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# Tectonic and Isotopic evolution of the Dharwar Craton, India.

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January 2021

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# Thesis Summary

The crustal evolution of a craton could be studied from analysing its zircon U-Pb record and associated isotopic and elemental composition. The Dharwar Craton in southern India is one such craton on which several independent studies have been conducted on isolated domains within the craton. In this thesis, we have attempted to create a robust tectonic and isotopic evolution model of the Dharwar Craton which also includes previously published data. This thesis is divided into four chapters spanning from the Archean origins of the craton to the latest thermal events affecting various domains within the craton.

Chapter 1 deals with zircon U-Pb dating, rare earth element (REE) composition and Lu-Hf isotopic analysis from granitoids sampled across the various domains within the Dharwar Craton to evaluate the crustal evolution episodes from individual domains and compare them to build a robust crustal architecture model for the Dharwar Craton including previously published data.

Chapter 2 deals with the detrital record of the Dharwar Craton deposited within the various volcano-sedimentary greenstone belts that unconformably overly the basement granitoid gneisses and igneous batholiths through detrital zircon U-Pb dating, REE compositions. The detrital sequences sampled from the Western Dharwar Craton have been analysed for detrital zircon Lu-Hf isotopes to further constrain the crustal evolution processes within the Western Dharwar Craton.

Chapter 3 deals with the detrital record of the Kaladgi-Badami basin, an east-west trending intracratonic Paleoproterozoic basin that unconformably overlies the northern part of Dharwar Craton, which formed as part of the widespread Proterozoic sedimentation across India termed as Purana basins. The detrital zircon U-Pb dating, REE compositional data from various stratigraphic units has been used to infer potential source regions and to compare with sedimentary records across other Paleoproterozoic basins across India and Madagascar to understand the post-assembly tectonic process within the Dharwar Craton which led to the formation of the Kaladgi-Badami basin.

Chapter 4 deals with the thermal record of the Western Dharwar Craton by magmatic and meta-igneous zircon, apatite and monazite: U-Pb dating, REE composition sampled along the western margin along the Dharwar Craton including the adjacent Coorg block and Karwar block. The difference between ages obtained using high-temperature zircon (>800° C) U-Pb dating and medium temperature (450—550° C) apatite U-Pb dating was used to infer the timing and spatial extent of the last thermal event experienced across the Dharwar Craton and correlate with contemporaneous tectonic events.

# Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

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VENKATA PAVAN KATURU

26/01/2021

# Acknowledgements

This has been one hell of a journey for me personally, starting life in a new country and finishing thesis in the middle of a pandemic has taught me new things about myself and I am proud finally draw the curtain over another phase of my life.

I would like to acknowledge my excellent supervisors for their supervision over the years and motivating me to finish my PhD. I would like to acknowledge all the PhD student cohort of the Earth Sciences department, of present and past, at the University of Adelaide who have created a welcoming atmosphere and making my stay in Adelaide memorable, especially during the days of having a beer over a zoom call in the middle of a lockdown.

I would also like to acknowledge the friends I have made outside of the university who have supported me in many ways to successfully finish my thesis.

Lastly, I would like to dedicate this work to my parents whose unwavering love and affection made it possible for me to chase my dreams.

# Statement of Authorship 1

| | |
|---|---|
| Title of Paper | Archaean crustal evolution of the Dharwar Craton, India: Insights from magmatic and meta-igneous zircon U–Pb, REE and Hf isotopes |
| Publication Status | ☐ Published ☐ Accepted for Publication<br>☐ Submitted for Publication ☒ Unpublished and Unsubmitted work written in manuscript style |
| Publication Details | Pavan, K., Collins, A.S., Santosh, M., Foden, J.D., Sajeev, K., In prep. Archaean crustal evolution of the Dharwar Craton, India: Insights from magmatic and meta-igneous zircon U–Pb, REE and Hf isotopes |

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| Overall percentage (%) | 80% | | |
| Certification: | This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper. | | |
| Signature | | Date | 26/1/2020 |

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By signing the Statement of Authorship, each author certifies that:

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ii. permission is granted for the candidate in include the publication in the thesis; and
iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

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| Signature | | Date | 24/1/2020 |

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| Name of Co-Author | Sajeev Krishnan | | |
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| Signature | | Date | 24/1/2020 |

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| | |
|---|---|
| Title of Paper | Detrital record of the Mesoarchean and lower Neoarchean meta-quartzites in Dharwar Craton, India: Evidence of Eoarchean to Mesoarchean crustal evolution from detrital zircon U–Pb, Hf isotpes and REE compositions |
| Publication Status | ☐ Published ☐ Accepted for Publication<br>☐ Submitted for Publication ☒ Unpublished and Unsubmitted work written in manuscript style |
| Publication Details | Pavan, K., Collins A, S., Santosh, M., Foden, J,D., Sajeev, K., in prep. Detrital record of the Mesoarchean and lower Neoarchean meta-quartzites in Dharwar Craton, India: Evidence of Eoarchean to Mesoarchean crustal evolution from detrital zircon U–Pb, Hf isotpes and REE compositions |

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|---|---|---|---|
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| Signature | | Date | 24/1/2020 |

| | | | |
|---|---|---|---|
| Name of Co-Author | Sajeev Krishnan | | |
| Contribution to the Paper | Helped with the organisation and logistics of fieldwork. Facilitated initial sample preparation and storage facilities | | |
| Signature | | Date | 24/1/2020 |

# Statement of Authorship 3

| | |
|---|---|
| Title of Paper | Detrital zircon record of the Kaladgi-Badami basin: Correlation with Paleoproterozoic basins across India and Madagascar |
| Publication Status | ☐ Published ☐ Accepted for Publication<br>☐ Submitted for Publication ☒ Unpublished and Unsubmitted work written in manuscript style |
| Publication Details | Pavan, K., Collins A, S., Santosh, M., Sarbani Patranabis-Deb, Saha, D., Foden, J,D., Sajeev, K., in prep. Detrital zircon record of the Kaladgi-Badami basin: Correlation with Paleoproterozoic basins across India and Madagascar |

## Principal Author

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|---|---|---|---|
| Name of Principal Author (Candidate) | Venkata Pavan Katuru | | |
| Contribution to the Paper | Conceptualisation of the work, development of ideas and conclusions, carried out fieldwork, sample preparation and analytical work, interpretation of the data, wrote the manuscript. | | |
| Overall percentage (%) | 80% | | |
| Certification: | This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper. | | |
| Signature | | Date | 26/1/2021 |

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iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

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|---|---|---|---|
| Name of Co-Author | Alan Collins | | |
| Contribution to the Paper | Supervised work, helped with data interpretation, fieldwork and manuscript revision | | |
| Signature | | Date | 25/1/2020 |

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|---|---|
| Title of Paper | Thermal history of the Dharwar Craton, India: Implications from multiple accessory mineral U–Pb geochronology, REE compositions from the western margin of the Dharwar Craton, Karwar Block and Coorg Block |
| Publication Status | ☐ Published ☐ Accepted for Publication<br>☐ Submitted for Publication ☒ Unpublished and Unsubmitted work written in manuscript style |
| Publication Details | Pavan, K., Collins A, S., Santosh, M., Foden, J,D., in prep. Thermal history of the Dharwar Craton, India: Implications from multiple accessory mineral U–Pb geochronology, REE compositions from the western margin of the Dharwar Craton, Karwar Block and Coorg Block |

## Principal Author

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| Name of Principal Author (Candidate) | Venkata Pavan Katuru | | |
| Contribution to the Paper | Conceptualisation of the work, development of ideas and conclusions, carried out sample preparation and analytical work, interpretation of the data, wrote the manuscript. | | |
| Overall percentage (%) | 80% | | |
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| Signature | | Date | 26/1/2020 |

## Co-Author Contributions

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iv. the candidate's stated contribution to the publication is accurate (as detailed above);
v. permission is granted for the candidate in include the publication in the thesis; and
vi. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

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|---|---|---|---|
| Name of Co-Author | Alan Collins | | |
| Contribution to the Paper | Supervised work, helped with data interpretation, collection of samples | | |
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| Contribution to the Paper | Supervised work, helped with data interpretation | | |
| Signature | | Date | 23/1/2020 |

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| Name of Co-Author | John Foden | | |
| Contribution to the Paper | Helped with data interpretation | | |
| Signature | | Date | 24/1/2020 |

# 1

# Introduction and Geological background to Dharwar Craton, India

## 1. Introduction:

The Archaean era acts as the bridge between the nascent Hadean earth to the proterozoic era. Continental growth models have converged that the majority of the preserved crust had formed already in the Neoarchean before ca. 2.5 Ga (Dhuime et al., 2012; Condie et al., 2014). Evidence for remelting of older crust have been preserved in much of the Archean crust suggesting active tectonic processes that recycled older crust. The features of these tectonic processes have been disputed and include from modern style horizontal tectonic processes to more vertical style tectonic accretion involving plumes and stagnant lid-drip style tectonic recycling (Jayananda et al., 2000, 2018, 2020; Li et al., 2018; Nebel et al.,2018; Cawood et al., 2018). More recent models predict the secular cooling of the mantle took place during the Archaean era (Spencer et al., 2017; Huang et al., 2020). The Archaean cratons display distinct magmatism events, suggesting that the magmatic events during this period were not globally contemporaneous and different proto-continents shared similar histories. These proto-plates have amalgamated and broke up with each other suggesting the development of tectonic processes that would eventually evolve into modern-style plate tectonics during the Mesoarchean era (Jayananda et al., 2018; Manikyamba et al., 2017; Pehrrson et al., 2013). The Dharwar Craton in India is one such craton formed during the Archean era with limited geochronological and isotopic data available (e.g. Jayananda et al., 2015,2020; Lancaster et al., 2015; Yang and Santosh, 2015; Dey, 2013) and contains Paleoarchean to Neoarchean granite-greenstone terranes which display distinct magmatic pulses and crust building episodes which include both vertical and lateral accretion of juvenile crustal protoliths and crustal recycling (Manikyamba and Kerrich, 2012; Manikyamba et al., 2015,2017; Rogers and Santosh, 2004).

## 2. Geological Background:

The Dharwar Craton in southern India is one of the major archean cratons in Peninsular India and is considered to be a tilted oblique crustal section that ranges from the Paleoarchean to Neoarchean in age and an amalgamation of microcontinents that preserve the evidence of continental growth and recycling during this period. The Dharwar Craton is bound by the Deccan Traps flood basalt on the north along with the Paleoproterozoic basin called the Kaladgi-Badami Basin (Chapter 4) and the Neoarchean amalgamation of micro blocks towards the south which include the Nilgiri Block, Biligirirangan, Shevaroy and Madras Block from west to east (Ishwar-Kumar et al., 2016; Peucat et al.,

2013) and the Coorg Block in the south-west separated by a Mesoarchean suture zone called the Mercara Shear Zone (MCSZ). On the north-west, the Karwar Block is separated from the Dharwar Craton by a proposed suture zone called the Kumta Shear Zone (KSZ). The Dharwar Craton primarily comprises of basement granitoid suites particularly Tonalite–Trondhjemite–Granodiorite (TTG) suites traditionally known as Peninsular Gneisses along with bimodal volcano-sedimentary greenstone belts, ranging from ages ca. 3.6—2.5 Ga, that overly the basement gneisses (Peucat et al., 1995; Chadwick et al., 2000; Jayananda et al., 2008; Manikyamba et al., 2017). These greenstone belts have been categorised into the older Sargur Group greenstone belts (older than 3.0 Ga) and younger Dharwar supergroup (2.9 —2.6 Ga) further classified into the lower Bababudan Group and the upper Chitradurga Group greenstone belts (Hokada et al., 2013). A progressive increase in the grade of metamorphism is reported from the north, showing upper greenschist — lower amphibolite grade rocks, to the south of Dharwar Craton exposing high-grade granulite facies rocks (Chadwick et al., 2000; Ramakrishnan and Vaidyanadhan, 2008).

Previously, the Dharwar Craton was subdivided into the Western Dharwar Craton (WDC) and Eastern Dharwar Craton (EDC) separated by an N-S strike 500 km long granitic batholith called the Closepet Granite (Naqvi, 2005; Jayananda et al., 2006; Chardon et al., 2011). Subsequent studies proposed a high strain mylonitic shear zone named as Chitradurga Shear Zone (CSZ) to act as the boundary between WDC and EDC (Jayananda et al., 2008, 2013; Chardon et al., 2011). The contact between WDC and EDC was later proposed to be a transitional zone extending between the CSZ and Closepet Granite and has been termed as the Central Dharwar Province (CDP) (Peucat et al., 2013) based on U–Pb zircon ages and Sm–Nd isotopic studies (Dey, 2013). Further studies have renamed it to the Central Dharwar Craton and proposed the eastern boundary to be the Kadiri—Kolar greenstone belt in the southern region of the CDC (Santosh and Li, 2018; Jayananda et al., 2018,2020).

### 2.1 Meta-igneous record of the Dharwar Craton

The Western Dharwar Craton, bound by the Arabian Sea in the west and by the Chitradurga Shear Zone (CSZ) on the east, contains abundant TTG gneisses – comprising of dark grey tonalitic to granodioritic banded gneisses (Jayananda et al., 2015); and two generations of volcano-sedimentary greenstone detrital sequences which include both the older Sargur Group and younger Dharwar Supergroup. The U–Pb zircon ages coupled with Nd and Hf isotopic data reveal TTG accretion during distinct major episodes at ca. 3.45—3.3 Ga and 3.2 Ga (Jayananda et al., 2015,2018; Guitreau et al., 2017). The TTG ages are closer to the detrital ages associated with the Sargur group volcanic sequences (Jayananda et al., 2008) and the detrital zircon record from the area (Sarma et al., 2012; Hokada et al., 2013; Lancaster et al., 2015; Maibam et al., 2016; Wang and Santosh, 2019). The TTGs are intruded by

two generations of potassic granites around ca. 3.0 Ga and ca. 2.6 Ga (Jayananda et al., 2006, 2018; Chadwick et al., 2011). Sm—Nd garnet-whole-rock isochron dating of mafic rocks, gneisses and pelitic rocks reveal major thermal event at ca. 2.52 Ga with cooling until ca. 2.45 Ga (Jayananda et al., 2013) and metamorphic titanite dated near the Holenarsipur Schist Belt in the south has been linked to the emplacement of trondhjemite plutons at ca. 3.1 Ga (Jayananda et al., 2013, 2015).

The Central Dharwar Craton contains older weakly foliated migmatitic TTGs and younger foliated dark grey banded gneisses (Jayananda et al., 2018). The abundance of older TTGs decreases from the Chitradurga Shear Zone towards the Kolar—Kadiri greenstone belt (Chardon et al., 2011; Jayananda et al., 2013; Peucat et al., 2013). U–Pb zircon ages reveal TTG accretion during ca. 3.37—3.23 Ga and ca. 3.15 — 2.96 Ga and the transitional TTGs towards the east forming at ca. 2.7—2.56 Ga followed by sanukitoid emplacement during ca. 2.56—2.52 Ga (Jayananda et al., 2018). The anatectic granites from the southern Closepet granite have been dated at ca. 2.52 Ga (Jayananda et al., 2013; Friend and Nutman, 1991) and calc-alkaline intrusions between the Closepet Granite and the Kolar greenstone belt have been reported for zircon ages around ca. 2.55 Ga (Krogstad et al., 1991; Jayananda et al., 2000; Chardon et al., 2002).

The basement rocks in the Eastern Dharwar Craton consist of minor dark grey banded to weakly migmatitic gneisses and light pink to whitish grey diatexitic gneisses (Jayananda et al., 2018). The granodiorites along the eastern margin of the Kolar greenstone belt have been reported for U–Pb zircon ages at ca. 2.55—2.53 Ma with remnants of ca. 2.7 Ga transitional TTG enclaves (Krogstad et al., 1991; Chardon et al., 2002). TTGs to the south of the EDC are proposed to have accreted at ca. 2.56 — 2.53 Ga and the granitoids in the northern part of EDC adjacent to the Hutti greenstone belt provide zircon U–Pb ages ranging from ca. 2.57—2.52 Ga (Sarma et al., 2008; Anand et al., 2014).

### 2.2 Volcano-sedimentary record of the Dharwar Craton

The volcano-sedimentary greenstone belts overlying the Dharwar Craton are divided into the older Sargur group and younger Dharwar Supergroup (Swami Nath and Ramakrishnan, 1981). The Dharwar Supergroup is further classified into the lower Bababudan Group and the upper Chitradurga Group greenstone belts (Hokada et al., 2013). The Sargur group has been proposed to be associated with komatiite volcanism around ca. 3.35 Ga representing melt extraction from the mantle (Jayananda et al., 2008). Based on the geochronology of the Sargur Group, the WDC was inferred to be older than ca. 3.5 Ga and deposited before ca. 3.0 Ga. (Nutman et al., 1992). The older TTG gneisses across the WDC and CDC are overlain by younger Dharwar Supergroup which is also considered to stratigraphically overlie the Sargur Group with the lower units from the Bababudan Group revealing an Sm—Nd age at ca. 2911 Ma (Kumar et al., 1996). Monazite electron microprobe age at 3082 Ma was

reported from Holenarsipur Greenstone belt from the Sargur Group (Hokada et al., 2013). Secondary ion mass spectrometer (SIMS) U–Pb age from detrital zircon from the basal unit from the Bababudan group at 3162 Ma has been reported as the maximum depositional age for the Dharwar Supergroup (Krapez et al., 2020). The overlap of ages between the basal units of Sargur Group and the Bababudan Group has rendered the stratigraphic relationship between Sargur Group and Dharwar Supergroup inconclusive (K. Patra et al., 2020). Supracrustal rocks of the Dharwar Craton younger than ca. 2.8 Ga have been placed in the Dharwar Supergroup, however, stratigraphic correlations between the distinct units have been difficult due to lack of spatial connection between each other and lack of regional lithostratigraphy has rendered some units with precise U–Pb ages (Sarma et al., 2012) without stratigraphic context (Krapez et al., 2020). The Chitradurga Group was defined to unconformably overlie the Bababudan Group along with the basement gneisses (Chadwick et al., 1989). The supracrustals from the Eastern Dharwar Craton have not been formally correlated with the western/central Dharwar supracrustals and very few attempts have been done to establish regional correlations among the supracrustal units.

### 2.3 Existing crustal evolution theories on the Dharwar Craton

Previous studies have explained the current configuration of the Dharwar Craton by proposing various crustal evolution models. Initial accretionary models considered the WDC and EDC as separate continents that formed separately, then collided with each other. The greenstone belts were envisaged as plate margin volcanism and/or marginal basins in these models (Krogstad et al., 1989; Chadwick et al., 2000; Santosh and Li, 2018). Alternative models consider the Dharwar Craton as one entity through the Archaean, where the craton evolved by "sagduction", which involves the gravitational sinking of the greenstone belts that were overlying the basement gneisses along with tectonic sliding at the margins (Chardon and Jayananda, 2008). Mantle plume driven mantle-derived magmatic-diapir accretion (Jayananda et al., 2000), and combination of plume-arc processes (Jayananda et al., 2008, 2013, 2018; Manikyamba and Kerrich, 2012) have also been proposed to explain the formation of the Dharwar Craton.

These initial models led to the use of more analyses that included studying Lu–Hf and Sm-Nd systematics in the rocks that give information about the timing of when the original melt has been separated from the depleted mantle, giving more insight into the episodes of crustal growth and talking about the origin of the rocks before they reach the surface. This led to the development of Lu–Hf datasets of Dharwar craton including works on Gadag greenstone belt (Sarma et al., 2012), Hutti Greenstone belt (Anand et al., 2014) and regional detrital studies across the Dharwar craton (e.g Lancaster et al., 2015; Maibam et al., 2016). The Lu–Hf datasets reveal that the crustal growth in both

EDC and WDC was contemporaneous with continous crustal recycling till ca. 3.0 Ga, cratonisation in WDC took place in two episodes at 3.3 Ga and 2.7 Ga and the younger EDC had its crustal extraction from 3.0—2.5 Ga (Lancaster et al., 2015). The Nd isotope analysis datasets for the Dharwar (e.g. Dey, 2013) suggests that both EDC and WDC hold Nd isotopic signatures leading to depleted mantle ages at 3.5 Ga. The major period of juvenile crust formation in WDC was during 3.35—3.0 Ga accompanied by crustal recycling. The data interpretation from Dey, (2013) suggests that a) the mantle was re-fertilized during the Mesoarchaean which contributed to the extensive mafic volcanism in 2.9—2.6 Ga in WDC, accompanied with crustal recycling during 2.7—2.6 Ga, b) the EDC remnant gneisses were already derived from a recycled Palaeoarchaean crust that was destroyed by late Neoarchaean juvenile crustal addition during 2.7—2.5 Ga along with recycling of the older crust. Dey (2013), however, has the lacunae involving the timing of earliest crustal extraction and spatial coverage of the Nd-isotope record especially involving the felsic and intermediate lithologies.

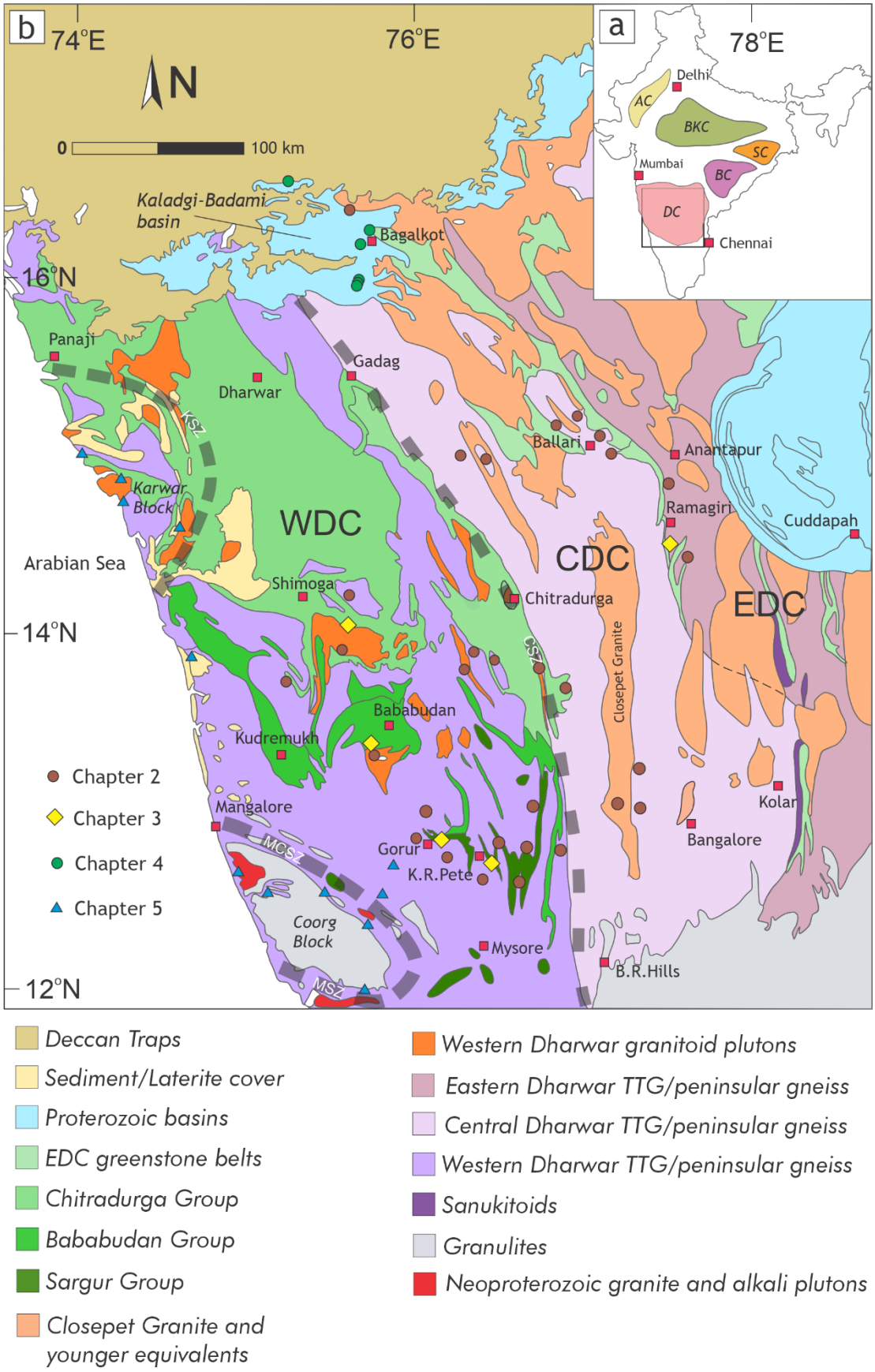


*Figure 1: The geological map of the Dharwar Craton (adapted from Jayananda et al., 2013a). a) Map of India outlining major cratons across peninsular India. DC: Dharwar Craton, BC: Bastar Craton, SC:*

*Singhbhum Craton, BKC: Bundelkhand Craton, AC: Aravalli Craton. b) Geological map of the Dharwar Craton with sample locations denoted by symbols representing each chapter outlined in this thesis. The major suture zones are marked by dashed lines and are named as KSZ — Kumta Shear Zone, MCSZ — Mercara Shear Zone, MSZ — Moyar Shear Zone. The individual domains of the Dharwar Craton have been labelled as WDC — Western Dharwar Craton, CDC — Central Dharwar Craton, EDC — Eastern Dharwar Craton.*

## 3. Thesis Outline:

The Dharwar Craton records suites of rocks that span the majority of the Archean period and records the transition in tectonic processes from the Paleoarchean to the Neoarchean followed by post-assembly events that led to the formation of intracratonic sedimentary basins, in this case, the Kaladgi-Badami basin. In this thesis, we have attempted to create a robust tectonic and isotopic evolution model of the Dharwar Craton which also includes previously published data. Various fields of geoscience are currently exploring efficient ways to manage and quantify large data sets as part of reporting and citing. This PhD research also explores ways to statistically compare large isotopic datasets in addition to the collection of new data in key regions. This PhD research has been driven by a multi-disciplinary approach to interpreting isotopic and geochemical datasets to understand the evolution of the Dharwar Craton and surrounding formations.

This thesis is divided into four chapters spanning from the Archean origins of the craton to the latest thermal events affecting various domains within the craton. The following chapters constitute unpublished and unsubmitted original work written in manuscript style. There is some repetition in the introduction, geological background, methodology and discussion sections of each chapter.

Chapter 2 deals with zircon U-Pb dating, rare earth element (REE) composition and Lu-Hf isotopic analysis from granitoids sampled across the various domains within the Dharwar Craton to evaluate the crustal evolution episodes from individual domains and compare them to build a robust crustal architecture model for the Dharwar Craton, from the Paleo- to Neoarchean, including previously published data in turn updating the existing crustal evolution histories to include the recent domain of Central Dharwar Craton as a separate entity from the Eastern Dharwar Craton. The new U–Pb age data from the granitoids have been used to identify the spatial extent of the previously reported crustal accretion episodes from the Meso- to Neoarchean. The rare earth element (REE) compositions have been used to infer the depth of crystallization of the zircons within the lithology. We compare the crustal domains within the Dharwar Craton with each other and their crustal evolution history to differentiate and identify similar/distinct suites within the Dharwar Craton. We also compare the entire Lu–Hf data set of the Dharwar Craton (published + new data) with Lu–Hf data sets of other major cratons to test the hypothesis for the existence of Neoarchean supercontinental amalgamation.

Chapter 3 deals with the detrital record of the Dharwar Craton deposited within the various volcano-sedimentary greenstone belts that unconformably overlie the basement granitoid gneisses and igneous batholiths through detrital zircon U-Pb dating, REE compositions. We attempt to improve upon the existing spatial correlations proposed by Krapez et al. (2020) and K. Patra et al. (2020) among the Western Dharwar Craton supracrustals. We compare the detrital record of the reported samples, in this study, belonging to the various groups of greenstone belts overlying the Dharwar Craton with previously published data to compare source regions. We compare the REE compositions from the detrital zircons against their crystallization ages to infer periods of deeper crystallization. The detrital sequences sampled from the Western Dharwar Craton have been analysed for detrital zircon Lu-Hf isotopes and compared against previous published detrital Lu–Hf data sets to further constrain the Paleo–Mesoarchean crustal evolution processes within the Western Dharwar Craton.

Chapter 4 deals with the detrital record of the Kaladgi-Badami basin, an east-west trending intracratonic Paleoproterozoic basin that unconformably overlies the northern part of Dharwar Craton, which formed as part of the widespread Proterozoic sedimentation across India termed as Purana basins. The detrital zircon U-Pb dating, REE compositional data from various stratigraphic units has been used to infer potential source regions and to compare with sedimentary records across other Paleoproterozoic basins across India and Madagascar, using multi-dimensional scaling, to check for similarities in the sedimentary environments and potential source regions. We test the hypothesis of the "Greater Dharwar Craton" model by Tucker et al. (2011) to learn if the Kaladgi-Badami basin forms a missing link between the Itremo Group in Madagascar and the Cuddapah Basin in India. The correlations were used to hypothesize post-assembly tectonic processes within the Dharwar Craton which led to the formation of the Paleoproterozoic Kaladgi-Badami basin.

Chapter 5 deals with the thermal record of the western margin of Dharwar Craton by magmatic and meta-igneous zircon, apatite and monazite: U-Pb dating, REE composition sampled along the western margin along the Dharwar Craton including the adjacent Coorg block and Karwar block. We interpret the apatite U–Pb ages to investigate the cooling and reactivation histories along the active margins between the Dharwar Craton—Coorg Block and Dharwar Craton—Karwar Block. We interpret the REE compositions from the zircons to infer the depth of crystallization and the REE compositions from apatites to infer exhumation history versus hydrothermal alteration of the protolith. The apatite U–Pb ages coupled with zircon and monazite U–Pb ages have been used infer the timing and spatial extent of thermal events experienced by the lithologies.

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# 2

# Archaean crustal evolution of the Dharwar craton, south India: Insights from magmatic and meta-igneous zircon U–Pb, REE and Hf isotopes

**Abstract**:

Various tectonic models explaining the continental growth and accretion history for terrane formation within the Archean Dharwar Craton of south India have been proposed. These commonly subdivide the craton into a western, eastern and sometimes a central domain (WDC, EDC and CDC, respectively), based on the age and chemistry of an, as yet, relatively limited zircon database. In this study, we present U–Pb, rare earth element (REE) and Hf isotopic data from zircons collected from magmatic and meta-igneous suites across the breadth of Dharwar Craton, to create a more robust Archean crustal evolution model integrating previous data.

The U–Pb data captures stages of tonalite-trondhjemite-granodiorite (TTG) magmatism in the WDC at ca. 3.4 Ga and ca. 3.2 Ga, in the CDC at ca. 3.3 Ga and ca. 3.0 Ga and then later transitional type TTGs in the EDC from 2.7–2.6 Ga—these are now deformed into orthogneisses and are what are conflated in the literature as the Peninsular Gneiss. Relatively undeformed granites within the WDC were dated at ca. 3.0 Ga, ca. 2.6 Ga, and in the CDC at ca. 2.6 Ga and ca. 2.55 Ga. The REE compositions from the same zircons were used to infer the depth of crystallisation compared to the plagioclase stability field. The $(La/Yb)_N$, $(Gd/Yb)_N$ ratios in zircon were cumulatively used to reveal the timing of crustal thickening associated with deeper partial melting (and/or crystallisation) of the source to produce the TTG domains around 3.2 Ga and 2.6 Ga. The combined εHf plot from all the terranes reveals that crustal growth and crustal melting/recycling was continuous and coeval within the WDC and CDC until ca. 3.0 Ga. Magmatism, involving considerable crustal recycling, continued in the CDC until ca. 2.55 Ga. The 2.6 Ga potassic granites arise from a juvenile source contaminated with pre-existing crust with εHf(t) values between +2.2 to -2.06. The εHf(t) values from the transitional TTG gneisses in the northern Dharwar craton lie between +4.5 to +1.46 and show that crustal growth in the EDC originated from a juvenile source.

The WDC and CDC appear to share similar antiquity and are linked through their history. The EDC, however, is interpreted to have formed away from the rest of the Dharwar Craton and accreted to the CDC at ca. 2.6—2.55 Ga along a suture that is represented by the Ramagiri Greenstone Belt.

## 1. Introduction:

The Archaean eon links the nascent earth of the Hadean to the more recognisable planet of the Proterozoic. Recent continental growth models converge on models where the majority of the preserved continental crust had already formed before the end of the Neoarchaean, before 2.5 Ga (Dhuime et al., 2012; Condie et al., 2014). Much of this Archaean crust preserves evidence of remelting of older crust, suggesting that tectonic processes were active that recycled pre-existing crust. However,

the nature of these tectonic processes are disputed and include stagnant lid drip type tectonics, vertical tectonic accretion involving plumes and modern horizontal tectonic processes. (Cawood et al., 2018; Jayananda et al., 2000, 2018, 2020; Li et al, 2018; Nebel et al., 2018). Pulses of magmatism have been recognised in all Archaean cratons, but the timing of magmatism varies, suggesting that magmatic pulses were not globally synchronous, and that different proto-continents existed that shared similar histories. These entities broke up and collided with each other in ways that suggest that at least by the Mesoarchaean that some-sort of horizontal proto-plate tectonics was operating (Jayananda 2000, 2018; Li et al., 2018; Manikyamba et al., 2017; Wyman and Kerrich, 2009, Pehrrson et al., 2013). Recent palaeomagnetic data also support modern-like horizontal plate velocities by 3.2 Ga (Brenner et al. 2020). The Dharwar craton in South India is one such craton that formed during the Archaean. It is a major terrain where limited geochronological and geochemical data are available (e.g. Jayananda et al., 2015, 2019, 2020; Guitreau et al., 2017; J.Y. Wang et al., 2020; Santosh and Li, 2018; Lancaster et al., 2015, Dey 2013). Yet, what is available has been used to suggest that by the Neoarchaean, at least, it formed a member of a continental-consortium with the Rae and Sask cratons of North America, the Mawson Craton of Australia/Antarctica, Siberia, West Africa, North China and the Congo/São Francisco Craton—a configuration called Nunavutia (Pehrsson et al., 2013).

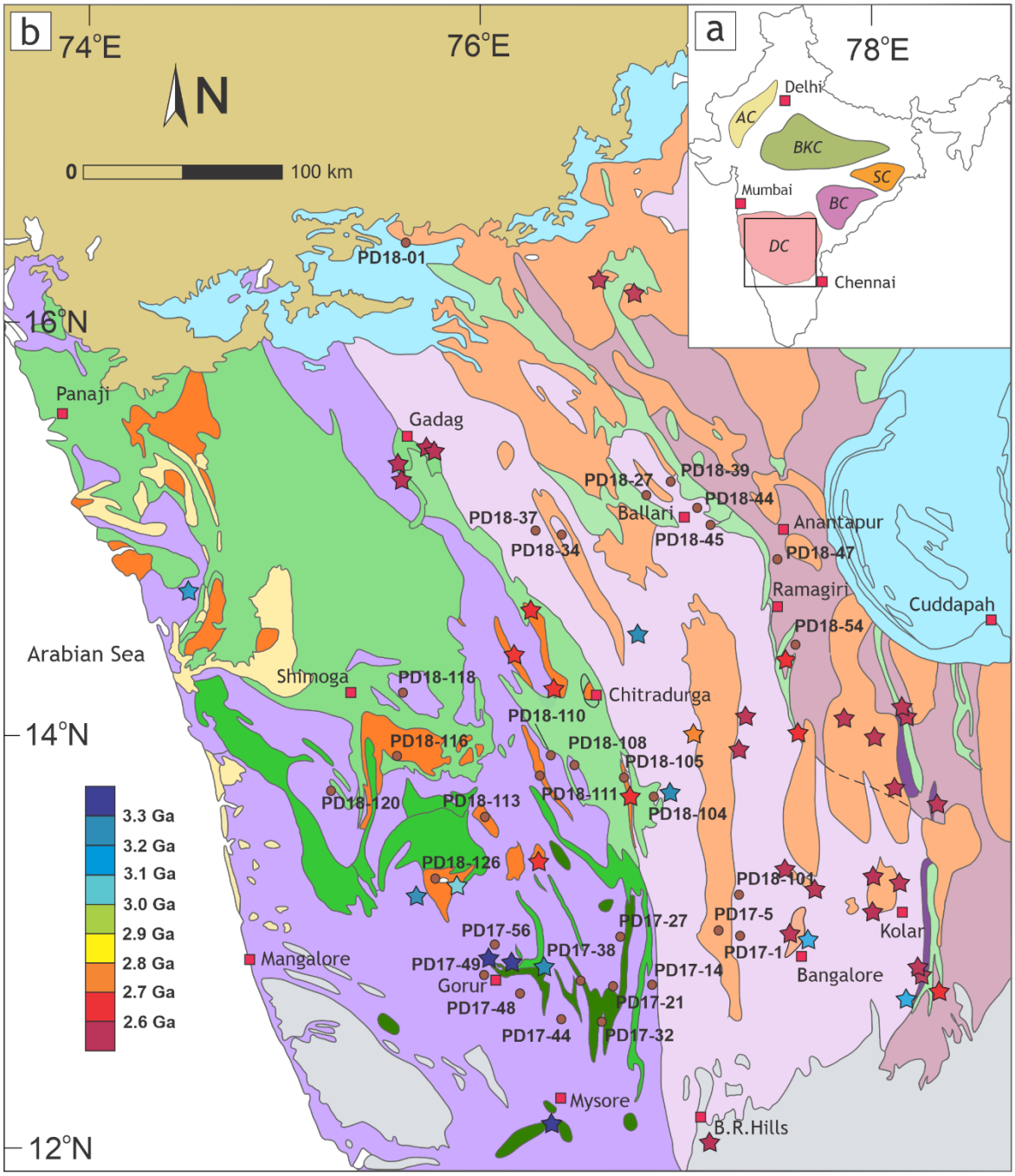
In this study, we have collected rock samples from magmatic and meta-igneous suites across the Dharwar Craton targeting the ubiquitous tonalite-trondhjemite-granodiorite (TTG) gneisses and potassic granitoids that occur across the whole craton. We have collected zircon U–Pb isotopic data from these samples to ascertain the timing of magmatism across the different domains of the Dharwar Craton. REE data from zircons were also collected and interpreted to infer the effective depth of source and/or crystallisation using REE elemental ratios and Lu–Hf isotopes were analysed to study the nature and composition of the source from which the magmatic suites evolved. Together, these data, with published comparable data, are used to establish a crustal evolution model for the Dharwar Craton. The data are then compared with contemporary cratons from around the world to examine whether the age 'barcode' preserved in the Dharwar Craton is consistent with the Nunavutia hypothesis, or with other palaeogeographic reconstructions.

## 2. Geological Background:

The Dharwar Craton forms a significant part of the continental shield of southern India. It is a tilted oblique crustal section that ranges from Paleoarchaean to Neoarchaean in age and comprises granitoids basement with structurally overlying metamorphosed volcanic, volcanoclastic, and sedimentary rocks that make up the greenstone belts and record a range of metamorphic grades (Jayananda et al., 2013a,b, 2015; Chardon et al., 2008, 2011). A notable, and unusual feature of the Dharwar Craton is that

metamorphic grade increases, progressively from north to south, from greenschist facies to granulite facies, at a high angle to the structural strike (Ramakrishnan and Vaidyanadhan, 2008).

The various lithologies within the craton include common tonalite-trondhjemite-granodiorite suites (3.36–2.7 Ga), which have been traditionally known as the Peninsular Gneiss (Smeeth, 1915), as well as bimodal volcanic and sedimentary greenstone belts. The latter are split into two groups. The older Sargur Group (>3.0 Ga), and the younger Dharwar Supergroup (2.9 – 2.6 Ga). All of these are intruded by potassic granitoids (Maibam et al., 2016, Jayananda et al., 2000, 2006; Chadwick et al., 2007). The Dharwar Craton has been divided into two zones, the Western Dharwar Craton (WDC) and the Eastern Dharwar craton (EDC), demarcated by a broadly north-south granite batholith (called the Closepet granite) that has been dated at ca. 2.55 Ga (Manikyamba et al., 2012, Jayananda et al., 2000; Moyen et al., 2003; Ramakrishnan and Vaidyanadhan, 2008). The transitional zone between the Chitradurga Schist Belt and the Closepet Batholith has been referred to as Central Dharwar Craton in recent years (Peucat et al., 2013, Dey et al., 2013; Jayananda et al., 2015; 2018; Li and Santosh, 2018), forming a third subdivision of the craton.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BKC
SC
Mumbai
BC
DC
Chennai
Deccan Traps
Sediment/Laterite cover
Proterozoic basins
EDC greenstone belts
Chitradurga Group
Bababudan Group
Sargur Group
Closepet Granite and younger equivalents
Western Dharwar granitoid plutons
Eastern Dharwar TTG/peninsular gneiss
Central Dharwar TTG/peninsular gneiss
Western Dharwar TTG/peninsular gneiss
Sanukitoids
Granulites
U-Pb age data - This study
Published U-Pb zircon ages for TTG & related granitoids

*Figure 1: (a) Geological framework of India representing the distribution of major Archean cratons (after Rogers, 1986), DC: Dharwar Craton, BC: Bastar Craton, SC: Singhbhum Craton, BKC: Bundelkhand Craton, AC: Aravalli Craton. (b) Geological map of the Dharwar Craton, South India (modified after Jayananda, 2013a). Previously published meta-igneous zircon U-Pb ages are indicated by a star with colours representing ages from the scale shown. The locations sampled for this study are indicated by brown circles.*

The oldest parts of the Western Dharwar Craton are the protoliths of the Peninsular Gneiss in the Gorur area (Fig. 1), where crystallisation ages have been interpreted to stretch back to ca. 3.41 Ga (Guitreau et al., 2017). These are overlain by metavolcanic and metasedimentary rocks of the Sargur Group (ca. 3.35–3.00 Ga) that consist of metamorphosed komatiites, tholeiitic basalts and rare felsic lava flows as well as sedimentary quartzites, pelites, conglomerates and banded iron formations. The younger Dharwar Supergroup at ca. 2.9 – 2.6 Ga unconformably overlies the Peninsular Gneiss and Sargur Group. It is divided into two subgroups; the Bababudan Group, comprising metabasalts, gabbros, ultramafic schists, quartzites, phyllites and conglomerates, and the Chitradurga Group, which includes mafic and felsic volcanic rocks, iron and manganese formations, quartzites and pelites that are intruded by calc-alkaline to potassic granites (Swami Nath and Ramakrishnan, 1981, Ramakrishnan and Vaidhyanadhan, 2008, Chadwick 2000, Chardon et al 2011; Tushipokla and Jayananda, 2013; Jayananda 2000, 2006, 2008, 2013a, 2013b; Manikyamba et al., 2017). Several workers have suggested that the shear zone along the eastern margin of the Chitradurga Schist Belt marks the eastern boundary of the WDC (Peucat et al 2013, Jayananda et al 2008, 2013a, 2013b, Chardon et al., 2011). High-K plutons intruded the Western Dharwar craton at 3.0 Ga (Chardon et al., 2011, Jayananda et al., 2020).

The contact between the EDC and the WDC is considered as a diffuse transitional zone between the Shimoga Schist Belt and the Gadag Greenstone Belt in the northeast, and bound by the Closepet Granite (Chadwick et al. 2007). This region is characterised by WDC-like TTG rocks, but with crystallisation ages between 2.7–2.5 Ga, similar to the crystallisation ages of granitoids in the EDC (Ramakrishnan and Vaidyanadhan, 2008). The transitional zone has been termed the Central Dharwar Craton (CDC) in recent studies (Peucat et al., 2013, Jayananda et al., 2018, 2020). Ca. 3.0 Ga orthogneisses near the Kolar Schist Belt form the oldest known component of the CDC. Neoarchean (ca. 2.7 Ga) banded gneisses are much more voluminous and form the basement to a series of greenstone belts that are characterized by volcanics that include major gold deposits.

The EDC is dominated by voluminous Neoarchaean (ca. 2630–2530 Ma) TTG gneisses and calc-alkaline granites (Peucat et al., 1993, Peucat et al., 2013). These are structurally interlayered with ca. 2.7 Ga greenstone belts that preserve relics of Mesoarchaean crust (ca. 3.14–3.00 Ga; Chadwick et al., 2000; Jayananda et al., 2000).

Detrital zircon Lu–Hf datasets include works on Gadag greenstone belt (Sarma et al., 2012), Hutti Greenstone belt (Anand et al., 2014), some detrital records from the metasedimentary domains scattered across the Dharwar craton (e.g Lancaster et al., 2015; Maibam et al., 2016) have been used to interpret that the crustal growth in both EDC and WDC was contemporaneous and agreed upon that cratonisation in WDC took place in two episodes at 3.3 Ga and 2.7 Ga and the younger EDC had its crustal extraction from 3.0 Ga to 2.5 Ga (Lancaster et al., 2015).

The Nd isotope record for the Dharwar Craton (Dey, 2013) suggests the EDC and WDC reveal Nd isotopic signatures leading to depleted mantle ages at ca. 3.5 Ga. The major period of juvenile crust formation in WDC was during 3.35 – 3.0 Ga accompanied by crustal recycling. The data interpretation from Dey (2013) suggests that a) the mantle was re-fertilized during the Mesoarchaean which contributed to the extensive mafic volcanism in 2.9 – 2.6 Ga in WDC, accompanied with crustal recycling during 2.7 – 2.6 Ga, b) the EDC remnant gneisses were already derived from a recycled PalaeoArchaean crust that was destroyed by late Neoarchaean juvenile crustal addition during 2.7-2.5 Ga along with recycling of the older crust. The study (Dey 2013), however, could not constrain the initiation of the juvenile magmatic TTG accretion in the Dharwar Craton.

The comparisons of crustal evolution histories of the WDC and EDC using these methods are considered incomplete and biased towards data from studies on the volcano-sedimentary greenstone belts and associated granitoids (Manikyamba and Kerrich, 2012; Yang et al., 2015; Jayananda et al., 2013; Dey et al., 2013, 2015). Recent isotopic studies have been published on the basement gneisses of the Dharwar Craton which are confined to localised domains (Guitreau et al., 2017, Ranjan et al., 2020., Jayananda et al., 2015, 2020; J.Y. Wang et al., 2020; Li and Santosh, 2018). The need for spatially extensive isotopic studies for the basement granitoid gneisses would provide a better understanding for the comparison and studying the evolution of the Dharwar Craton as a whole, clarifying the accretion of individual crustal domains if they resulted from coeval crustal growth or retaining different formation histories.

## 3. Methods:

### *3.1 Zircon U–Pb geochronology and REE composition*:

Thirty-one rock samples were crushed and sieved for a zircon fraction (<500 μm) at the petrology lab facility at the Indian Institute of Science, Bangalore. The fractions were panned for heavy minerals. Magnetic minerals were removed using a neodymium. The resulting fractions were handpicked for zircons, mounted in epoxy resin, ground and polished to half thickness of the zircons. These zircon mounts were carbon-coated and imaged by a Gatan cathodoluminescence (CL) detector

attached to Quanta 600 MLA Scanning Electron Microscope to identify various domains within the zircons suitable for analysis. U–Pb geochronology was performed at Adelaide Microscopy, The University of Adelaide, using an Agilent 7900 ICP-MS. This was attached to a New Wave 213 nm laser (NWR-213) and an ASI RESOlution 193 nm excimer laser during different sessions. Both laser used a spot size of 30 μm and a frequency of 5 Hz. The isotopes $^{204}Pb$, $^{206}Pb$, $^{207}Pb$, $^{208}Pb$, $^{232}Th$, $^{238}U$ were measured for U–Pb geochronology. GEMOC GJ-1 zircon (TIMS ages $^{207}Pb/^{206}Pb$ = 602 ± 4.3 Ma, $^{206}Pb/^{238}U$ = 600.7 ± 1.1 Ma and $^{207}Pb/^{235}U$ = 602.0 ± 1.0 Ma; Jackson et al., 2004) was used for the correction of U–Pb fractionation for laser sessions. The Plesovice zircon (ID-TIMS $^{206}Pb/^{238}U$ age = 337.13 ± 0.37 Ma) was used as an internal standard to test the accuracy of the laser sessions. A total of 167 Plesovice zircon analyses yielding a weighted average $^{206}Pb/^{238}U$ age of 338.23 ± 0.86 Ma (2SD, MSWD = 2.3), which was within the uncertainty of the ID-TIMS age of Sláma et al. (2008). Rare Earth Elements: $^{139}La$, $^{140}Ce$, $^{141}Pr$, $^{146}Nd$, $^{147}Sm$, $^{153}Eu$, $^{157}Gd$, $^{159}Tb$, $^{163}Dy$, $^{165}Ho$, $^{166}Er$, $^{169}Tm$, $^{172}Yb$, $^{175}Lu$; also $^{49}Ti$, $^{89}Y$, $^{178}Hf$ were simultaneously measured over the same spots on the zircons along with U–Pb isotopes using 50 μm spot size analyses over NIST SRM 610 glass as reference material (Norman et al., 1996, Norman et al., 1998, Jochum et al., 2011). The U–Pb data and REE data were separately processed using Iolite (Paton et al., 2011).

### *3.2 Zircon Lu–Hf analysis*:

Zircon grains with less than 10% discordance were targeted for Hf isotope analysis, which was carried out using a New Wave UP-193 Eximer laser (193 nm), attached to a Thermo-Scientific Neptune multicollector ICP-MS following methods described on Payne et al. (2013). CL images were used as a guide to target zircons within the same domain as the U–Pb ablation spot. Beam diameters of 35 μm or 50 μm were used depending on the grain size. Zircons were typically ablated for ~80 s using a 5 Hz repetition rate with a 4 ns pulse rate and an intensity of ~ 4.4 J/cm$^2$ in a helium atmosphere that was mixed with argon upstream of the ablation cell. HfTRAX, a Microsoft Excel macro (Payne et al., 2013) was used to carry out zircon data reduction. Data was normalised to $^{179}Hf/^{177}Hf$ = 0.7325 using an exponential correction for mass bias. The Yb and Lu isobaric interferences on $^{176}Hf$ were corrected following the methodology of Woodhead et al. (2004). Zircon standards were analysed before and during analysis to assess the performance and stability of the instrument. Mudtank zircon was used as primary standard and 13 analyses yielded a mean $^{176}Hf/^{177}Hf$ ratio of 0.282489 ± 0.000018 (2 SD), which was within the uncertainty of the published value of 0.282507 ± 0.000006 (Woodhead and Hergt, 2005). The initial $^{176}Hf/^{177}Hf_{CHUR(t)}$ was calculated using a $^{176}Lu$ decay constant of 1.865 × 10$^{-11}$ year $^{-1}$ (Scherer et al., 2001) with modern $^{176}Hf/^{177}Hf$ and $^{176}Lu/^{177}Hf$ values of 0.282785 and 0.0336, respectively (Bouvier et al., 2008). The values of crustal model ages ($T_{DMC}$) were calculated using a $^{176}Lu$ decay constant of 1.865 × 10$^{-11}$ year$^{-1}$ (Scherer et al., 2001), modern $^{176}Hf/^{177}Hf$ = 0.28325, modern $^{176}Lu/^{177}Hf$ = 0.0384 (Griffin et

al., 2000), and a bulk crust value of $^{176}Lu/^{177}Hf = 0.015$ (Griffin et al., 2002). The reported uncertainties for $\varepsilon_{Hf}(t)$ were calculated as $^{176}Hf/^{177}Hf_{sample}$ uncertainty converted to epsilon notation and reported at $2\sigma$ level.

Concordia diagrams ($^{207}Pb/^{235}U$ vs $^{206}Pb/^{238}U$) were generated to represent the data using the Isoplot 4.15 plugin on Microsoft Excel (Ludwig, 2003) and an online version of IsoplotR (Vermeesch, 2018) was used to calculate the upper intercepts of the discordant lines and mean ages. The analytical ellipses have been coloured to represent Th/U ratios. The thickness of the data ellipses represent two standard deviations in error. The mean standard weighted deviation (MSWD) has been calculated along the discordant lines drawn following the strategies mentioned in Spencer et al. (2016). The number of ellipses used to calculate the MSWD and upper intercept of the discordant lines is indicated. The REE compositions have been normalised against chondrite values from Boynthon et al. (1984), using the Geochemical Data Toolkit for R (GCDkit6.0) (Janousek et al., 2006) to calculate REE ratios. In particular, Eu anomalies, $La_N/Yb_N$ ratios (light rare earth element, LREE, vs heavy rare earth element, HREE), and $Gd_N/Yb_N$ ratios (middle rare earth element, MREE, vs HREE) were calculated.

Lu–Hf analyses on near concordant (>85% concordance) zircons were obtained from the same domains from which the U–Pb data were collected. The results are presented in Fig. 9 and are plotted as ratios against $^{207}Pb/^{206}Pb$ ages.

## 4. Results:

### *4.1 Sample descriptions:*

Thirty granitoid samples were used for zircon U–Pb analysis, of twenty-eight samples, were analysed for Lu–Hf isotopes. The samples were collected in a series of transects that includes the WDC, CDC and EDC, mostly within the state territory of Karnataka, to ensure a significant spatial coverage over the whole craton. The northernmost sample is from the Closepet Granite equivalent near Bagalkote; the southernmost sample was collected near Akkihebbalu village. The longitudinal spread extends from Ramagiri Greenstone Belt in the EDC to Sringeri town in the WDC (Figure 1).

| Sample | Lithology | Region | Latitude | Longitude | Elevation |
|---|---|---|---|---|---|
| PD17-1 | Bt Granite | Closepet Granite | 12.93823 | 77.35293 | 804 |
| PD17-5 | Granite | Closepet Granite | 12.94583 | 77.26208 | 850 |
| PD17-14 | Pegmatoidal Granitoid Gneiss | Transitional Central zone | 12.81692 | 76.86365 | 690 |
| PD17-21 | Granitoid Gneiss | Western Dharwar | 12.78800 | 76.71220 | 854 |
| PD17-27 | Granitoid Gneiss | Western Dharwar | 12.92885 | 76.75573 | 824 |
| PD17-32 | Granitic Gneiss | Western Dharwar | 12.62553 | 76.63278 | 841 |
| PD17-38 | Tonalite Throndhjemite Granodiorite Gneiss | Western Dharwar | 12.73630 | 76.48962 | 869 |

| | | | | | |
|---|---|---|---|---|---|
| PD17-44 | Tonalite Throndhjemite Granodiorite Gneiss | Western Dharwar | 12.59772 | 76.37252 | 757 |
| PD17-48 | Tonalite Throndhjemite Granodiorite Gneiss | Western Dharwar | 12.77307 | 76.15093 | 907 |
| PD17-49 | Tonalite Throndhjemite Granodiorite Gneiss | Western Dharwar | 12.83033 | 76.06583 | 885 |
| PD17-56 | Tonalite Throndhjemite Granodiorite Gneiss | Western Dharwar | 12.92985 | 76.08125 | 994 |
| PD18-01 | Bt Granite | Closepet Granite | 16.33885 | 75.61198 | 525 |
| PD18-27 | Tonalite Throndhjemite Granodiorite Gneiss | Central Dharwar | 15.13743 | 76.84401 | 488 |
| PD18-34 | Bt Granite | Central Dharwar | 14.97457 | 76.44863 | 690 |
| PD18-37 | Bt Granite | Central Dharwar | 14.98212 | 76.36622 | 645 |
| PD18-39 | Granodiorite | Central Dharwar | 15.13962 | 76.98873 | 415 |
| PD18-44 | Granitoid gneiss | Central Dharwar | 14.97192 | 77.22908 | 497 |
| PD18-45 | Granitoid gneiss | Central Dharwar | 14.893 | 77.27879 | 493 |
| PD18-47 | Tonalite Throndhjemite Granodiorite Gneiss | Eastern Dharwar | 14.72877 | 77.51852 | 371 |
| PD18-54 | Tonalite Throndhjemite Granodiorite Gneiss | Eastern Dharwar | 14.32158 | 77.56143 | 461 |
| PD18-101 | Porphyritic Kfs Granite | Closepet Granite | 13.17818 | 77.28368 | 922 |
| PD18-104 | Tonalite Throndhjemite Granodiorite Gneiss | Central Dharwar | 13.54972 | 76.99198 | 760 |
| PD18-105 | Tonalite Throndhjemite Granodiorite Gneiss | Central Dharwar | 13.72904 | 76.88171 | 660 |
| PD18-108 | Tonalite Throndhjemite Granodiorite Gneiss | Western Dharwar | 13.89725 | 76.43247 | 679 |
| PD18-110 | Weakly foliated Granodiorite | Western Dharwar | 13.86205 | 76.35491 | 689 |
| PD18-111 | Granitic Gneiss | Western Dharwar | 13.77185 | 76.32336 | 670 |
| PD18-116 | Granite | Western Dharwar | 13.90487 | 75.57293 | 593 |
| PD18-118 | Tonalite Throndhjemite Granodiorite Gneiss | Western Dharwar | 14.20827 | 75.61265 | 569 |
| PD18-120 | Granoidioritic Gneiss | Western Dharwar | 13.67886 | 75.24567 | 613 |
| PD18-126 | Granite | Western Dharwar | 13.30347 | 75.82401 | 1035 |

*Table 1: Table representing the lithologies sampled for this study categorised into Western, Central and Eastern Dharwar Cratons along with Closepet Batholith and their locations.*

### 4.2 Zircon U–Pb geochronology, REE compositions and Lu–Hf isotopic data:

#### *4.2.1 TTG gneisses of the Western Dharwar Craton:*

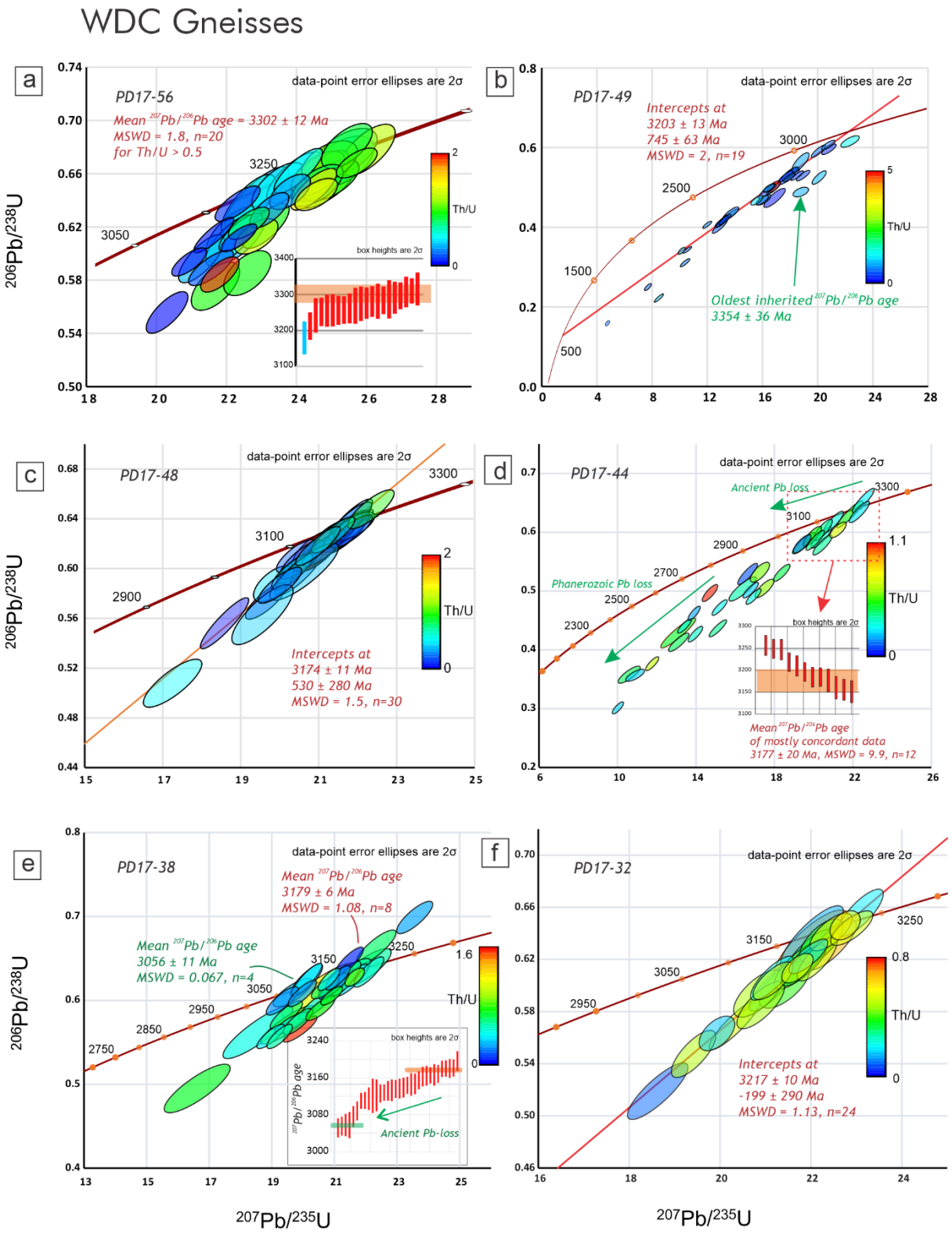


*Figure 2 representing the U–Pb data from older gneisses of the Western Dharwar Craton.*

PD17-56 is collected from a quarry in Javenahalli village, which lies in the vicinity of the oldest rocks so far reported from the Western Dharwar craton — the Gorur gneiss (Figure 2 (a)). The sample collected is a TTG gneiss that yielded mostly concordant zircons with $^{207}Pb/^{206}Pb$ ages ranging from 3334

± 37 Ma to 3176 ± 30 Ma. The Th/U ratios of analysed volumes decrease with age. Zircons younger than 3.25 Ga yield Th/U ratios < 0.2. Zircons with Th/U > 0.5 yield a mean $^{207}Pb/^{206}Pb$ age of 3302 ± 12 Ma (MSWD = 1.8, n=20). The age data are interpreted to indicate magmatic crystallisation at 3302 ± 12 Ma, followed by deformation and metamorphism with preferential expulsion of Th from the zircon lattice (Williams and Claesson, 1987) at ca. 3.2 Ga. (Figure This is further supported by the presence of bright rims around the zircons seen under CL (Figure 8). Seven spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280627–0.280720 with εHf(t) values in a range of +0.08 to +3.82. The zircons yielded Eu/Eu* values between 0.33–0.88, $La_N/Yb_N$ ratios varied from 0.00001–0.1; $Gd_N/Yb_N$ ranged between 0.0068–0.1224.

PD17-49 is from a homogenous granodioritic gneiss collected in Gorur town along the Gorur-Hassan road. The zircons are short and thick (Figure 8) with vague oscillatory zoning. The data are quite discordant, however, we have used nineteen of the youngest, and most concordant, grains to define an indicative discordia, marking the younger boundary of array. This has an upper intercept of 3203 ± 13 Ma (MSWD = 2, n=19). Older, possibly inherited grains, yield $^{207}Pb/^{206}Pb$ ages up to 3354 ± 36 Ma. We interpret 3203 ± 13 Ma as the best estimate of the time of crystallisation of the gneiss protolith supported by zircons showing mostly oscillatory zoning within the CL images (Figure 8). The zircons yielded Eu/Eu* values between 0.47–0.87, $La_N/Yb_N$ ratios varied from 0.0085–0.8676; $Gd_N/Yb_N$ ranged between 0.0447–1.1574. Four spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280683–0.280775 with εHf(t) values in a narrow range of -3.84 to +1.43.

PD17-48 is from a TTG gneiss collected from the west of Holenarsipur town. The zircons are elongated with clear oscillatory zoning in the CL images (Figure 8). It has yielded mostly near-concordant data (>90%), with a few highly discordant grains that align along a discordia line with an upper intercept of 3174 ± 11 Ma (MSWD = 1.5, n = 30). A weighted mean of $^{207}Pb/^{206}Pb$ ages from the near concordant grains (>90%) yielded a mean of 3153 ± 6 Ma (MSWD = 1.02, n = 29). This is interpreted as the best estimate of the age of crystallization of the TTG protolith. The zircons yielded Eu/Eu* values between 0.61–3.38, $La_N/Yb_N$ ratios varied from 0.0085–0.8676 and $Gd_N/Yb_N$ ranged between 0.0447–1.1574. Seven spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280733–0.280751 with εHf(t) values in a narrow range of -1.00 to +1.25.

PD17-44 is a granodioritic mesosome, collected from a migmatitic TTG gneiss. The zircons are short and commonly display metamict textures, with a few that preserve oscillatory-zoning. The oldest zircons are used to define a discordia line that marks to old margin of the array (Figure 2(d)). This has an upper intercept age of 3209 ± 11 Ma (MSWD = 2.5, n=10). The $^{207}Pb/^{206}Pb$ ages of near concordant (>90%) zircons define a weighted mean of 3177 ± 20 Ma (MSWD = 9.9, n=12). The zircons yielded Eu/Eu* values between 0.11–1.11. $La_N/Yb_N$ ratios varied from 0.00004–0.3548 and $Gd_N/Yb_N$ ranged between

0.01–0.3487. Six spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280719–0.280770 with εHf(t) values in a narrow range of -2.25 to -0.23.

PD17-38 is from a TTG gneiss collected from a quarry named Singanahalli Gate. The outcrop has veins of aplite and pegmatite cutting through segregated leucosome and melanosome that are uniformly distributed. The zircons appear thick elongated (Figure 8) and mostly display imperfect oscillatory zoning in CL, with a few exceptions displaying ideal magmatic zoning. The zircons from this sample have yielded mostly near-concordant grains (>90% concordant) with $^{207}Pb/^{206}Pb$ ages from 3182 ± 17 Ma to 3052 ± 20 Ma. A mean of the eight oldest near-concordant ages yielded a $^{207}Pb/^{206}Pb$ age of 3179 ± 7 Ma, which is interpreted as the age of crystallisation of the protolith of this gneiss. The four youngest near concordant $^{207}Pb/^{206}Pb$ ages, which also have Th/U ratios <0.2, are interpreted to provide the best estimate of the timing of metamorphism and deformation at 3056 ± 11 Ma. The zircons yielded Eu/Eu* values between 0.39–0.68, $La_N/Yb_N$ ratios from 0–0.0697 and $Gd_N/Yb_N$ ratios between 0.0189–0.1375. Seven spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280739–0.280817 with εHf(t) values in a narrow range of -1.39 to +1.85.

PD17-32 is a uniformly banded granodioritic gneiss collected on the west margin of Melukote Hill. The zircons are mostly short and rounded and display magmatic oscillatory zoning. This sample yielded ages that have an upper intercept of 3217 ± 9.4 Ma (MSWD = 1.13, n=24) and appear to have suffered modern Pb loss with a zero lower intercept. The upper intercept is interpreted to represent the best estimate for crystallization of the protolith of the gneiss. The zircons yielded Eu/Eu* values between 0.13–0.43, $La_N/Yb_N$ ratios varied from 0–0.62 and $Gd_N/Yb_N$ ranged between 0.0229–0.1087. Six spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280709–0.280824 with εHf(t) values widely ranging from -0.59 to +6.23.

PD18-118 is a TTG gneiss acquired at a contact zone with amphibole bearing schists of the Chitradurga Group, near the town of Honnali (Figure 1). The sample contained large pristine zircons that preserve magmatic oscillatory zoning in CL. The zircons are near concordant and yield a weighted mean $^{207}Pb/^{206}Pb$ age of 3284 ± 9 Ma (MSWD = 0.94, n=32), which is interpreted as the crystallization age of the protolith of the gneiss. The zircons yielded Eu/Eu* values between 0.25–0.39, $La_N/Yb_N$ ratios from 0–0.0008 and $Gd_N/Yb_N$ between 0.041–0.0871. Seven spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280633–0.280676 with εHf(t) values in a narrow range of +2.33 to +4.68.

PD18-108 is from a uniform banded TTG gneiss obtained from an outcrop structurally enclosed within the western segment of the Chitradurga Greenstone Belt. The gneisses are thought to represent a basement to the greenstone belt. Most U–Pb data are discordant. A group of near concordant (>85%) zircons were used to calculate a weighted mean $^{207}Pb/^{206}Pb$ age of 3232 ± 32 Ma (MSWD = 2.5, n=7). This

is interpreted as the best approximation for the age of crystallization of the gneiss protolith as CL images of these zircons preserve good magmatic oscillatory zoning. The zircons yielded Eu/Eu* values between 0.32–1.67, $La_N/Yb_N$ varied from 0.0033–0.3876 and $Gd_N/Yb_N$ ranged between 0.0589–0.8603. Six spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280662–0.280739 with εHf(t) values in a wider range of +1.51 to +4.29.

PD18-110 is a weakly foliated TTG gneiss on the western side of the Chitradurga Greenstone Belt. It yielded zircons with ages that align along a broad discordant array with a Mesoproterozoic upper intercept. The CL images show two groups of zircons—long elongated grains with good oscillatory zoning, and long elongated subhedral grains with a dark CL response. Two concordant zircons have similar $^{207}Pb/^{206}Pb$ ages of 3235 ± 37 Ma and 3203 ± 35 Ma, whilst a younger grain is dated at 3073 ± 35 Ma. The discordant analyses form an array from these concordant data towards the origin. The zircons yielded Eu/Eu* values between 0.18–1.36, $La_N/Yb_N$ ratios varied from 0.0002–0.7127 and $Gd_N/Yb_N$ ranged between 0.0795–0.9937. Four spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280721–0.280819 with εHf(t) values in a wider range of -1.36 to +4.94.

PD18-120 is a weakly foliated granitic gneiss sampled from a cliff face at Thirthahalli village (Figure 1). The zircons are mostly subhedral and thick with uneven oscillatory zoning combined with partially metamict cores in some grains (Figure 8). This sample has yielded zircons that range from slightly reversely discordant to highly normally discordant. Thirteen near concordant (95–105%) analyses form a linear array and are used to calculate a discordia with an upper intercept of 3154 ± 9 Ma (MSWD = 1.6, n = 13), which is interpreted as the best estimate of crystallisation of the granite. A sole concordant analysis at 2935 ± 6 Ma may represent a later thermal event. The zircons yielded Eu/Eu* values between 0.21–0.79, REE ratios—$La_N/Yb_N$ varied from 0–0.0871; $Gd_N/Yb_N$ ranged between 0.0086–0.5216. Six spots yield an initial $^{176}Hf/^{177}Hf$ values of 0.280662–0.280739 with εHf(t) values in a wider range of +1.51 to +4.29.

PD17-21 is a banded gneiss on the western margin of the Nagamangala Greenstone Belt. The zircons from this sample are mostly elongated with clear magmatic oscillatory zoning and a few subhedral grains that appear to have an unclear/metamict CL response. The zircons broadly define a triangular array of data, with the concordia maximum and minimum ages of 3048 ± 24 Ma and 2924 ± 23 Ma, with a lower intercept at ca 624 ± 89 Ma. There is a spread in $^{207}Pb/^{206}Pb$ grain ages of the near concordant (>85%) zircons with general decrease in Th/U ratio with decreasing age. These data are interpreted to represent crystallization of the gneiss protolith at, or before, 3048 ± 24 Ma and Pb-loss during metamorphism at ca 2924 ± 23 Ma. The zircons yielded Eu/Eu* values between 0.32–1.27,

$La_N/Yb_N$ ratios varied from 0.0028–0.0872 and $Gd_N/Yb_N$ ranged between 0.0151–0.0791. Six spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280831–0.280914 with εHf(t) values ranging from -2.04 to +0.54.

PD18-111 was collected west of the Chitradurga Greenstone Belt from a uniformly banded migmatitic granitic gneissic body. All data define a linear discordia array. The >85% concordant zircons have Th/U ratios greater than 0.2 and yielded a weighted mean $^{207}Pb/^{206}Pb$ age of 3216 ± 17 Ma (MSWD = 12, n=13). This is interpreted as the best estimate of the crystallization age of the gneissic protolith from the oscillatory zoning visible in the CL images. The zircons yielded Eu/Eu* values between 0.39—0.59, $La_N/Yb_N$ varied from 0.006 — 0.06 and $Gd_N/Yb_N$ ranged between 0.05—0.29. Four spots yielded initial $^{176}Hf/^{177}Hf$ values of 0.280685–0.280734 with εHf(t) values in a narrow range of +1.48 to +3.33.

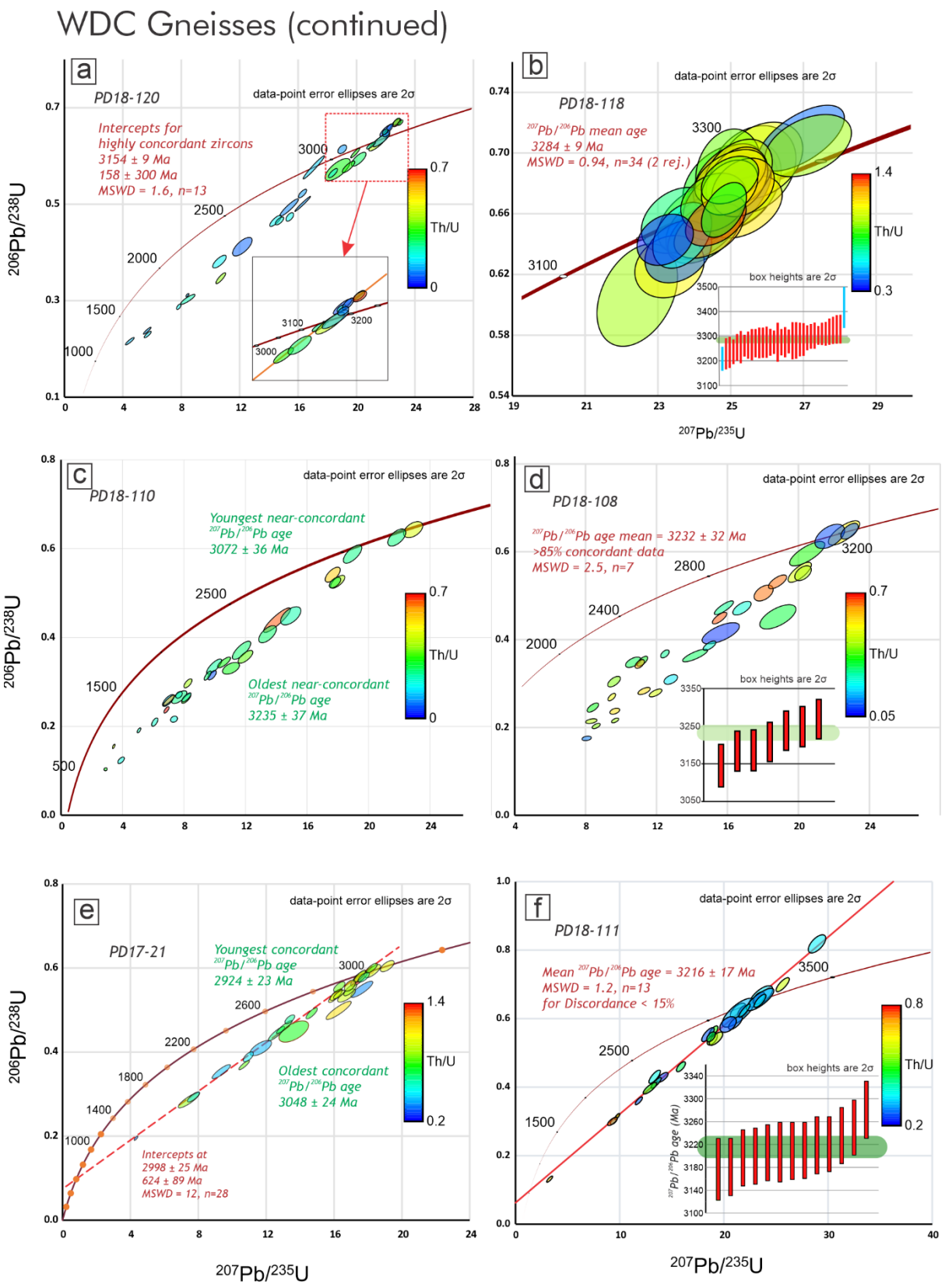


*Figure 3 representing the U–Pb data from older gneisses of the Western Dharwar Craton*

### *4.2.2 Undeformed granitoids of the Western Dharwar Craton:*

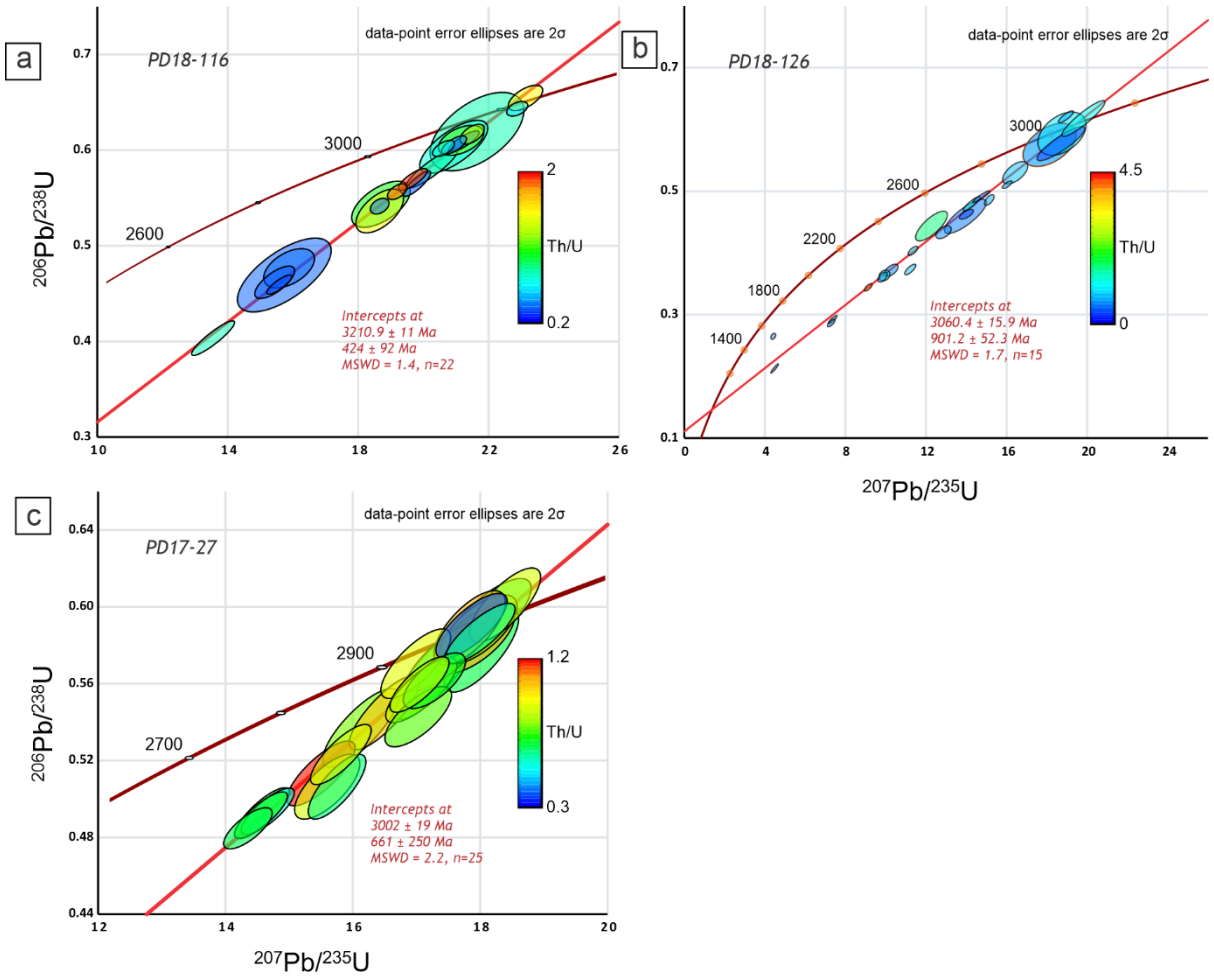


*Figure 4 representing the U–Pb data from undeformed granitoids of the Western Dharwar Craton.*

PD18-116 was sampled from a massive granite quarry in the town of Shimoga (Figure 1). It yielded zircons that define a discordia line with an upper intercept of 3211 ± 11 Ma and a lower intercept of 424 ± 92 Ma (MSWD = 1.4, n=22). The more discordant grains are generally lower in Th/U ratio. The age of 3211 ± 11 Ma is interpreted as the crystallization age of this granite as the zircons display clear magmatic oscillatory zoning in CL. The zircons yielded Eu/Eu* values between 0.16–0.87, $La_N/Yb_N$ ratios varied from 0.0002–0.0478 and $Gd_N/Yb_N$ ranged between 0.0472–0.3247. Eight spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280713–0.280769 with εHf(t) values in a narrow range of +0.12 to +3.58.

PD18-126 was acquired from a massive granite body towards the south-east of Chikamagalur town (Figure 1). The zircons from this sample are slightly elongated and show subtle oscillatory zoning. Zircon U–Pb data align along a discordia line with an upper intercept of 3060 ± 16 Ma and a lower intercept of 901 ± 52 Ma (MSWD = 1.7, n=15). The upper intercept is interpreted as the best estimate of the age of crystallization of this granite. The zircons yielded Eu/Eu* values between 0.43–2.4, $La_N/Yb_N$

ratios varied from 0.0004–0.14 and $Gd_N/Yb_N$ ranged between 0.0219–0.5593. Six spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280796–0.280885 with εHf(t) values in a wider range of -4.75 to -1.05.

PD17-27 is a slightly foliated granite body collected towards the north of Nagamangala town (Figure 1). The zircons are slightly elongated and mostly display oscillatory zoning. This sample yielded mostly near concordant zircons that align along a discordia line with an upper intercept age of 3002 ± 19 Ma and an imprecise lower intercept age of 661 ± 250 Ma (MSWD = 2.2, n=25). The upper intercept is takes as the best estimate for the crystallization age of the granite. Five spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280859 – 0.280868 with εHf(t) values ranging from -1.87 to +0.77. The zircons yielded Eu/Eu* values between 0.25—0.46, $La_N/Yb_N$ ratios varied from 0.004–0.18 and $Gd_N/Yb_N$ ranged between 0.0498–0.101.

### *4.2.3 Foliated gneisses of the Central Dharwar Craton:*

PD18-104 was collected from a banded gneiss sandwiched by two greenstone belts belonging to the Sargur Group on the eastern margin of the Chitradurga Greenstone Belt (Figure 1). The zircons display cores and very thin rims in CL. The cores define a discordia line with an upper intercept of 3301 ± 22 Ma (MSWD = 0.81, n=25). This is interpreted as the age of crystallization of the gneiss protolith. Ancient isotopic disturbance is recorded by eight analyses that lie to the left of this discordia. A discordia constructed through these eight analyses has an upper intercept of 3184 ± 35 Ma (MSWD = 1.5, n=8). We interpret this to indicate the time of metamorphism and partial melting. The zircons yielded Eu/Eu* values between 0.25–0.38, $La_N/Yb_N$ ratios varied from 0.0022–0.5102 and $Gd_N/Yb_N$ ranged between 0.0736–0.529. Five laser spots yield initial $^{176}Hf/^{177}Hf$ values of 0.280624–0.280654 with εHf(t) values in a narrow range of +1.72 to +3.04.

PD18-34 was collected from a granodioritic TTG gneiss structurally enclosed within a granitic body to the north-west of the Closepet granite batholith (Figure 1). The zircons are short and thick and display an overall dark CL response with a few grains displaying subtle oscillatory zonation. Most zircons were highly discordant with only five analyses near-concordance. These consist of four analyses between 3067 ± 41 Ma and 2927 ± 33 Ma and a lone concordant analysis with a $^{207}Pb/^{206}Pb$ age of 3368 ± 35 Ma. The zircons yielded Eu/Eu* values between 0.15–2.26, $La_N/Yb_N$ varied from 0.0001–0.8357 and $Gd_N/Yb_N$ ranged between 0.0257–0.8082. Three spots yielded initial $^{176}Hf/^{177}Hf$ values of 0.280854–0.280901 with εHf(t) values in a narrow range of -2.52 to -0.68.

PD17-14 is a pegmatite-bearing uniformly banded gneiss, collected on the eastern fringe of the southern extension of the Chitradurga Greenstone Belt (Figure 1). Most of the zircon grains are small and elongated with metamict cores and preserved oscillatory zoning towards the rims. The analyses

with the youngest $^{207}Pb/^{206}Pb$ ages define a discordia line with an upper intercept of 3014 ± 24 Ma (MSWD = 1.5, n=12). Two concordant older grains have ages of 3142 ± 35 Ma and 3062 ± 25 Ma. The zircons yielded Eu/Eu* values between 0.35–0.76, $La_N/Yb_N$ ratios varied from 0.0061–1.6371 and $Gd_N/Yb_N$ ranged between 0.0437–0.4786. No grains were selected for Hf isotopic analysis as the zircons were not big enough for the spot size of 50 μm.

PD18-27 is a melanosome collected from a quarry to the west of Ballari (Bellary) city (Figure 1) and the gneiss was intruded by granitic and pegmatitic dykes. The zircons vary in shape and appear to have an overall dark CL response, with a few grains showing subtle oscillatory zoning. The zircons are highly discordant. Twelve grains can be used to form a discordia line marking the upper boundary of the data array in the concordia plot. This discordia has an upper intercept of 2722 ± 20 Ma (MSWD = 1.3, n=12) and a lower intercept of 546 ± 17 Ma. We tentatively use the upper intercept as an estimate of crystallisation of the protolith of the gneiss. The discordant analyses also appear to have lost variable amounts of Pb in the modern environment, drawing them down from the discordia towards the origin. The zircons yielded Eu/Eu* values between 0.16–0.87, $La_N/Yb_N$ ratios varied from 0.0002–0.0478 and $Gd_N/Yb_N$ ranged between 0.0472–0.3247. Two spots yielded initial $^{176}Hf/^{177}Hf$ values of 0.281039 and 0.281056 with εHf(t) values of -0.73 and -0.69.

PD18-44 was from a TTG gneiss containing porphyritic mafic enclaves collected from the east of Ballari city (Figure 1). The zircons yielded many discordant data. The grains are short and thick and mostly preserve oscillatory zoning in CL. Some of the grains contain inclusions. Five near-concordant data define a mean weighted mean $^{207}Pb/^{206}Pb$ age of 2670 ± 23 Ma (MSWD = 0.52, n=5). This is interpreted as the best estimate of the crystallisation age of the gneiss protolith. The zircons yielded Eu/Eu* values between 0.13–2.23, $La_N/Yb_N$ ratios varied from 0.0017–0.3334 and $Gd_N/Yb_N$ ranged between 0.0533–0.3841. Five spots yield initial $^{176}Hf/^{177}Hf$ values of 0.281057–0.281089 with εHf(t) values in a narrow range of -6.96 to -5.32.

PD18-39 was collected from a weakly foliated granodioritic gneiss north of Ballari city (Figure 1). Sixteen zircons define a discordia line with an upper intercept of 2677 ± 22 Ma (MSWD = 1.5, n=16) with a modern lower intercept. This is interpreted as the best estimate of the crystallization age of the gneiss protolith since the zircons show oscillatory zoning and have an elongated euhedral shape. The discordant zircons below this line are interpreted to reflect older, possibly inherited zircons. The zircons yielded Eu/Eu* values between 0.38–0.56, $La_N/Yb_N$ ratios varied from 0.0031–0.2783 and $Gd_N/Yb_N$ ranged between 0.0344–0.5108. Three spots yield initial $^{176}Hf/^{177}Hf$ values of 0.281064–0.281072 with εHf(t) values in a narrow range of -3.66 to -1.83.

PD18-37 was collected from a weakly foliated granite to the west of the Closepet Granite that intruded into older basement gneiss. Eighteen of the twenty-eight analyses define a discordia line with an upper intercept of 2566 ± 16 Ma (MSWD = 1.3, n=18), which is interpreted as the best estimate of the age of crystallization of the granite. One concordant zircon yielded a $^{207}Pb/^{206}Pb$ age of 2748 ± 49 Ma that is interpreted as an inherited grain as it had a darker CL response compared to the other grains that preserved weak oscillatory zoning. The zircons yielded Eu/Eu* values between 0.39–1.04, $La_N/Yb_N$ ratios varied from 0.0008–1.5921 and $Gd_N/Yb_N$ ranged between 0.0674–1.4508. Seven spots yield initial $^{176}Hf/^{177}Hf$ values of 0.281126–0.281166 with εHf(t) values in a narrow range of -4.01 to -0.76.

CDC Gneisses

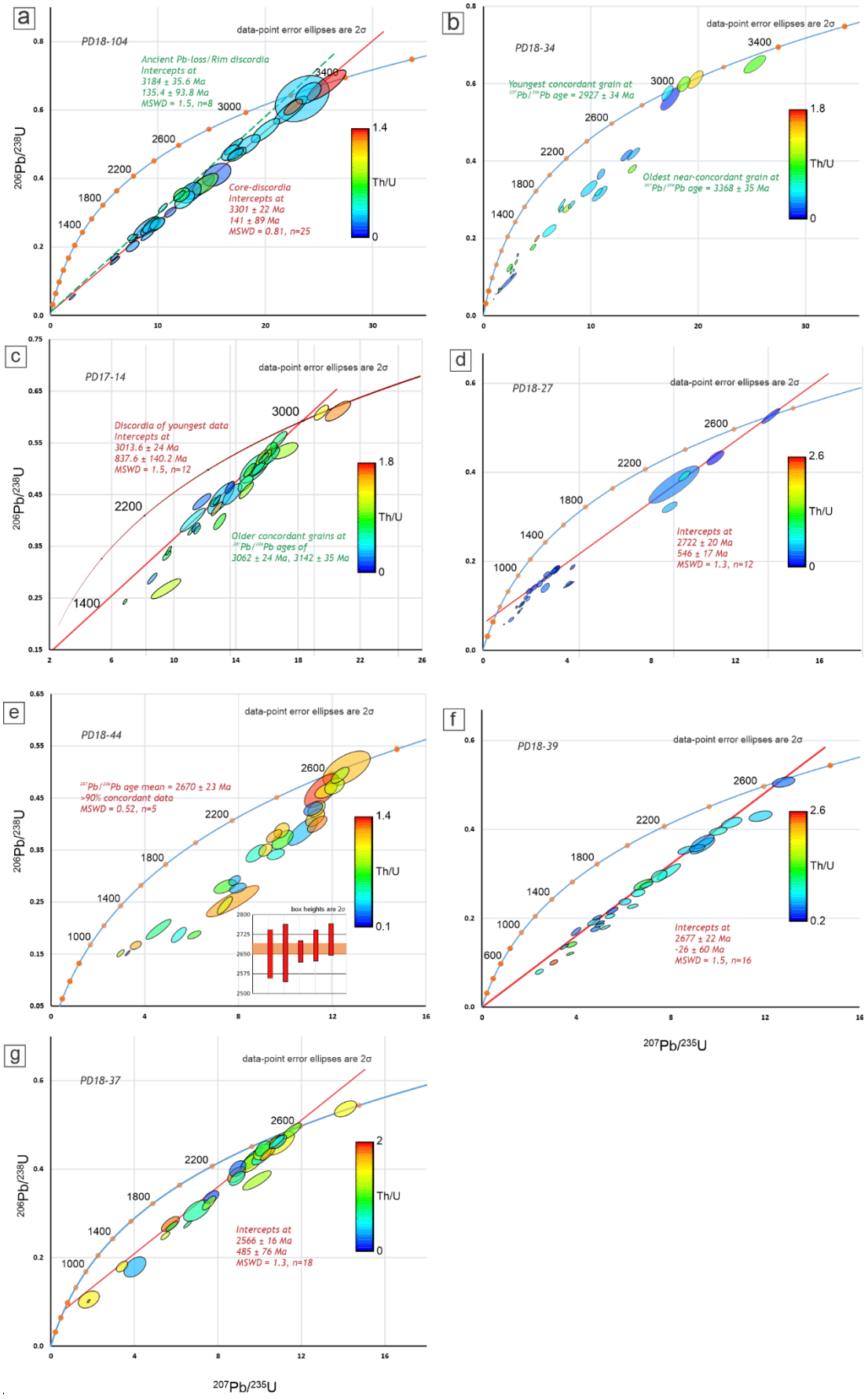

*Figure 5 showing U–Pb data from the gneisses across the Central Dharwar Craton with the older gneiss to west in (a) to the younger gneiss towards the east of Central Dharwar.*

### *4.2.4 Felsic batholiths of the Central Dharwar Craton:*

PD18-45 was from a homogenous granodiorite body a few kilometres south-east from PD18-44. Zircon U–Pb data define a discordia line with an upper intercept of 2676 ± 17 Ma and a lower intercept of 467 ± 47 Ma (MSWD = 0.81, n=25). The upper intercept is interpreted as the time of granite crystallization. The lower intercept is interpreted to represent Palaeozoic isotopic disturbance. The zircons appear thick and slightly elongated and display subtle oscillatory zoning, but overall have a dark CL response. The zircons yielded Eu/Eu* values between 0.12–7.54, LaN/YbN ratios varied from 0.0011–0.2942 and GdN/YbN ranged between 0.0258–0.1575. Five spots yield initial 176Hf/177Hf values of 0.281098–0.281179 with εHf(t) values in a narrow range of +1.46 to +3.66.

PD18-105 was collected from a banded gneiss with mafic enclaves that was intruded by metre-thick granite veins within a quarry near the town Sira, which lies between the Chitradurga Greenstone Belt and the Sargur Group (Figure 1). The sample was taken from the granite vein. The zircons are mostly euhedral and majority of the CL response of the zircons appear to be in a stage between magmatic oscillatory zoning and metamictization. Sixteen of the zircons are used to define a discordia line that marks the upper boundary of the data array. This discordia has an upper intercept of 2604 ± 16 Ma and a lower intercept of 504 ± 33 Ma (MSWD = 1.2, n=16). The upper intercept is interpreted as marking the best estimate of crystallisation of the granite. The lower intercept is likely to represent isotopic disturbance associated with the orogenesis preserved south of the Dhawar Craton (Plavsa et al. 2015). Analyses that plot below this discordia are suggested to represent discordant inherited grains. The zircons yielded Eu/Eu* values between 0.05–0.78, LaN/YbN ratios varied from 0.0002–0.5024 and GdN/YbN ranged between 0.0486–0.3590. Five spots yield initial 176Hf/177Hf values of 0.281057–0.281164 with εHf(t) values in a narrow range of -2.06 to +2.2.

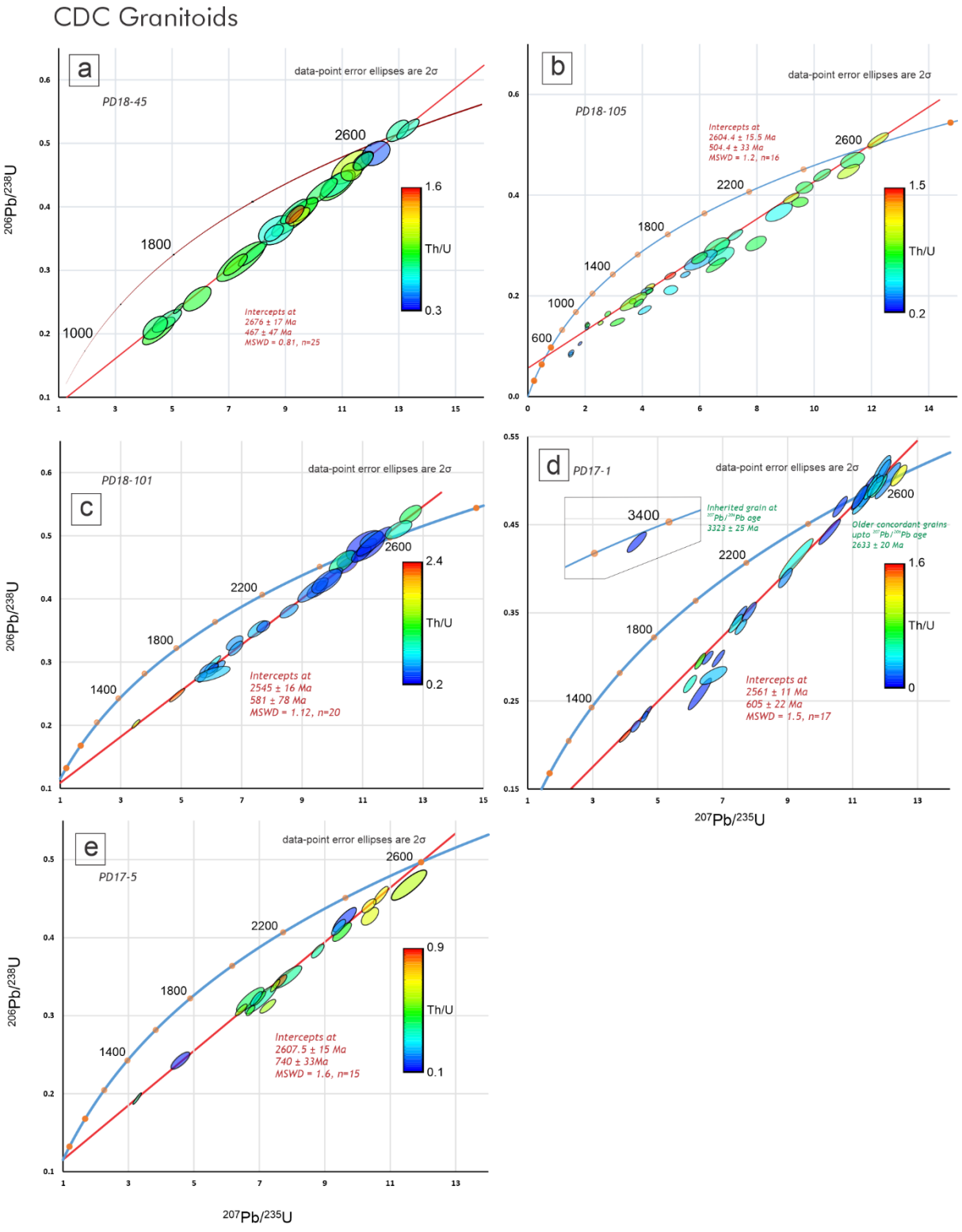


*Figure 6 represents the U–Pb data from felsic batholiths across the Central Dharwar Craton.*

PD17-1 is a granite collected from the eastern periphery of the southern part of the Closepet granite. The zircons are crystalline and elongated in shape and mostly preserve subtle oscillatory zoning. Eighteen zircon grains define a discordia line that bounds the data array and has an upper intercept age of 2561 ± 11 Ma and a lower intercept of 605 ±22 Ma (MSWD = 1.5, n=17). The upper

intercept is interpreted as the best estimate of crystallization of the granite. Concordant zircons form a spread back to 2633 ± 20 Ma, with one discrete concordant analysis at 3323 ± 25 Ma. These are interpreted as inherited zircons. One younger analysis at 2486 ± 17 Ma may suggest hydrothermal zircon growth past crystallization. The zircons yielded Eu/Eu* values between 0.12–6.06, $La_N/Yb_N$ ratios varied from 0.0001–0.4855 and $Gd_N/Yb_N$ ranged between 0.0063–0.079. Seven spots yield initial $^{176}Hf/^{177}Hf$ values of 0.281104–0.281165 and the εHf(t) values range from -6.77 to -3.87.

PD18-101 was collected from the eastern boundary of the Closepet Granite, 40 kilometres north of PD17-1, from a porphyritic granite with orthoclase phenocrysts up to 2 cm long. The zircons have Th/U ratios > 0.2 and align along a discordia line with upper intercept of 2545 ± 16 Ma and a lower intercept of 581 ± 78 Ma (MSWD = 1.12, n=20). The upper intercept is interpreted as the best estimate of the age of crystallization of this sample. The zircons preserve oscillaroty zoning in CL and yielded Eu/Eu* values between 0.38–0.98, $La_N/Yb_N$ ratios between 0.0–4.427 and $Gd_N/Yb_N$ between 0.0268–0.16. Five spots yield initial $^{176}Hf/^{177}Hf$ values of 0.281130–0.281182 with εHf(t) values in a narrow range of -7.24 to -6.03.

PD17-5 is a calc-alkaline sample in the Closepet Granite batholith containing dark biotite-rich veins near Thagachaguppe village between Bangalore and Mandya. The zircon analyses define a broad discordant array with fifteen of them used to define a discordia line that bounds the young margin of the array and yields an upper intercept of 2607.5 ± 15 Ma and a lower intercept of 740 ± 33 Ma (MSWD = 1.6, n=15). The zircons have Eu/Eu* values between 0.32–0.63, $La_N/Yb_N$ ratios between 0.0095–0.3590 and $Gd_N/Yb_N$ between 0.0540–0.2078. This sample was not selected for Hf-isotopic analysis due to presence of numerous apatite inclusions within the oscillatory zoned zircons.

### *4.2.5 Transitional TTGs and granites of the Eastern Dharwar craton:*

PD18-01 is a granite collected at the northern periphery of the Closepet Granite adjacent to the Kaladgi-Badami basin, in the north of the Dharwar Craton. Zircon U–Pb data are quite spread and many are discordant. Eight of the analyses are used to define a discordia line that bounds the young boundary of the array, with an upper intercept of 2613 ± 24 Ma and an imprecise lower intercept of 446 ± 110 Ma (MSWD = 0.97, n=8). The upper intercept is taken as the best estimate of the age of crystallisation of the granite, as the zircons display faint, yet well-defined, oscillatory zoning in CL. The other discordant data are interpreted as an unresolved mix of older inheritance, Phanerozoic Pb loss and possible common Pb. The zircons yielded Eu/Eu* values between 0.5–1.52, $La_N/Yb_N$ ratios between

0.0009–0.6940 and $Gd_N/Yb_N$ ratios between 0.0420–0.4136. Four spots yield initial $^{176}Hf/^{177}Hf$ values of 0.281060–0.281148, with εHf(t) values in a narrow range of -0.03 to +2.26.

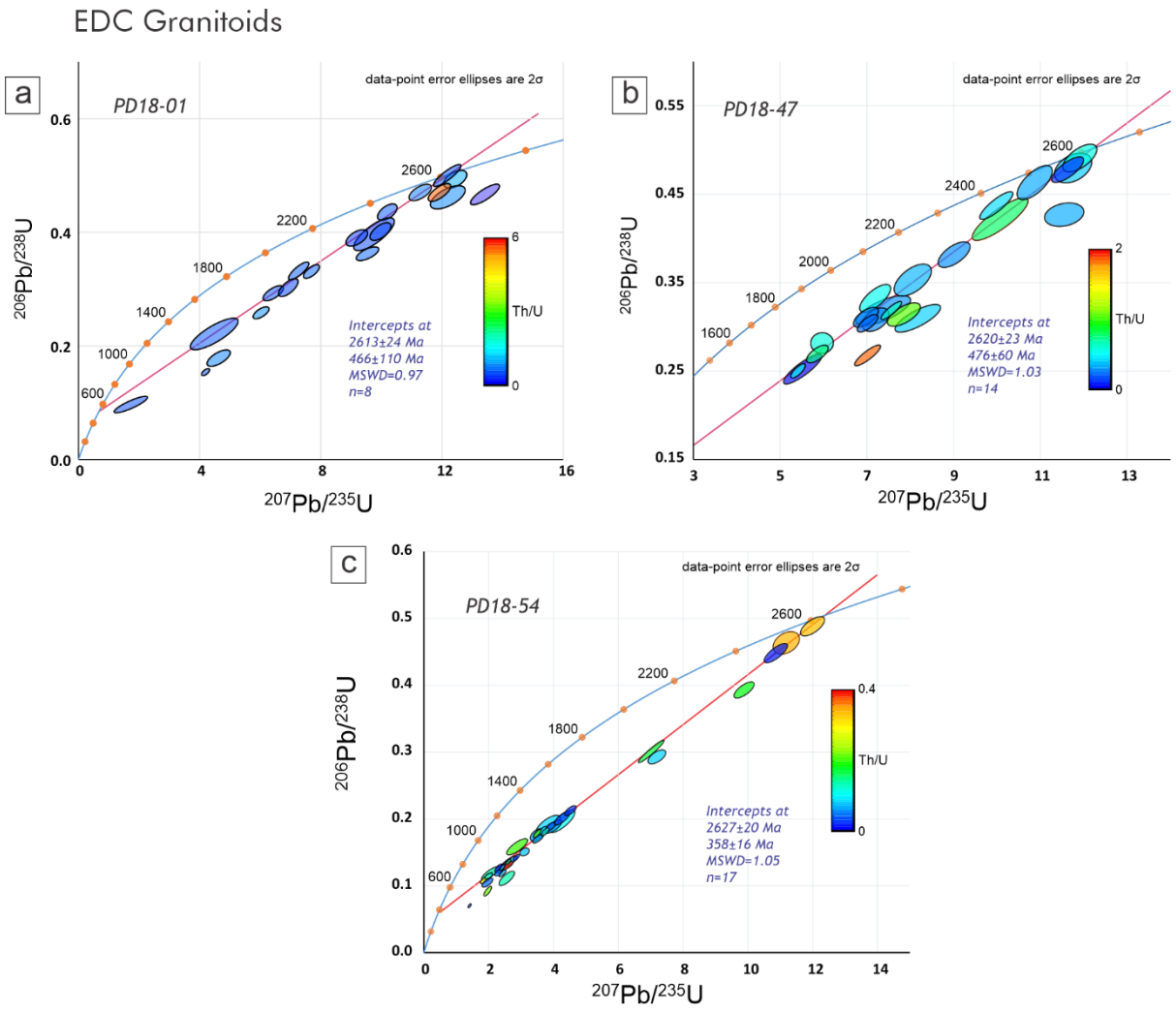


*Figure 7 showing the U–Pb data from the zircons from Eastern Dharwar Granitoids.*

PD18-47 is the melanosome from a banded TTG gneiss that is cross-cut with aplite veins. It was collected from south of Anantpur town (Figure 1). Fourteen of the youngest analyses define a discordia line with an upper intercept age of 2620 ± 23 Ma and a lower intercept of 476 ± 60 Ma (MSWD = 1.03, n=14). The upper intercept is taken as the best estimate of the age of crystallisation, which is supported by the recognition that these zircons are elongated and preserve oscillatory zoning in CL. Older discordant grains are interpreted to be a combination of common Pb, Phanerozoic Pb loss and or/inheritance. The zircons yielded Eu/Eu* values between 0.24–1.94, $La_N/Yb_N$ ratios varied from

0.0036–12.9218 and $Gd_N/Yb_N$ ranged between 0.0081–2.0731. Four spots yield initial $^{176}Hf/^{177}Hf$ values of 0.281098–0.281179 with εHf(t) values in a narrow range of +1.46 to +3.66.

PD18-54 was from a uniformly banded migmatitic gneiss on the eastern boundary of the Ramagiri Greenstone Belt. Zircons are mostly discordant with low Th/U ratios < 0.1. Seventeen of the youngest $^{207}Pb/^{206}Pb$ ages are used to define a discordia line with an upper intercept at 2627 ± 20 Ma and a lower intercept of 358 ± 16 Ma (MSWD = 1.05, n=17). An array of highly discordant data spreading from this discordia line towards the origin are interpreted to reflect a second Pb loss phase in the modern environment. We interpret the unusual lower intercept age to also reflect modern isotopic disturbance that has offset all the discordant data towards the origin. The zircons yielded Eu/Eu* values between 0.36–0.87, $La_N/Yb_N$ ratios varied from 0.0278–1.1240 and $Gd_N/Yb_N$ ranged between 0.0448–1.451. Three spots yield initial $^{176}Hf/^{177}Hf$ values of 0.281085–0.281118 with εHf(t) values in a narrow range of +2.75 to +4.50.

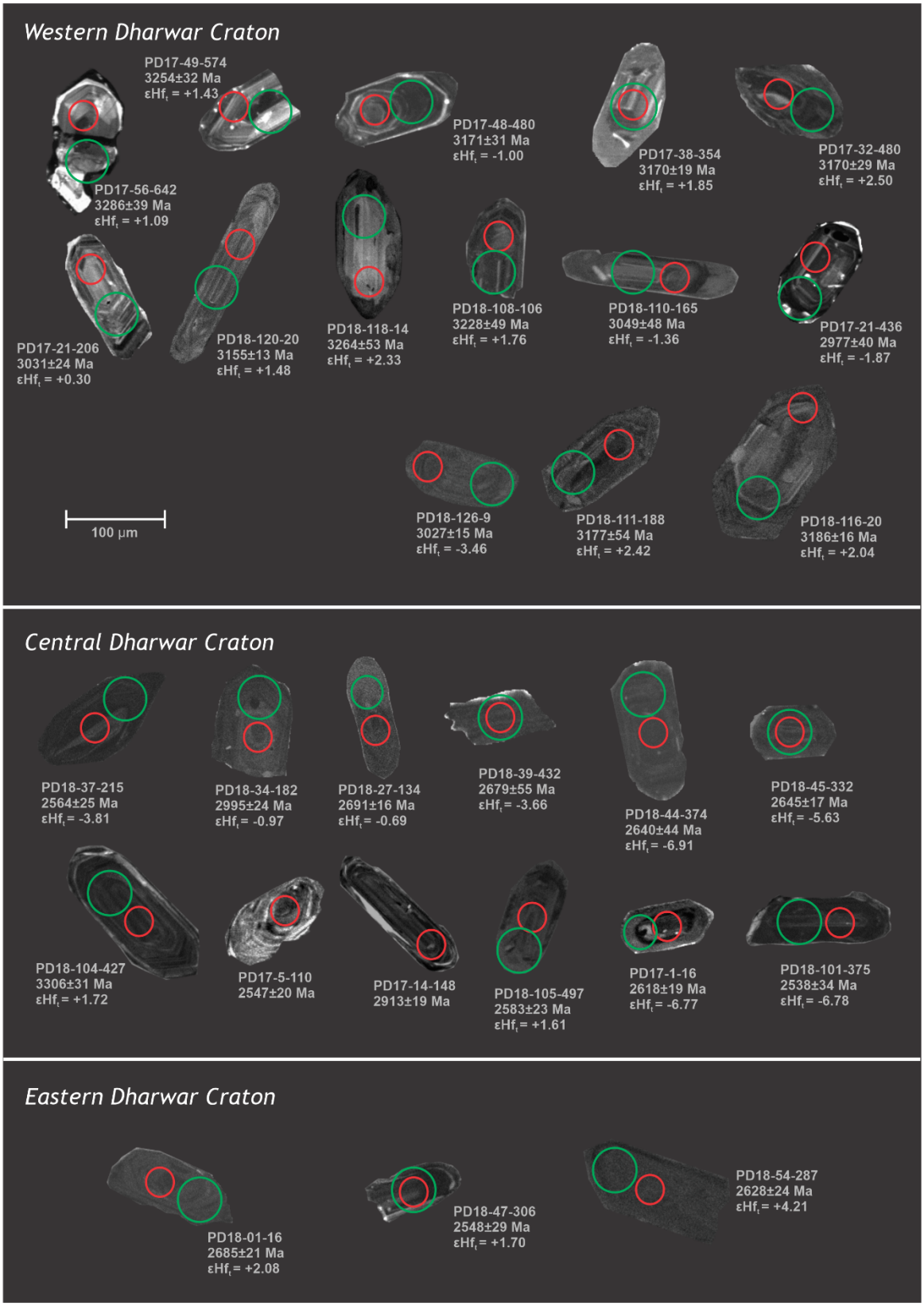


*Figure 8: Representative cathodoluminescence (CL) images of zircons from each sample analyzed in this study labelled with constrained U–Pb age and corresponding εHf(t) value. The red and green circles represent the ablated portion of the zircon for U–Pb age and Lu–Hf isotopes respectively.*

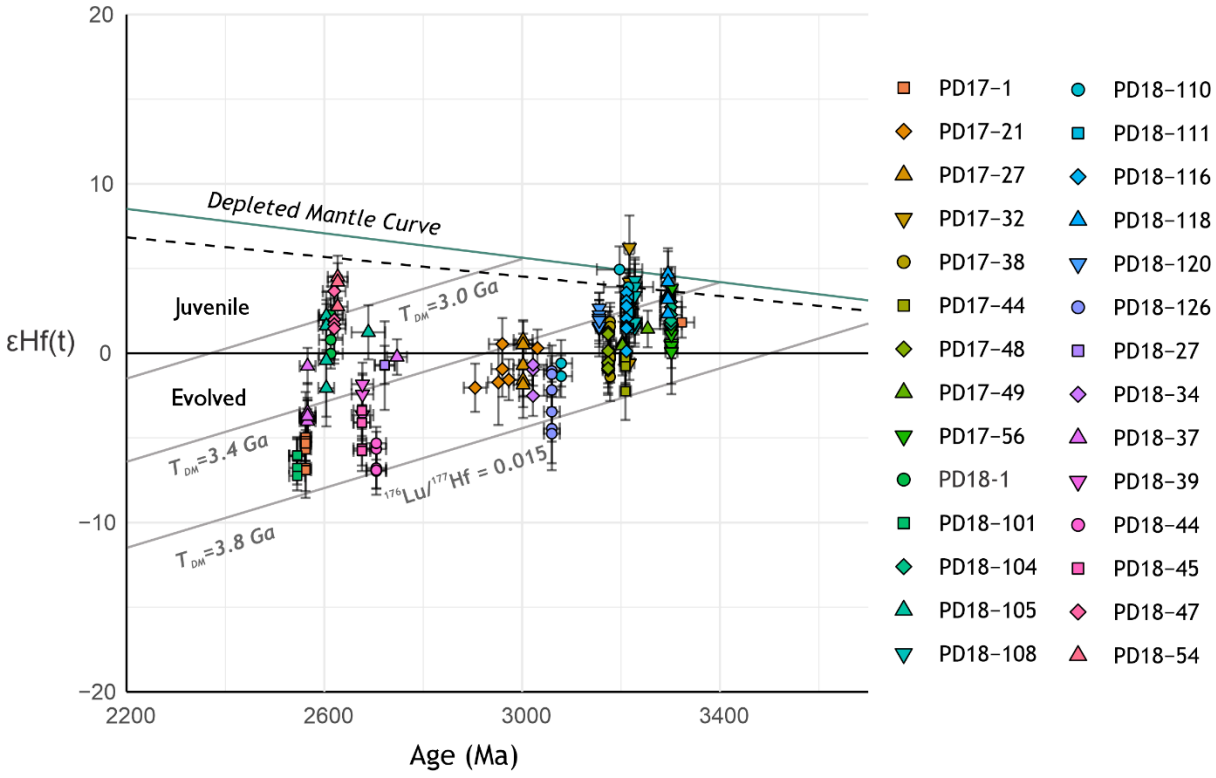


*Figure 9: εHf(t) versus interpreted magmatic ages obtained in this study for each sample. The uncertainties plotted are at 2σ. The horizontal line at εHf(t) = 0 represents CHUR – Chondritic Uniform Reservoir, representing the bulk Earth. The depleted mantle line is calculated by using the εHf(t) equation with the values: modern $^{176}Hf/^{177}Hf_{DM}$ = 0.28325 (Griffin et al., 2000) and modern $^{176}Hf/^{177}Hf_{CHUR}$ = 0.282785 (Bouvier et al., 2008). The new crust line has been adapted from Dhuime et al. (2011). The values of crustal model ages ($T_{DM}^{C}$) and crustal evolution lines were calculated using a $^{176}Lu$ decay constant of 1.865 × $10^{-11}$ year $^{-1}$(Scherer et al., 2001), modern $^{176}Hf/^{177}Hf$ = 0.28325, modern $^{176}Lu/^{177}Hf$ = 0.0384 (Griffin et al., 2000), and a bulk crust value of $^{176}Lu/^{177}Hf$ = 0.015 (Griffin et al., 2002).*

## 5. Discussion:

### *5.1 Magmatic/accretionary episodes of Dharwar craton from zircon U–Pb data:*

#### *5.1.1 Western Dharwar Craton*

The WDC is regarded as the oldest part of the Dharwar Craton and has a nucleus of TTG gneisses, whose protoliths crystallised at 3.4–3.0 Ga (Lancaster et al., 2015; Peucat et al., 2013). The protolith to sample PD17-56 crystallised at ca. 3300 Ma and forms a part of the oldest kernel of the WDC. The decreasing Th/U ratios with age, shown by zircons from this sample, are interpreted to reflect ancient Pb-loss during ca. 3.2 Ga metamorphism and partial melting. This magmatic and metamorphic event is recorded throughout the WDC, and is recorded in the protolith crystallisation ages of samples PD17-38, PD17-44, PD17-48, PD17-49, PD18-108, PD18-111, PD18-116, PD18-118, PD18-120 that range from ca. 3.28–3.15 Ga. The next tectonic event in the WDC is at about 3.07–3.00 Ga when potassic granites intrude through the area (Jayananda et al., 2006, Chadwick et al., 2007, Chardon et al., 2011), which was observed in the crystallisation ages of the samples PD18-126 and PD17-27 (and

arguably PD18-110). PD17-38 also experienced zircon growth and isotopic disturbance at this time. These two magmatic events are separated by Mesoarchaean upper-amphibolite facies metamorphism of the Holenarsipur greenstone belt (3.14-3.10 Ga). The WDC is bound on the east by the Chitradurga greenstone belt/shear zone (Chadwick et al., 1981) that preserves two volcano-sedimentary groups—the older Sargur Group (3.22–2.92 Ga) and the younger Dharwar Supergroup (2.68–2.63 Ga)(Hokada et al., 2013, Nasheeth et al., 2015). The crystallisation ages for the magmatic and meta igneous samples within the WDC are reflected in the detrital zircon record of metasandstones within the Chitradurga Greenstone Belt. To the north of the Chitradurga Greenstone Belt, magmatic ages have been reported from felsic volcanics and granites of ca. 2.59 Ga and ca. 2.56 Ga (Sarma et al., 2011; Mohan et al., 2014), demonstrating the presence of K-feldspar rich intrusions in the late Neoarchaean (Li Shanshan et al., 2018).

### *5.1.2 Central Dharwar Craton*

The recently defined Central Dharwar Craton (CDC) has evolved through two stages of TTG magmatism (3.38–3.23 Ga and 3.15–2.96 Ga), these are followed by the intrusion of transitional TTGs between 2.70–2.56 Ga and sanukitoids at ca. 2.56–2.52 Ga (Chardon et al., 2011, Jayananda et al., 2013a, 2018). To the south, the high-grade gneisses and granulites in Biligiri-Rangan Hills (Figure 1) preserve protolith crystallisation ages 3.36–3.31 Ga, 3.2–3.1 Ga and 2.99–2.97 Ga (Peucat et al., 2013; Ratheesh Kumar et al., 2016). The Biligiri-Rangan Hills area, in particular, preserves a magmatic history very similar to that of the WDC.

Sample PD18-104 represents the earlier phase of TTG accretion in the central block and has experienced a thermal overprint that is coeval with metamorphism in the Biligiri-Rangan Hills region at ca. 3.21–3.16 Ga. Samples PD17-14, PD17-21, PD17-27, along with the vestigial remnant of the basement in the CDC (i.e., PD18-34), represent the second stage of TTG magmatism that may be associated with reworking of the existing crust during the same thermal event. PD18-27, PD18-39, PD18-44, PD18-45, PD18-47, PD18-01 and PD18-54 represent the younger phase of TTG magmatism (Krogstad et al., 1991, Balakrishnan et al., 1999), here ranging between 2.72–2.61 Ga. The Chitradurga Shear Zone acts as the western boundary of CDC and is bound by the Kolar-Kadiri Greenstone Belt on its east. The CDC has experienced three major thermal events at 3.2 Ga, 2.6 Ga and 2.5 Ga hypothesized from textural garnet Lu–Hf isochrons from Biligiri Rangan hills on the southern fringe (Jayananda et al., 2013; Yang and Santosh, 2015). The CDC is made up of older gneisses to the west which have experienced similar histories as the older gneisses in the WDC. Concordia diagram of PD17-32 captures the 3.2 Ga thermal event with samples from southern region of WDC crystallizing following the event. PD18-105 appears to have witnessed the local 2.6 Ga thermal event near the Chitradurga greenstone

belt, emplaced as high-K granitic pluton derived from reworking Archaean basement (Jayananda et al., 2006) and is formed contemporaneously with the transitional TTGs that span between CDC and EDC.

The Closepet Granite batholith cuts older rocks in the CDC, is roughly N–S oriented and stretches for over 500 km. It formed around 2.52–2.50 Ga (Chardon et al., 2011; Jayananda et al., 2013) from deep crustal melting associated with crustal thickening through underplating from mantle-generated magmas (Moyen et al., 2001). The intrusion of this vast batholith caused partial melting of the older gneisses through contact metamorphism along its periphery. PD17-1 and PD18-101 are from the south east periphery of the Closepet Granite and mark this late ca. 2.55 Ga magmatism/thermal event. PD17-37 was sampled from the north western periphery of the Closepet Granite and preserves a similar crystallisation age. PD17-5 is from a K-rich gneiss that may represent a ca. 2.62 Ga vestigial basement to the Closepet Granite.

#### *5.1.3 Eastern Dharwar Craton*

The samples PD18-47, PD18-54, PD18-01, were sampled close to the western margin of the EDC, the first two samples from east of the Ramagiri Greenstone Belt (Figure 1). PD18-01 is a granodioritic member of the transitional TTGs that are found in both the CDC (ca. 2670-2600 Ma) and the EDC (ca. 2590-2580 Ma; Jayananda et al 2019). These rocks have been explained as the products of melting of mafic lower crust, or melting of composite sources within an arc setting (Jayananda et al., 2006, Jayananda et al., 2018). These transitional TTGs were preceded by bimodal greenstone volcanism at ca. 2745 – 2670 Ma and form much of the basement of the EDC. The gneisses PD18-47, PD18-54, also crystallised at this time (ca. 2.62 Ga) during this phase of continental growth.

Figure 10 provides a summary of all the meta-igneous suites that were sampled across the Dharwar Craton. The ages have been combined and plotted as a kernel density estimate which has been filtered for <10% discordance. The heights of the peaks are based on the quantity of near-concordant zircons yet broadly summarize the crustal growth episodes across the entire Dharwar Craton. The U–Pb ages of individual samples have been chronologically arranged as per spatial distribution from WDC towards EDC shows distinct episodes of crustal growth during ca 3.4 – 3.2 Ga, 3.2 – 3.0 Ga, 2.7 – 2.6 Ga, 2.6 – 2.55 Ga which also coincides with the major detrital signatures of the corresponding volcano-sedimentary greenstone sequences across the Dharwar Craton.

### *5.2 Nature and composition of source from Zircon Lu-Hf isotopic data:*

Previous craton-wide Nd isotope data from mafic rocks were used to propose that the WDC formed by accretion of juvenile felsic and mafic components between 3.36 and 3.0 Ga, which was followed by dominant mafic crust addition from ca. 2.9 Ga to 2.6 Ga (Dey 2013). Dey (2013), also argued

that the craton experienced major crustal reworking between 2.6–2.5 Ga that was associated with only minor mantle-derived input. Much of this was corroborated by Lancaster et al. (2015), who presented a large study of detrital zircon U–Pb and Lu–Hf isotopic data from throughout the Dharwar Craton. They suggested that significant juvenile crustal extraction occurred between 3.3–2.7 Ga, with cratonization of the WDC occurring around 3.0 Ga and the initiation of continuous crustal extraction as far back as ca. 3.7 Ga, from the existence of detrital zircons of this antiquity.

Guitreau et al. (2017) focussed on the oldest part of the WDC and studied the igneous zircon record of the Gorur gneiss and its surroundings to infer the initiation of crustal extraction. Their data revealed multiple zircon signatures that included inherited pre-3.4 Ga zircons. Although none of our samples are that old, Sample PD17-56 contains ca. 3.3 Ga zircon with varying $\varepsilon_{Hf}$ values that suggest the presence of older crustal material in the magmatic source, with model ages between 3.63–3.44 Ga. The CDC gneisses of the eastern flank of the Chitradurga Greenschist Belt (PD18-104) also have ca. 3.3 Ga protolith ages and preserve $\varepsilon_{Hf}$ values that approach chondritic values suggesting the presence of older Palaeoarchaean crust. Inherited zircon in sample PD17-01 also suggests the presence of crust of similar age. Our data support earlier studies that conclude that the WDC and CDC share a late Eoarchaean–Palaeoarchaean history between 3.63-3.3 Ga, with 3.3 Ga magmatism in both sourced from juvenile depleted mantle sources with very short crustal residence times (Dey et al., 2013, Lancaster et al., 2015, Guitreau et al., 2017).

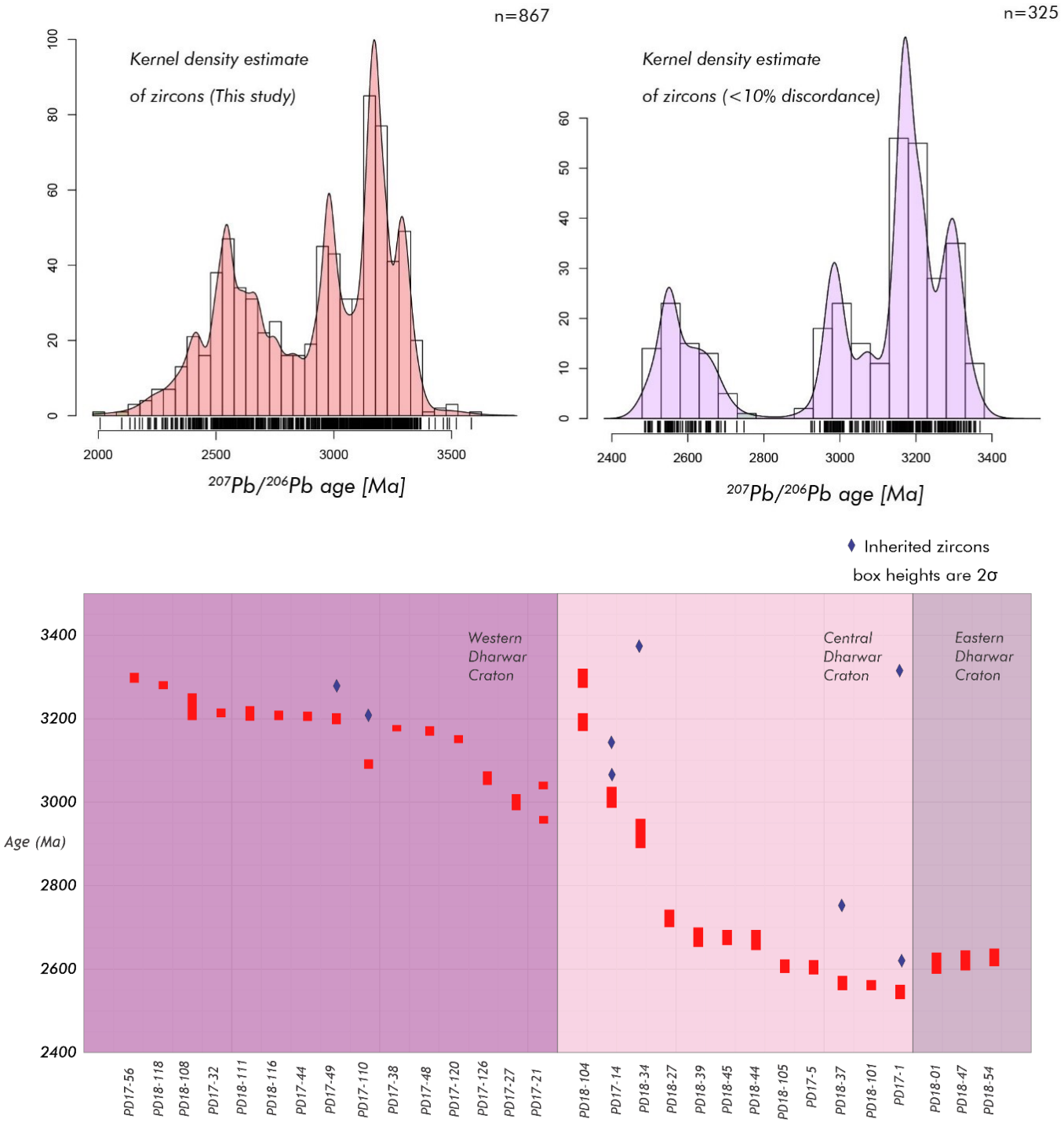


*Figure 10: Summary of zircon age data from this study to highlight Archaean crustal growth episodes in the Dharwar craton. The constrained U–Pb ages of each sample along with inherited zircons are plotted chronologically to reflect general trend of crustal growth from Western Dharwar Craton towards the Eastern Dharwar Craton.*

Latest Palaeoarcheaen (3.3–3.2 Ga) rocks from the WDC record a period of depleted-mantle derived magmatism that is best shown in the juvenile hafnium isotopes of sample PD18-118, but also is shown by the variable $\varepsilon_{Hf}$ values of PD18-108, PD18-116, PD18-111 and PD17-32 that trend towards the depleted mantle.

After 3.2 Ga, εHf(t) values in WDC zircons shift negatively, towards near-chondritic values, which is interpreted to show increasing reworking of pre-existing crust (samples PD17-49, PD17-48, PD17-44, PD18-120 and in inherited zircons from sample PD17-32). Magmatism of this age is coeval with metamorphism in the Biligiri-Rangan Hills (ca. 3.21–3.16 Ga.)(Jayananda et al., 2013a, 2015, Peucat et al., 2013). After a short magmatic gap at ca. 3.15–3.10 Ga, that is represented by metamorphism in Holenarsipur Greenstone Belt at ca. 3.14–3.10 Ga (Peucat et al., 1995), the negative $\varepsilon_{Hf}$ shift continues in ca. 3.10–2.90 Ga zircon, where WDC and CDC protolith zircon preserve mostly negative values (PD17-27, PD17-21, PD18-126). Previous workers have suggested that this tectonism may be explained by plume triggered near-edge subduction in multiple short-lived oceanic arcs from tectonic overburden of the greenstone volcanism (Guitreau et al., 2017, Jayanada et al., 2008). Alternatively, Amaldev et al. (2016) invoked a hypothesis involving the accretion of the Coorg Block with the WDC at around 3.1 Ga to cause magmatism and metamorphism over this broad timeframe. The exposed basement in the CDC, PD18-34, has slightly negative $\varepsilon_{Hf}$ values with similar $T_{DM}$ ages as PD18-104 and other coeval samples from WDC implying that it has crystallised from a slightly enriched protolith with a longer crustal residence time, which is consistent with the Paleoarchaean inherited grain present in this sample.

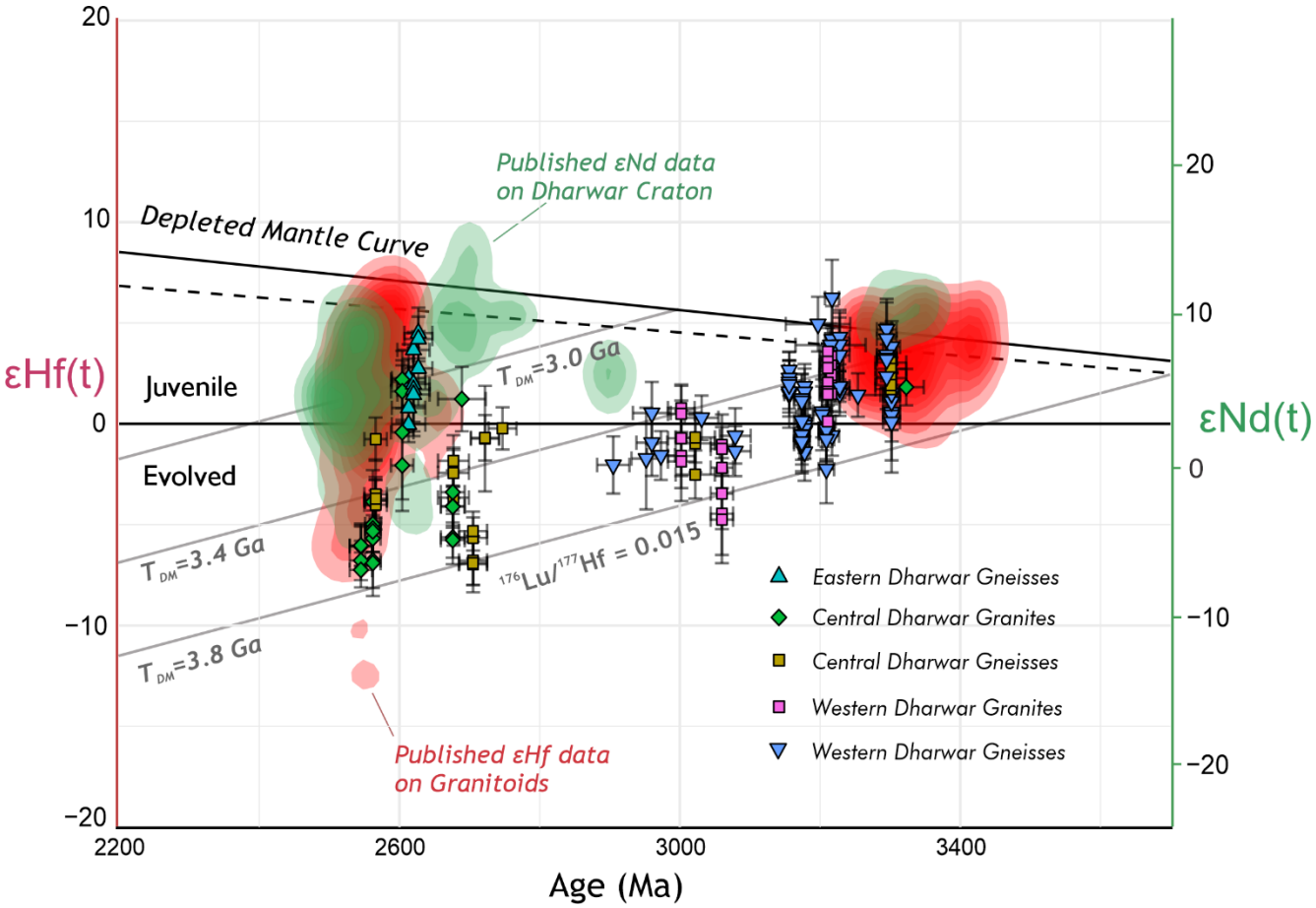


*Figure 11: εHf(t) versus interpreted protolith ages obtained in this study grouped into categories. $^{207}Pb/^{206}Pb$ zircon U-Pb ages have been used for samples without clear interpreted protolith ages. Previously published εHf(t) values from the granitoids across Dharwar Craton have been plotted as a contour plot in red. Previously published εNd(t) data across the mafic and felsic magmatic suites in Dharwar Craton have been combined and converted into εHf(t) values using the equation, εHf (t) = [(εNd(t)* 1.36) + 2.89] (Vervoort and Blichert-Toft, 1999) and plotted as contours in green. Data for Hf-Nd systematics gathered from Jayananda et al., 2018 (and references therein), 2020, Dey, 2013, J.Y.Wang et al., 2020; Ranjan et al., 2020*

Two phases of Neoarchaean volcanism are recorded in the Dharwar Craton. In the WDC, the younger greenstone group in the Chitradurga Greenstone Belt formed at ca. 2.76–2.67 Ga, whereas the supracrustal sequences in the EDC represent the youngest greenstone belts at ca. 2.58–2.54 Ga (Jayananda et al., 2013). The ca. 2.76–2.67 Ga magmatism at the border between the WDC and the CDC preserves notably juvenile Nd isotope values (Dey, 2013), which is in marked contrast to the near contemporaneous felsic magmatism in the CDC around ca. 2.7—2.6 Ga (samples PD18-39, PD18-44, PD18-45; Fig. 13), which preserves εHf values down to -8. This bimodal nature suggests a process where depleted mantle sourced mafic volcanism instigated crustal melting and the production of voluminous felsic magmatism. The samples PD18-101, PD17-1, PD18-37 show further evolved signature, with crystallization ages between ca. 2.6—2.55 Ga, in their $\varepsilon_{Hf}$ values inferring they could have been reworked from the above terrain through interaction with a plume related to the juvenile calc-alkaline

sanukitoid volcanism at ca. 2.57 - 2.52 Ga resulted in emplacement of anatectic granitic batholiths such as the Closepet granite.

Samples PD18-01, PD18-45, PD18-54 lie with ages between ca. 2.6—2.55 Ga to the east of the Ramagiri Greenstone Belt and its northern equivalent, Hungund-Maski Schist Belt, within the EDC. They preserve juvenile $\varepsilon_{Hf}$ values, suggesting that they form by melting of the contemporaneous depleted mantle and, therefore, represent a different source from that of granites in both the WDC and CDC. These rocks formed after the transitional TTGs and before the extensive calc-alkaline sanukitoid magmatism seen throughout the Eastern Dharwar Craton. The near depleted mantle values suggest very low crustal contamination, and/or the absence of any older crust in the EDC. The Ramagiri Greenstone Belt marks a well-defined isotopic boundary between the combined older Archaean WDC/CDC and the Neoarchean EDC.

### *5.3 Depth of melting/crystallization:*

Previous work on the depth of crystallisation of the Dharwar Craton granitoids has focussed on whole rock major and trace element compositions (especially heavy rare earth elements—HREE—Y, Nb, Ta and Sr) to deduce the nature and depth of the melts and the residual mineralogy of the source (Jayananda et al., 2018, S. Ranjan et al., 2020., J.-Y. Wang et al., 2020). The elements partition into amphibolite or eclogite residue dependant on the depth of melting, evaluated based on the Sr/Y vs Y plot and $(La/Yb)_N$ vs $(Yb)_N$ diagram (Martin, 1986; Defant and Drummond, 1990; Moyen 2011). The TTGs of the Dharwar Craton have been grouped into low-Al TTGs, which indicate shallow depth melting of a mafic source, and high-Al TTGs with low Y, Yb, high Sr/Y and $(La/Yb)_N$ values suggesting deeper melting with garnet alongside clinopyroxene/hornblende in the residue. Jayananda et al. (2018) suggested that the transitional TTGs around ca. 2.7—2.6 Ga, which bear moderate to high Sr/Y and $(La/Yb)_N$ ratios coupled with variable HREE depletion, formed from partial melting of mafic sources at variable depths. The EDC sanukitoids had moderate to high fractionated REE patterns with varying Y values and Sr/Y ratios that were inadequate to measure the depth of melting. The anatectic granites have moderate to poorly fractionated REE patterns with low Sr/Y ratios and moderate to low $(La/Yb)_N$ vs $Yb_N$, which suggest a lower to mid-crustal source (Jayananda et al., 2018).

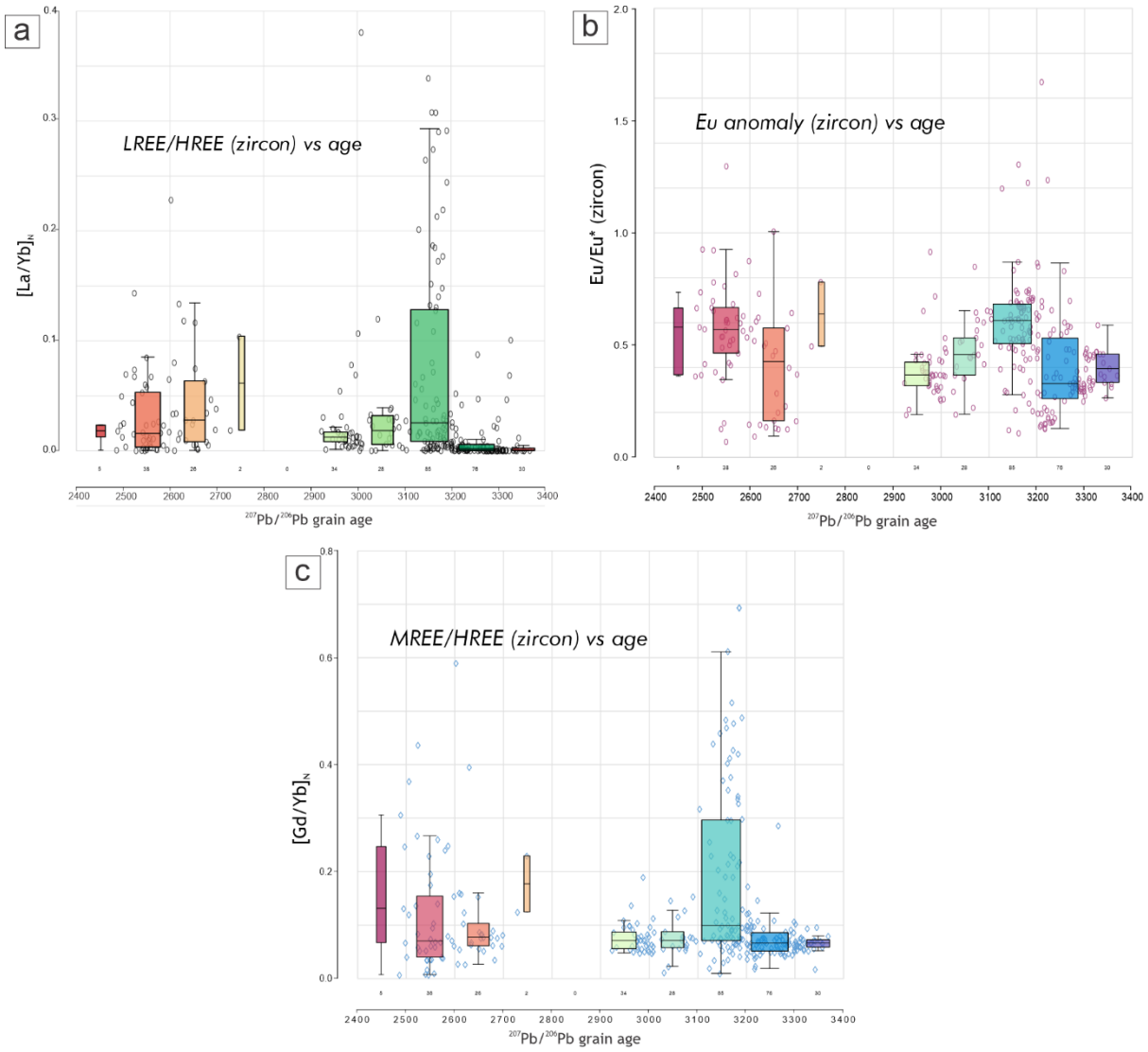


*Figure 12: Rare earth element data from >90% concordant zircons of the Dharwar Craton, plotted as various REE ratios vs $^{207}Pb/^{206}Pb$ grain age of individual zircons. Boxplots have been drawn at intervals of every 100 Ma and has been centred inside the intervals. The thickness of the boxplot represents the number of analyses within the age interval and is denoted by the number below it. The horizontal line inside the box plot represents the median of the ratios that have been represented within the age bracket. The error bars represent the maximum and minimum values of the box plot distribution with any data points beyond the error bars as potential outliers. The lower and upper bounds of the boxplot is defined by the lower and upper quartile of zircon ratios.*

In this study, we have inferred the depth of melting (and/or crystallisation) of the source, based on REE compositions of the zircons that were measured simultaneously during the collection of U–Pb data (McKenzie et al., 2018). Igneous zircons tend to sequester HREEs compared to LREE and MREEs (Speer and Cooper, 1982; Hanchar and van Westrenen, 2007) when the zircon grows in an REE saturated melt and where there is no other REE-compatible phase competing for the elements. The diffusion of REEs in zircon is minimal after crystallisation (Cherniak et al., 1997), hence the zircon

preserves the REE composition it incorporated from the source melt. However, to ensure the reliability of the interpretations, we have only plotted >90% concordant zircon data. Magma sources with melt residual compositions that include HREE phases such as garnet and amphibole influence the MREE/HREE ratios in the analysed zircons (McKenzie et al., 2018). A similar influence will occur with garnet crystallising from a magma as it will compete with zircon for the HREEs. Higher MREE/HREE ratios in zircons represent flatter HREE trends in the $REE_{(N)zircon}$ spider plots that could infer high-pressure assemblages or the presence of garnet or amphibole in the source melt, or in the magma, which signifies relatively deep magma generation and/or crystallisation where garnet is stable.

The REE compositions from zircons have been collectively plotted as LREE/HREE, MREE/HREE and Eu/Eu* with time, to infer crustal thickness and depth of crystallisation/crustal differentiation (McKenzie et al., 2018). The zircons were selected using a near-concordance filter as a correlation between degree of concordance and REE composition was seen, suggesting REE open system behaviour in when Pb is lost. The data are illustrated as $La_N/Yb_N$ versus age to represent the LREE/HREE ratio and $Gd_N/Yb_N$ versus age, to focus on the MREE/HREE ratio. Eu/Eu* has been calculated as $Eu/Eu^* = Eu_N/ \text{sqrt} (Sm_N * Gd_N)$ and is used to infer the presence or absence of plagioclase crystallisation during deep crustal differentiation. Boxplots are used to look at the trends within the data.

Europium anomalies vary considerably through the Archaean, but are consistently negative ($Eu/Eu^* <1$), indicating the common presence of plagioclase in the source, or crystallising early in the magma. There is a notable decrease in the anomaly (Eu/Eu* rises towards 1) from the Palaeoarchean to 3.2–3.1 Ga, which can be interpreted as Eu-saturation occurring before plagioclase/feldspar fractionation which can happen during a non-equilibrium process such as metamorphism (Trail et al., 2012).

The $La_N/Yb_N$ ratios show that there is an increase in the average LREE/HREE ratio around 2.6 Ga – 2.7 Ga and again after 3.15Ga. According to McKenzie et al., 2018 the $La_N/Yb_N$ ratios trend along average crustal thickness which could be inferred as potential crustal thickening events around 3.15-3.2 Ga and 2.6-2.7 Ga. The $(Gd/Yb)_N$ versus age plot shows higher ratios towards 2.6-2.7 Ga and 3.1-3.2 Ga which agree with the inferences from LREE/HREE ratios. The higher $Gd_N/Yb_N$ ratios (> 0.1) represent deeper crystallisation of zircons alongside deep crystallising minerals such as garnet and amphibole which accurately describe the formation ages of the TTG gneisses in the Dharwar.

### *5.4 Comparison with other Archaean terranes: implications for global Archaean crustal processes*

The Archaean crustal record of the Dharwar Craton has been correlated with other Archaean domains like Bundelkhand Craton in central India, North China Craton, Pilbara and Yilgarn Cratons in Australia, Kaapval and Tanzania Cratons in southern Africa, Antongil Craton in Madagascar, Superior craton and Rae family of cratons in North America (Pehrsson et al 2013, Lancaster et al., 2015, Jayananda et al., 2018). The above Archaean cratons comprise similar lithologies bearing TTGs, volcano-sedimentary greenstone sequences and Archaean progeny granitoids such as anatectic granites and calc-alkaline granitoids (Cawood et al., 2018, Nebel et al., 2018).

The crust building events in the Dharwar Cratons at ca 3.4 – 3.2 Ga have been involved with crustal components from upto ca. 3.8 Ga (Lancaster et al., 2015). This coincides and correlates with older TTG crustal building events in various Archaean cratons such as Bundelkhand craton at ca. 3.33 – 3.27 Ga; Kaapval craton at ca. 3.45 Ga, 3.32 Ga, 2.9 Ga; Pilbara craton at ca 3.5 – 3.2 Ga; Tanzania craton at ca 3.2 – 3.14 Ga; Antongil Craton at ca 3.32 – 3.18 Ga respectively. (Lancaster et al., 2015, Jayananda et al., 2018 and references therein)

The paleoarchaean to mesoarchaean crustal growth in Dharwar Craton could have experienced transitional type tectonics from asymmetrical drip-type gravitational sinking, due to tectonic overburden of the overlying greenstone volcanism, as proposed in Nebel et al., 2018. The partial melting of the sinking lithosphere resulted in an accretion of transitional TTG type melts crystallizing in the CDC around ca 2.7 – 2.6 Ga. This coincides with documented crustal growth episodes during 2.7 Ga in Bundelkhand craton; ca. 2.72 – 2.6 Ga in North China Craton; ca. 2.75 – 2.6 Ga in Kaapval Craton; ca 2.72 – 2.63 Ga in the Yilgarn Craton, ca 2.72 – 2.64 Ga in the Tanzania Craton. (Jayananda et al., 2018 and references therein)

The further differentiation of the partial melted delaminated crust evolved to create Archaean progeny granites such as the Closepet Granite in the CDC at ca 2.55 Ga. In WDC, the sinking/subducting plate was proposed to have undergone shallow – mid-crustal partial melting (Jayananda 2018) which resulted in the formation of granitic batholiths such as the Shimoga and Chikamagulur granite at ca. 3.0 Ga which could be associated with the Holenarsipur greenstone volcanism around 3.1 Ga.

The deep-sinking crustal material has been proposed to cause aesthenosphere upwelling resulting in juvenile high potassic calc-alkaline sanukitoid melts that were preceded by the transitional type TTG melts. (Jayananda et al., 2018, 2020). The sanukitoid volcanism in the EDC has been proposed to have occurred in an episode ca. 2.57 – 2.52 Ga, as part of bimodal volcanism, preceded by the

crystallization of transitional type TTG gneisses during 2.7 – 2.6 Ga ( J.Y. Wang et al., 2020). Similar bimodal volcanic episode has been reported from the Woodburn Lake group in the Rae Craton in North America, associated with the formation of the neoarchaean Rae greenstone belt during 2.72 – 2.65 Ga (Pehrsson et al 2013). Correlations with accretionary episodes from other Archaean cratons include ca. 2.57 – 2.54 Ga in Bundelkhand Craton; ca. 2.55 – 2.5 Ga in North China Craton; ca. 2.61 – 2.59 Ga in central Limpopo belt. (Lancaster et al., 2015, Jayananda et al., 2018 and references therein)

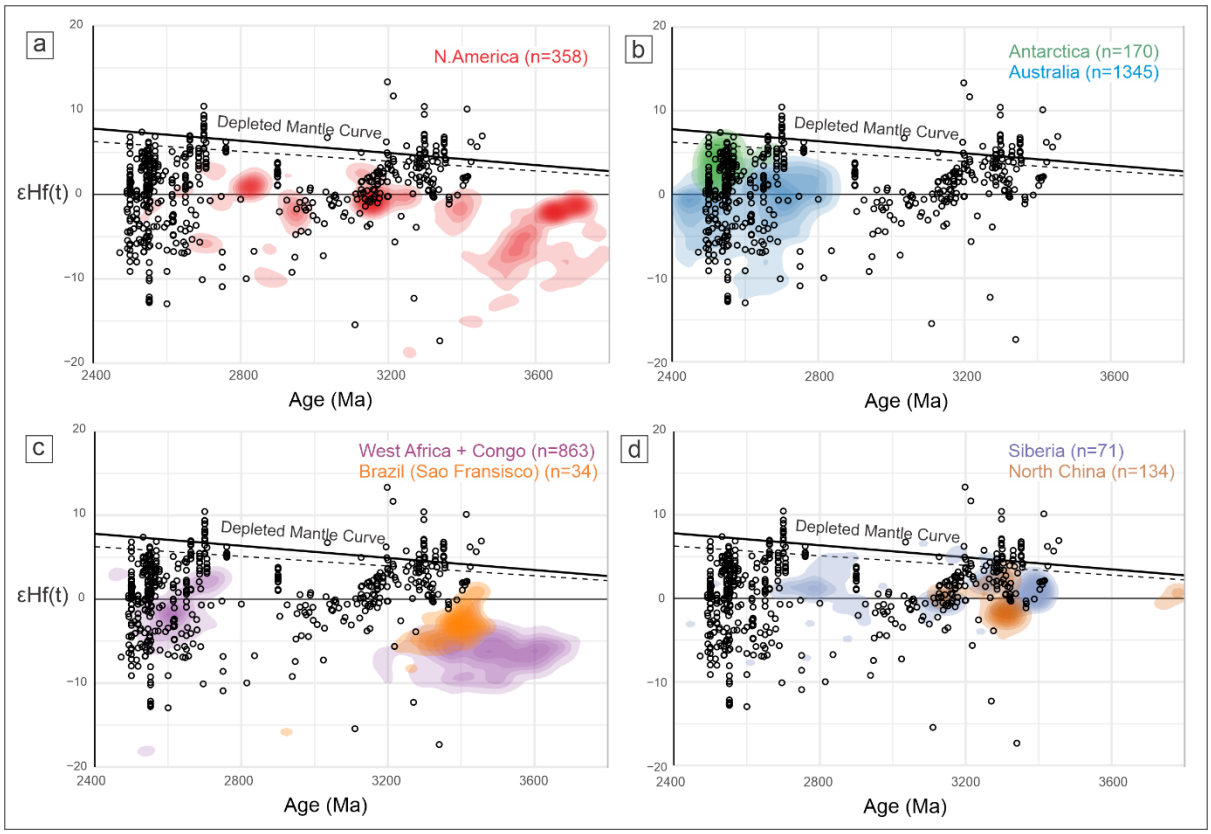


*Figure 13: The εHf(t) values of the Dharwar Craton represented in circles (data from this study and including published Nd-Hf isotopic data) plotted against various Archean domains across the world using the global zircon database published in Spencer et al., 2017 to test out the Nunavutia hypothesis.*

The crustal evolution of the Dharwar Craton plotted in εHf(t) space has been compared with the crustal evolution histories of other major Archean cratons mainly discussed in Pehrsson et al. (2013) to belong the clan of Nunavutia, a major continental amalgamation proposed to have existed between ca. 2.55 —2.45 Ga, consisting mainly the cratons of Rae, Sask, Siberia, West Africa, Congo, Sao Fransisco, Mawson, Gawler, Siberia and North China Cratons. We have used a global zircon database from Roberts and Spencer, (2015) to compare and test the Nunavutia hypothesis. We have observed that the younger CDC and EDC correlate with the Archean cratons in North America (Rae + Sask), Australia (Gawler), Antarctica (Mawson), West African cratons and partially correlate with the Siberian craton.

The older Mesoarchean components in WDC and CDC correlate with North America, Siberia and North China cratons and we have deemed the Nunavutia hypothesis inconclusive due to lack of enough data points from the Dharwar Craton around the period of proposed existence of Nunavutia, between ca. 2.54 —2.45 Ga used for the correlation.

## 6. Conclusions:

1) The Dharwar Craton has evolved through various phases including juvenile accretion of TTG suites at ca. 3.4- 3.2 Ga with crustal components extracted up to ca 3.8 Ga in the WDC. Continuous reworking of the existing ancient crust towards the east through localised island arc-like tectonic activity until ca. 3.0 Ga leading to the formation of potassic felsic plutons and younger TTG domains. The interaction of these younger domains with greenstone volcanism at 2.7 – 2.6 Ga created transitional type tectonics creating transitional type TTG domains that are prevalent to the east of CDC. This was followed by extensive juvenile magmatism at ca. 2.57 – 2.52 Ga in the EDC which could have been the thermal trigger to cause further differentiation/crustal reworking in the CDC to create Archaean progeny granites such as the Closepet granite batholith at 2.55 Ga.
2) WDC and CDC appear to have evolved contemporaneously until 3.0 Ga which was evident with similar aged 3.4 Ga zircon bearing gneisses in both domains and presence of inherited zircon at 3.3Ga in Closepet granite. The thermal disturbance at 3.0 Ga observed in the zircon U–Pb could be attributed to the formation of localised high potassic plutons in WDC and younger TTG domains that form the basement of the CDC. The CDC experienced further recycling until 2.55 Ga attributed to bimodal volcanism which accreted transitional type TTGs at ca. 2.7 – 2.6 Ga and juvenile magmatism in the EDC at ca. 2.58 – 2.52 Ga.
3) The εHf(t) dataset from this study, combined with published εHf(t) values on granitoids and εNd(t) values from greenstone belts and associated granitoids show the influence of juvenile greenstone magmas around at ca. 2.7 – 2.6 Ga on reworking of ancient existing crust to produce the transitional TTG around the same time period.
4) Combined Eu/Eu*, LREE/HREE, MREE/HREE ratios from analysed zircons across the Dharwar craton have been used as markers to infer timing of crustal growth/thickening events at ca. 3.2 Ga and 2.7 – 2.6 Ga.
5) The Ramagiri greenstone belt has been proposed to be the isotopic boundary separating the crustal reworked transitional type TTG suites and Archaean progeny granites in the CDC from juvenile sanukitoid magmatism on the EDC.

6) The documented crustal accretion events in the Dharwar craton can be compared to major cratons in the world including Bundelkhand Craton in central India, North China Craton, Pilbara and Yilgarn Cratons in Australia, Kaapval and Tanzania Cratons in southern Africa, Antongil Craton in Madagascar, Superior craton and Rae family of cratons in North America. These cratons record extensive crustal growth and major accretionary episodes equivalent to the times of crustal growth in the Dharwar Craton around ca. 3.45– 3.3 Ga, 3.23 - 3.15 Ga, 3.0 – 2.9 Ga and 2.7 – 2.55 Ga.

7) The Dharwar Craton lacks enough data points in εHf(t) space around the proposed time of existence of the Nunavutia amalgamation of cratons, hence the correlation with the global zircon database Spencer et al. (2017) has been regarded inconclusive and would have to be tested using an updated database.

## 7. Acknowledgements:

We acknowledge the support of Dr David Kelsey and Dr Sarah Gilbert for their support at Adelaide Microscopy in the acquisition of the zircon cathode-luminescence imaging (CL) and U–Pb and REE data using LA—ICPMS respectively during 2017 and 2018. Dr. Morgan Blades and Dr. Justin Payne are acknowledged for their help obtaining Lu–Hf data from the zircons. The Petrology lab team at Indian Institute of Science, India are acknowledged for their assistance during fieldwork logistics and sample preparation. Mr. Kiran Sasidharan and Mr. Thamam Mubarish are acknowledged for the assistance in fieldwork. Pavan Katuru is supported during his PhD by the scholarship provided by the University of Adelaide.

## 8. Appendix:

The zircon U–Pb data are provided in Appendix 2.1. The zircon REE concentrations are provided in Appendix 2.2. The Lu–Hf isotopic data from the zircons analysed in this study are provided in Appendix 2.3.

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# 3

## Detrital record of Mesoarchean and lower Neoarchean meta-quartzites in Dharwar Craton, India: Evidence of Eoarchean to Mesoarchean crustal evolution from detrital zircon U–Pb, Hf isotopes and REE compositions

## Abstract

Archean cratons act as windows to understand the early Earth as some of them preserve Eoarchean to Mesoarchean tectono-thermal signatures, which, in turn, can be inherited by subsequent detrital formations. In this study, we analyse detrital zircons from various detrital sequences overlying the Archean Dharwar Craton in southern India for U–Pb, Lu–Hf isotopic data and REE compositions to construct and compare the tectono-sedimentary processes prevalent during the Meso- to Neoarchean across the Dharwar Craton. The U–Pb age data show that the sedimentary sources for the detrital suites coincide with the timing of major crustal accretion/growth events across the Dharwar Craton. The stratigraphic correlations between various subgroups have been revisited combining current study with previously published data. Lu–Hf isotope data reveal the involvement of the neighbouring Coorg Block during the sedimentation of the lower Sargur Group greenstone belts; the upper Dharwar Supergroup reveal sources with mostly Paleoarchean crustal extraction ages that have been previously reported for the crustal accretion episodes of the Dharwar Craton. The REE compositions from the detrital zircons plotted as $(Gd/Yb)_N$ ratios infer a localised subduction zone near the Holenarsipur Schist Belt (HSB); timing of granitoid emplacement which contributed to the formation of the Bababudan Group greenstone belts. We conclude that the Dharwar Craton had limited sedimentation during the Mesoarchean evident from the presence of narrow linear belts and involved detrital material from the adjacent Coorg Block and widespread sedimentation took place during the Neoarchean possibly initiated by the extensive mafic volcanism.

## 1. Introduction:

The formation and evolution of the continental crust, their incorporation into cratons and supercontinents, combined with their destruction at convergent margins account for the major themes in understanding the evolution of the Earth. (Nance et al., 2014; Spencer et al., 2017; Hawkesworth et al., 2018). The initiation of modern-style subduction like plate tectonics and the emergence of continental crust above the sea level is still debated (Palin et al., 2020). Recent geological models and numerical models mark the Archean era as a crucial period that experienced the secular cooling of the mantle (Spencer et al., 2017; Huang et al., 2020). The Archean cratons provide essential windows to understand the history and nature of the continental growth and its emergence in the early Earth as some of them preserve Eoarchean to Mesoarchean tectonic imprints (Roberts and Santosh, 2018; J.Y.Wang and Santosh, 2019). Paleoarchean to Neoarchean granite-greenstone terranes display distinct magmatic pulses and crust building episodes which include vertical and lateral accretion of juvenile

crustal protoliths and crustal recycling (Smithies et al., 2009; Manikyamba and Kerrich, 2012; Manikyamba et al., 2015, 2017; Santosh et al., 2005).

The Dharwar Craton in southern India is considered an amalgamation of microcontinents that preserve the records of continental growth and recycling during distinct thermal and tectonic events from ca. 3.8—2.5 Ga (Jayananda et al., 2018; Santosh and Li, 2018). Volcano-sedimentary successions of Archean greenstone belts ranging from ages ca. 3.6—2.5 Ga overly the basement gneisses (Peucat et al., 1995; Chadwick et al., 2000; Jayananda et al., 2008; Manikyamba et al., 2017). Several previous studies have focused on the basement Tonalite–Trondhjemite–Granodiorite (TTG) gneisses with associated granitoid plutons and greenstone belts, and proposed various crustal evolution models ranging from plume-arc accretions to modern style subduction-accretion collision (Dey et al., 2013; Jayananda et al., 2018 and references therein; Santosh and Li, 2018; Jayananda et al., 2020). However, the pre-3.4 Ga record of the Dharwar Craton has not been reported yet from meta-igneous sampling. A few studies have attempted to study the detrital zircon record of the metasediments in the Dharwar Craton (Lancaster et al., 2015; Hokada et al., 2013; Maibam et al., 2016; Krapež et al., 2020; Gao and Santosh, 2020), but the focus has mainly been the upper Neoarchean detrital sequences which host gold and various metallogenic deposits (Manikyamba et al., 2017). The older metasediments have been reported in very few studies, which do not provide a comprehensive review of the older volcano-sedimentary greenstone belts that record the initial episodes of the crustal evolution of the Dharwar Craton, and their stratigraphic correlation with other greenstone belts is still uncertain.

In this study, we have presented detrital zircon U-Pb data from the older (older than 2.7 Ga) metasedimentary greenstone belts across the Dharwar Craton and compare with previous correlative interpretations (Patra et al., 2020; Krapež et al., 2020; Chadwick et al., 1991).

The detrital zircon investigations carried out by Lancaster et al. (2015) report significant crustal extraction events at ca. 3.3 Ga and 2.7 Ga with crustal reworking in the Eastern Dharwar Craton until ca. 2.55—2.50 Ga. Maibam et al. (2016) reported contemporaneous crust formation in the Western and Eastern Dharwar Cratons between ca. 3.6—3.2 Ga. The samples reported in this study with proximity to the oldest nucleus of the Dharwar Craton, the Gorur Gneiss aged at ca. 3.4 Ga (Guitreau et al., 2017) are reported for detrital zircon Lu–Hf isotopic data and Rare Earth Element (REE) compositions to interpret the source regions for the sediments that suggest major crustal events during ca. 3.35—3.2 Ga and continuous crustal recycling trend observed in the Western Dharwar Craton and potentially in the Coorg Block in the Paleoarchean. The REE compositions show potential implications for the existence of localised modern-style tectonics in the Mesoarchean era.

## 2. Geological Background:

The basement of the Indian shield is composed of Archean cratonic nuclei such as the Dharwar Craton, Bastar Craton and Singhbhum craton that have amalgamated through Archean—Proterozoic collisional sutures (J.Y. Wang and Santosh, 2019). The boundaries of the Dharwar Craton include the Deccan Traps basalts on the north and the Southern Granulite Terrane to the south. The dominant makeup of the Dharwar Craton comprises of Archean granitoid–gneiss and greenstone sequences. The Dharwar Craton is subdivided into three major domains: the Western Dharwar Craton (WDC), the Eastern Dharwar Craton (EDC) and the Central Dharwar Craton (CDC) based mainly on the age and nature of the greenstone belts, the grade of metamorphism and interpreted crustal thickness (Swaminath and Ramakrishnan, 1981; Jayananda et al., 2000) combined with the usage of isotope geochronological data (Peucat et al., 2013; Dey et al., 2013). A progressive increase in the grade of metamorphism is reported from north to south of the Dharwar Craton with the northern parts showing upper greenschist to lower amphibolite grade of rocks and the southern parts exposing high-grade granulite rocks (Chadwick et al., 2000). The metamorphic grade progression is attributed to the northward tilt of the craton exposing the lower crust, experiencing higher grade metamorphism, in the south (Chardon et al., 2008; Moyen et al., 2003; Jayananda et al., 2013).

Previously, the WDC and the EDC were considered as the subdivisions of the Dharwar Craton with the Closepet Granite marking the boundary (Naqvi, 2005; Jayananda et al., 2006; Chardon et al., 2011). The subsequent studies proposed a steep high-strain mylonitic Gadag-Mandya shear zone, later renamed as the Chitradurga Shear Zone (CSZ), on the eastern margin of the Chitradurga Greenstone Belt (CGB) to act as the boundary between the two domains (Jayananda et al., 2008; 2013; Chardon et al., 2011). The contact between the WDC and EDC was later proposed to be a transitional zone extending from the Chitradurga Shear Zone (CSZ) to the Closepet Granite and demarcated as the Central Dharwar Province (CDP) (Peucat et al., 2013) based on U-Pb zircon ages and Nd isotopic studies. The CDP has been referred to as Central Dharwar Craton (CDC) in more recent studies (Santosh and Li, 2018; Jayananda et al., 2018; 2020).

### *2.1 Western Dharwar Craton Greenstone belts:*

The WDC is predominantly comprised of Tonalite—Trondhjemite—Granodiorite (TTG) gneisses ranging in ages from ca. 3.4—3.2 Ga (Guitreau et al., 2017; Jayananda et al., 2015, 2018) with crustal inheritance up to ca. 3.8 Ga (Beckinsale et al., 1980; Bhaskar Rao et al., 1992; Meen et al., 1992; Peucat et al., 1993). These gneisses were accreted mainly during the Mesoarchean (Peucat et al., 1993) along with Neoarchean (ca. 2.6 Ga) potassic granitoid plutons (Jayananda et al., 2006). These gneisses are

interlayered with the Sargur Group (> 3.0 Ga)greenstone belts, which are unconformably overlain by the Dharwar Supergroup Greenstones (ca. 2.9—2.5 Ga), in turn, subdivided into the Bababudan Group and the Chitradurga Group greenstones (Hokada et al., 2013).

### *2.1.1 Sargur Group:*

The Sargur Group greenstones occur within the TTG gneisses of WDC and show ages of ca. 3.4 Ga and have been described as small and linear greenstone belts in the southern part of WDC (Manikyamba et al., 2017). The Sargur type belts are grouped based on their location (Manikyamba et al., 2017) and include schist belts occurring at Holenarsipur (HSB), Nuggihalli, Krishnarajapete (K.R. Pete) (KSB), Mayasandra, Nagamangala, Melukote, Kalyadi, Banavara, Hadanur. These are estimated to have formed alongside the komatiite flows at ca. 3.35 Ga (Jayananda et al., 2008) and associated felsic flows at ca. 3.30 Ga (Peucat et al., 1995; Tushipokla and Jayananda, 2013). These older greenstone belts are intruded by Gorur Gneiss of ca. 3.4 Ga near the Holenarsipur belt. The Sargur Group is notable for the presence of ca. 3.6—3.5 Ga SHRIMP zircon U-Pb ages (Ramakrishnan and Vaidyanathan, 2008). The Sargur Group tapers out towards the north of the WDC, which is overlain by the larger greenstone belts of the Dharwar Supergroup Greenstone belts. The most precise age reported for the Sargur Group comes from SHRIMP $^{207}Pb/^{206}Pb$ ages from a rhyolitic flow from Holenarsipur Greenstone Belt at 3298 ± 7 Ma (Peucat et al., 1993).

### *2.1.2 Dharwar Supergroup:*

The Dharwar Supergroup was earlier divided into younger greenstone belts that were deposited on the quartz pebble conglomerate (QPC) as Bababudan and Chitradurga Groups (Ramakrishnan et al., 1978; Swami Nath and Ramakrishnan, 1981). The Bababudan Group starts with the QPC, interpreted as a paleosol (Srinivasan and Ojakangas, 1986), as a basal unit and is followed by a quartzite (Manikyamba et al., 2017). These quartzites are interbedded with MORB and within-plate type volcanic rocks (Bhaskar Rao et al., 1992), which are overlain by a sequence of conglomerates, BIFs, schistose rocks and greywackes across the Kudremukh, Shimoga, Bababudan and Chitradurga greenstone/schist belts. In the Bababudan Group, Sm-Nd whole-rock isochron ages reveal basalt in the lower stratigraphy at ca. 2.91 Ga and ca. 2.84 Ga in the higher stratigraphic levels (Kumar et al., 1996), while tuffs reveal zircons with SHRIMP U–Pb ages at ca. 2.72 Ga (Trendall et al., 1997). The lower Bababudan Group exposed in the Bababudan, and Kudremukh Greenstone (KGB) belts are considered to have developed in an intra-cratonic setting. The Bababudan Group Greenstone belts and Chitradurga Group Greenstone belts are not to be confused with individual greenstone belts such as the Bababudan Greenstone Belt (BBG) and Chitradurga Greenstone Belt (CGB) which belong to their respective groups.

The Chitradurga Group consists of conglomerates with a disrupted framework, greywackes, phyllites, BIFs, cherts, shales, volcanic basalts and rhyolites. The Chitradurga Group is characterised by three horizons of BIFs, three horizons of conglomerate, and four lithostratigraphic units, of which one of them is the Bababudan Group (Krapež et al., 2020). Lateral stratigraphic variations in the Chitradurga Group include lithological changes and also loss or gain of strata on syn- and post-folding structures (Chadwick et al., 1983; Krapež et al., 2020). Mafic and felsic volcanics from the Chitradurga Group were dated using Sm–Nd whole-rock isochron method to reveal magmatism at ca. 2.74 Ga. The ca. 2.6 Ga orogeny in the Chitradurga Greenstone Belt (Jayananda et al., 2006, 2013) is proposed to have erased the signatures of the undeformed volcanic sequences except for isolated amphibolitic enclaves within the Peninsular Gneiss (Manikyamba et al., 2017).

The Shimoga and Chitradurga greenstone belts were proposed to have formed in convergent setting resulting in the exposure of the rocks belonging to the Chitradurga Group (Manikyamba et al., 2014). The Shimoga Greenstone Belt (SGB) appears to represent an intervention between the Bababudan Group and the Chitradurga Group (Krapež et al., 2020) from past lithostratigraphic correlations with the lower groups of the SGB correlating with the Bababudan Group and the upper groups of the SGB with the Chitradurga Group (Chadwick et al., 1988; Chadwick et al., 1991). The Chitradurga group extends to the far north, forming a structurally dismembered lithotectonic complex named as the Gadag Duplex (Chadwick et al., 2003). The detrital zircons from the Gadag Greenstone Belt (GGB) report several age populations ranging from ca. 3.4—2.55 Ga with major crust forming events at ca. 3.6 and 3.36 Ga with juvenile addition at ca. 2.6 Ga (Sarma et al., 2012; J.Y. Wang et al., 2019).

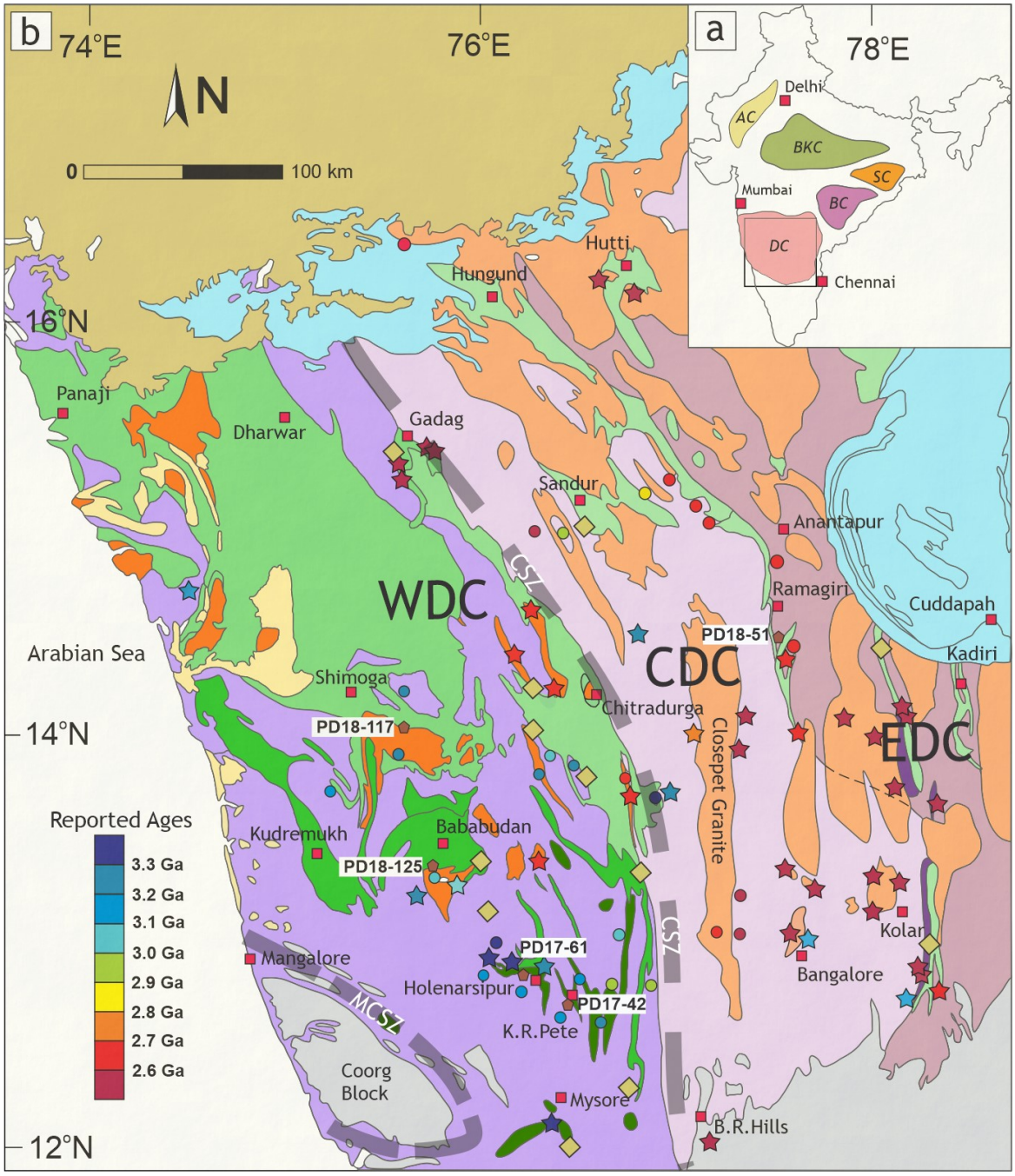
The relationship between the Bababudan Group and the Chitradurga Group has not been thoroughly explored, but recent works have explained the current state of play for the comprehensive comparison of lithostratigraphy and geochronology of the Dharwar Supergroup (Manikyamba et al., 2017; Krapež et al., 2020). Krapež et al. (2020) proposed that the basal units of the Chitradurga Group and Bababudan Group are identical and only differ by a spatial unconformity. In a recent study, the youngest whole-rock Sm-Nd isochron age (2934 ± 88 Ma) from the Holenarsipur Schist belt, from the Sargur Group, has been compared to the oldest ages reported from the lowest stratigraphic units belonging to the Bababudan Group, interpreting the Sargur Group to represent lower stratigraphic ultramafic units of the Dharwar Supergroup with no clear temporal distinction to separate these two groups (Patra et al., 2020). However, Hokada et al. (2013) showed the distinction between the Sargur Group and Dharwar Supergroup with the presence of kyanite and monazite grains in the muscovite quartzite schists dated from the Holenarsipur Schist Belt interpreting the quartzite undergoing high-grade metamorphism to form kyanite and monazite at monazite U-Pb age of 3082 ± 66 Ma. Combining

these existing theories, the greenstone belts occurring across the WDC represent complex volcano-sedimentary processes through the Mesoarchean to the Neoarchean.

### *2.2 Central Dharwar and Eastern Dharwar Craton Greenstone Belts:*

The Central Dharwar Craton is comprised by a mix of ca. 3.4—3.0 Ga and ca. 2.7—2.5 Ga crust that that was affected by thermal events during ca. 3.20 and 2.62 Ga (Jayananda et al., 2011; 2013a). The Eastern Dharwar Craton is comprised of juvenile accreted granitoids ranging from ca. 2.6—2.52 Ga (Jayananda et al., 2020). The greenstone belts associated with the CDC and EDC are represented by Neoarchean supra-crustal sequences linked into groups such as a) Sandur Schist belt occurring between the Closepet Granite; b) Ramagiri—Penakacherla—Hungund greenstone belts; c) Kolar—Kadiri—Hutti greenstone belts and several smaller greenstone belts (Manikyamba et al., 2017; Manikyamba and Kerrich, 2011). The presence of komatiites similar to the WDC, but in lower volume, have been reported from only the Sandur and Ramagiri greenstone belts (Zachariah et al., 1995; Manikyamba et al., 2008). The prominent feature of the greenstone belts is the preservation of various subduction zone volcanic rocks with associated gold mineralisation (Manikyamba et al., 2017) of which, the Hutti Greenstone Belt is still mined for gold. While formal correlations with greenstone belts across the WDC have not been made, U–Pb ages of felsic volcanism across CDC and WDC have been used to compare the formation periods of the Eastern Dharwar Greenstone belts with the Neoarchean supra-crustals in the WDC. Krapež et al. (2020) have drawn comparisons between the lower groups of the Bababudan Group and the Sandur Group with Mesoarchean maximum depositional ages, the upper Chitradurga Group with the Hutti Greenstone Belt. Granodiorites aged at ca. 2.62 Ga (Balakrishnan et al., 1999) intruding the pillow basalts associated with the ca. 2.7 Ga felsic volcanism near Ramagiri, has been linked to the formation of the Bababudan Group (Krapež et al., 2020) through the tuff zircon U-Pb ages at ca. 2.72 Ga (Trendall et al., 1997).

The Kolar Schist Belt in the Eastern Dharwar Craton is comprised of BIFs, amphibolite, quartz mica schist and porphyritic granite with mafic enclaves representing accreted relicts of an ocean–trench–continent transitional zone within a Neoarchean convergent margin (Yang and Santosh, 2015). Komatiitic amphibolites have been reported for Sm–Nd isochron ages of ca. 2.69 Ga and ca. 2.73 Ga (Balakrishnan et al., 1988). Zircon records reveal emplacement ages in the Kolar Schist Belt at ca. 2.63 Ga and 2.53 Ga, followed by metamorphism at ca. 2.41 Ga (Krogstad et al., 1989). Detrital zircons from the BIFs reveal zircons representing two significant events of crustal growth at ca. 2.7 and 2.5 Ga.




- Deccan Traps
- Sediment/Laterite cover
- Proterozoic basins
- EDC greenstone belts
- Chitradurga Group
- Bababudan Group
- Sargur Group
- Closepet Granite and younger equivalents
- Western Dharwar granitoid plutons
- Eastern Dharwar TTG/peninsular gneiss
- Central Dharwar TTG/peninsular gneiss
- Western Dharwar TTG/peninsular gneiss
- Sanukitoids
- Granulites
- U-Pb age data - Chapter 2
- Published U-Pb zircon ages for TTG & related granitoids
- U-Pb age data - This study
- Published detrital zircon studies with Lu-Hf isotopic data

*Figure 1: (a) Geological framework of India showing the location of major Archean cratons: DC – Dharwar Craton, AC – Aravalli Craton, BKC – Bundhelkhand Craton, BC – Bastar Craton, SC – Singbhum Craton. (b) Geological map of the Dharwar Craton with dashed lines representing major shear zones discussed in this study; CSZ – Chitradurga Shear Zone, MCSZ – Mercara Shear Zone. The three main domains within the Dharwar Craton, namely Western Dharwar Craton (WDC), Central Dharwar Craton (CDC) and Eastern Dharwar Craton (EDC). Individual published magmatic and meta-igneous zircon ages represented using 'Reported Ages' legend on the left represented by star symbols. The reported magmatic ages from Chapter 2 have been shown in circles coloured using the same legend. Previously published detrital studies with zircon Lu-Hf datasets have been displayed in the map marked by gold coloured diamonds. Brown pentagon shapes marked sample locations in this study, and major towns have been drawn in red squares.*

## *3.* Methods:

### *3.1 Zircon U–Pb dating:*

The quartzite samples were crushed and sieved for a zircon fraction (<500 μm) at the petrology lab facility at the Indian Institute of Science, Bangalore. The fractions were panned for heavy minerals. Magnetic minerals were removed, and resulting fractions were handpicked for zircons, mounted in epoxy resin and polished at the University of Adelaide. The grain mounts were carbon-coated and imaged by a Gatan cathodoluminescence (CL) detector attached to Quanta 600 MLA Scanning Electron Microscope to identify various domains within the zircons suitable for analysis. U–Pb geochronology was performed at Adelaide Microscopy, The University of Adelaide, using an Agilent 7900 ICP-MS attached to a New Wave 213 nm laser (NWR-213). The laser used a spot size of 30 μm and a frequency of 5 Hz. The isotopes $^{204}$Pb, $^{206}$Pb, $^{207}$Pb, $^{208}$Pb, $^{232}$Th and $^{238}$U were measured for U–Pb geochronology. GEMOC GJ-1 zircon (TIMS ages $^{207}$Pb/$^{206}$Pb = 602 ± 4.3 Ma, $^{206}$Pb/$^{238}$U = 600.7 ± 1.1 Ma and $^{207}$Pb/$^{235}$U = 602.0 ± 1.0 Ma; Jackson et al., 2004) was used for the correction of U–Pb fractionation for laser sessions. The Plesovice zircon (ID-TIMS $^{206}$Pb/$^{238}$U age = 337.13 ± 0.37 Ma) was used as an internal standard to test the accuracy of the laser sessions. Rare Earth Elements – $^{139}$La, $^{140}$Ce, $^{141}$Pr, $^{146}$Nd, $^{147}$Sm, $^{153}$Eu, $^{157}$Gd, $^{159}$Tb, $^{163}$Dy, $^{165}$Ho, $^{166}$Er, $^{169}$Tm, $^{172}$Yb, $^{175}$Lu, $^{89}$Y, $^{178}$Hf were simultaneously measured from the zircons along with U–Pb isotopes using 50 μm spot size analyses over NIST-SRM 610 glass as reference material (Norman et al., 1996, Norman et al., 1998, Jochum et al., 2011). The U–Pb and REE data were separately processed using Iolite™ (Paton et al., 2011). Concordia diagrams ($^{207}$Pb/$^{235}$U vs $^{206}$Pb/$^{238}$U) were generated to represent the data using the Isoplot 4.15 plugin on Microsoft Excel (Ludwig, 2003) and an online version of IsoplotR (Vermeesch, 2018) was used to calculate the upper intercepts of the discordant lines and mean ages. The analytical ellipses have been coloured to represent Th/U ratios. The mean standard weighted deviation (MSWD) has been calculated for $^{207}$Pb/$^{206}$Pb ages to represent the peaks of detrital distribution in the Kernel Density Estimates (KDE), for zircons greater than 85%

concordance, shown in figure 4. The U–Pb age data has been represented as a top-down view of the probability density estimate (PDE) in figure 6. The REE compositions have been normalised against chondrite values from Boynthon et al. (1984), using the Geochemical Data Toolkit for R (GCDkit6.0) (Janousen et al., 2006) to calculate REE ratios. In particular, Eu anomalies represented by Eu/Eu* (where $Eu^* = \sqrt{(Sm_N \times Gd_N)}$), $La_N/Yb_N$ ratios (light rare earth element (LREE) vs heavy rare earth element (HREE)), and $Gd_N/Yb_N$ ratios (middle rare earth element (MREE) vs HREE) were calculated and plotted against individual zircon $^{207}Pb/^{206}Pb$ ages.

### *3.2 Zircon Lu–Hf analysis:*

Zircon grains from the Holenarsipur Schist Belt (HSB) (PD17-61) and K.R.Pete Schist Belt (KSB) (PD17-42) with less than 15% discordance in U–Pb ages were targeted for Hf isotope analysis, which was carried out using a Nu Plasma II multi-collector inductively coupled plasma mass spectrometer at the John De Laeter Centre at Curtin University, Australia. CL images were used as a guide to target zircons within the same domain as the U–Pb ablation spot. $^{180}Hf$, $^{179}Hf$, $^{178}Hf$, $^{177}Hf$, $^{176}Hf$, $^{175}Lu$, $^{174}Hf$, $^{173}Yb$, $^{172}Yb$ and $^{171}Yb$ were counted on the Faraday collector array. The time-resolved data was reduced using Iolite™ from data reduction scheme after Woodhead et al. (2004). Data was normalised to $^{179}Hf/^{177}Hf = 0.7325$ using an exponential correction for mass bias (Patchett and Tatsumoto, 1980). The Yb and Lu isobaric interferences on $^{176}Hf$ were corrected following the methodology of Woodhead et al. (2004). Zircon standards GEMOC GJ-1, Plesovice, 91500, R33 were analysed before and during analysis to assess the performance and stability of the instrument (reported in the appendix). Mudtank zircon was used as the primary standard, and 17 analyses yielded a mean $^{176}Hf/^{177}Hf$ ratio of 0.282507 ± 0.0000094 (2σ), which was slightly over the uncertainty of the published value of 0.282507 ± 0.000006 (Woodhead and Hergt, 2005). The initial $^{176}Hf/^{177}Hf_{CHUR(t)}$ was calculated using a $^{176}Lu$ decay constant of $1.865 \times 10^{-11}$/year (Scherer et al., 2001) with modern $^{176}Hf/^{177}Hf$ and $^{176}Lu/^{177}Hf$ values of 0.282785 and 0.0336, respectively (Bouvier et al., 2008). The values of crustal model ages ($T_{DM}^C$) were calculated using a $^{176}Lu$ decay constant of $1.865 \times 10^{-11}$/year (Scherer et al., 2001), modern $^{176}Hf/^{177}Hf = 0.28325$, modern $^{176}Lu/^{177}Hf = 0.0384$ (Griffin et al., 2000), and a bulk crust value of $^{176}Lu/^{177}Hf = 0.015$ (Griffin et al., 2002). The reported uncertainties for εHf(t) were calculated as $^{176}Hf/^{177}Hf_{sample}$ uncertainty converted to epsilon notation and reported at 2σ level.

## 4. Results:

Four metasedimentary quartzites have been chosen to represent various detrital groups across the stratigraphy of the greenstone successions over the Western Dharwar Craton. One muscovite bearing

quartzite has been collected near the Ramagiri Greenstone Belt as a lithostratigraphic unit with limited detrital zircon data. The locations and details of the samples are summarised in the table below.

| Sample | Latitude | Longitude | Location | Lithology | Detrital unit | Category |
|---|---|---|---|---|---|---|
| *PD17-42* | 12.6357 | 76.4639 | Krishnarajapete | Fuchsite Quartzite | K.R. Pete Schist Belt (KSB) | Bababudan Group Greenstone belt (?) |
| *PD17-61* | 12.7935 | 76.2866 | Holenarsipur | Kyanite bearing Fuchsite Quartzite | Holenarsipur Schist Belt (HSB) | Sargur Group Greenstone belt |
| *PD18-51* | 14.2972 | 77.4890 | Ramagiri | Muscovite bearing Quartzite | Ramagiri Greenstone Belt (RGB) | Eastern Dharwar Craton Greenstone |
| *PD18-117* | 14.0573 | 75.6876 | Shimoga | Fuchsite Quartzite | Shimoga Schist Belt (SSB) | Chitradurga Group Greenstone (?) |
| *PD18-125* | 13.3440 | 75.7692 | Chikamagaluru | Quartzite | Bababudan Group Greenstone belt | Bababudan Group Greenstone belt |

*Table 1: Table showing coordinates and nearest landmark to sample locations, along with lithology, name of the detrital units and expected stratigraphic category among the detrital units in Dharwar Craton.*

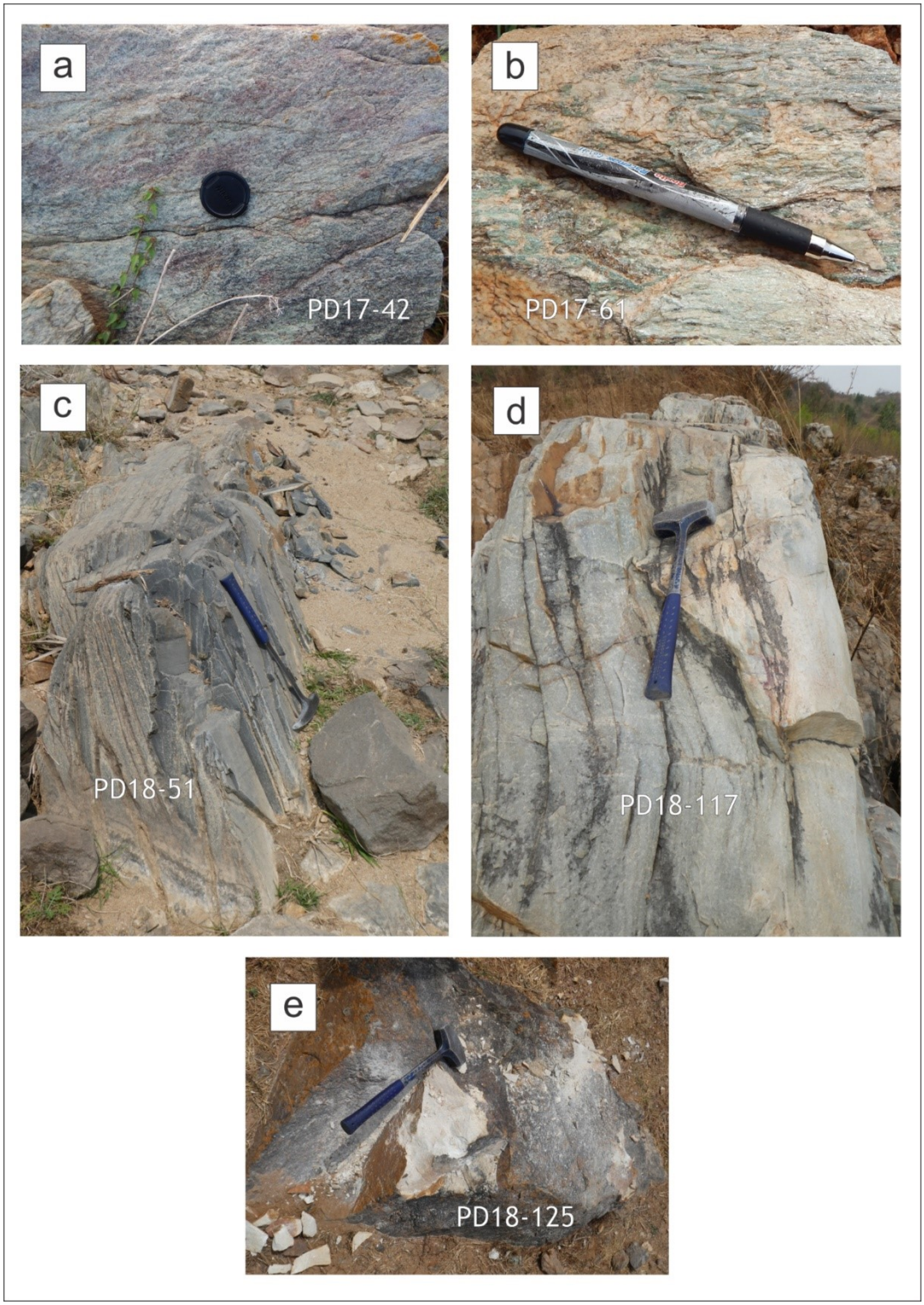



*Figure 2: Field photographs showing various sample locations. (a) Fuchsite-Quartzite (PD17-42) collected near K.R.Pete town showing reddish-brown weathering. (b) Kyanite bearing Fuchsite-Quartzite (PD17-61) collected near Holenarsipur town, the sample contained Kyanite needles. (c) Muscovite bearing Quartzite (PD18-51) collected south of Ramagiri town. (d) Fuchsite-Quartzite (PD18-117) collected south of Shimoga town occurring as deformed beds. (e) Quartzite sample (PD18-125) collected north of Chikamagulur town.*

### *4.1 Zircon U–Pb dating and REE composition:*

PD17-42 was a fuchsite bearing quartzite collected towards the southwest of Krishnarajpete (K.R. Pete) town. The fuchsite quartzite showed weathering in reddish-brown colouring. One hundred fifteen zircons have been analysed for U–Pb dating of which 57 zircons reveal near-concordant (concordance greater than 85% in this case) ages. The zircons appear irregularly shaped with broken and rounded edges. The morphology of the zircons ranged from elongated zircons with aspect ratio 3:1 to 3:2 with a thickness between 40 – 100 μm. The cathode luminescence (CL) images reveal a majority of the zircons showing igneous oscillatory zoning with internal cracks and occasional metamict textures. The kernel density estimate (KDE) calculated using the near-concordant ages filtered using discordance less than fifteen percentage reveal major age peaks converging at mean $^{207}Pb/^{206}Pb$ ages at 3178 ± 12 Ma (MSWD = 2.2, n = 20), 3307 ± 15 Ma (MSWD = 1.8, n = 12) and 3420 ± 22 Ma (MSWD = 2.1, n = 7) along with minor detrital contribution at 3105 ± 18 Ma (MSWD = 0.8, n = 4) and ca. 2.85 Ga. The measured Th/U ratios for the near-concordant zircons range from 0.036 to 1.68. The youngest near concordant zircon had $^{207}Pb/^{206}Pb$ age of 2737 ± 54 Ma. The REE compositions from the near concordant zircons reveal Eu/Eu* values ranging from 0.11 to 0.86, $La_N/Yb_N$ values ranging from 0.00002 to 0.22 and $Gd_N/Yb_N$ values ranging from 0.0288 to 0.7822.

PD18-117 is a quartzite collected to the south of Shimoga town. Ninety-three zircons have been analysed for U–Pb and REE analysis of which 28 analyses are less than fifteen per cent discordance. The zircons appear well-rounded in shape with broken edges with aspect ratios of 1:3 to 1:1 and thickness ranging from 30 – 90 μm. The CL imaging of the zircons reveals a majority of the grains showing magmatic oscillatory zoning with a minor fraction showing thin (up to 10 μm) bright rims. The near-concordant zircons were used to calculate the KDE which revealed major detrital contribution converging at mean $^{207}Pb/^{206}Pb$ ages, 2991 ± 16 Ma (MSWD = 1.3, n = 11), 3224 ± 18 Ma (MSWD = 0.95, n = 4) and minor contributions at ca. 3.15 – 3.05 Ga and ca. 3.3 Ga. The youngest near-concordant zircon had $^{207}Pb/^{206}Pb$ age of 2925 ± 41 Ma. The measured Th/U ratios for the near-concordant zircons range from 0.052 to 1.1. The REE compositions from the near concordant zircons reveal Eu/Eu* values ranging from 0.13 to 1.02, $La_N/Yb_N$ values ranging from 0.0001 to 0.02 and $Gd_N/Yb_N$ values ranging from 0.045 to 0.5.

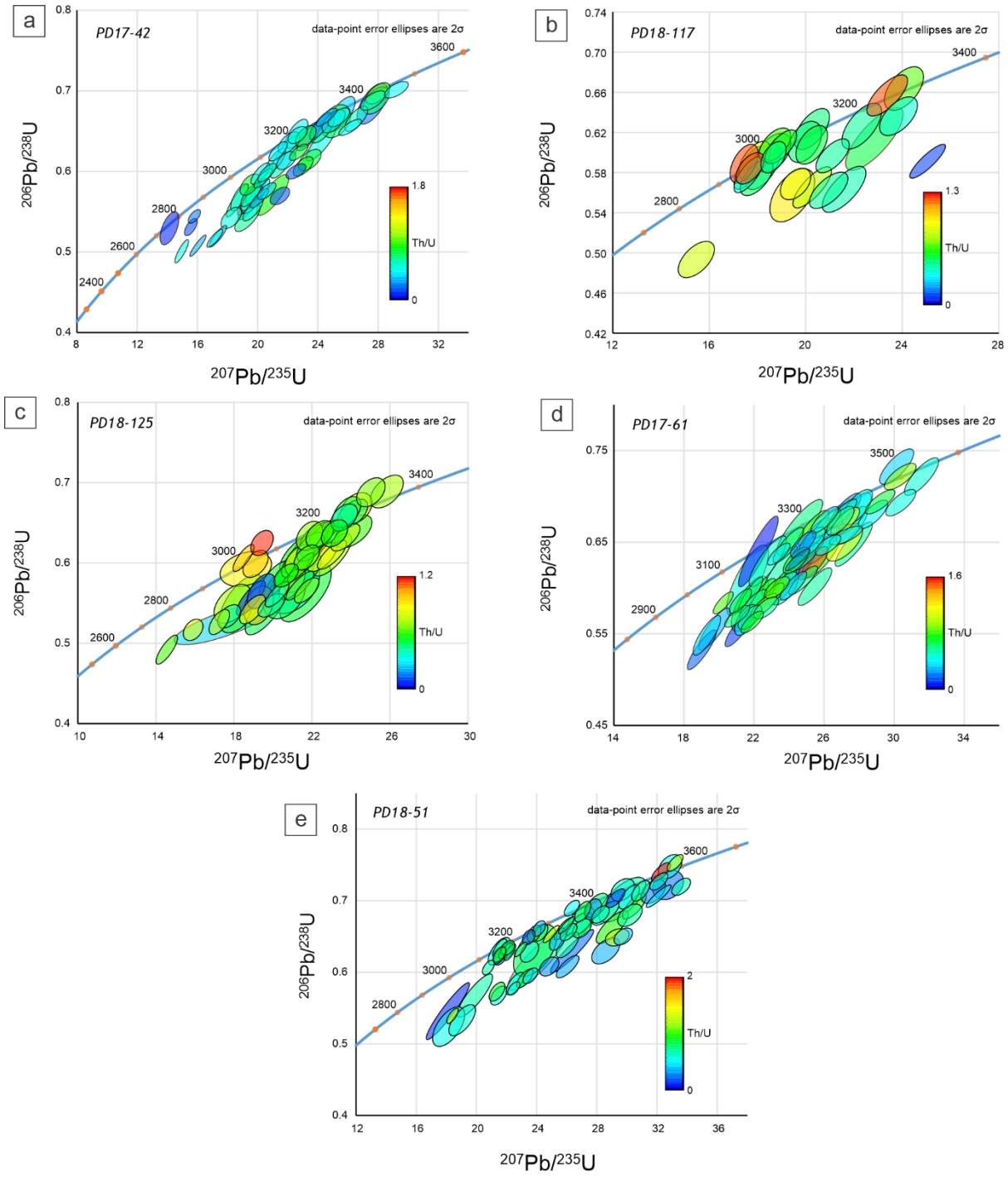



*Figure 3: U-Pb Concordia diagrams for the detrital zircons analysed in this study. The ellipses represent the 2σ error in age determination of each grain and are coloured using Th/U ratio as the colour scale shown next to each plot. Zircons with concordance greater than 85% shown in the figure. (a) Fuchsite-Quartzite (PD17-42) collected from near K.R.Pete town, (b) Fuchsite-Quartzite (PD18-117) collected south of Shimoga town, (c) Quartzite sample (PD18-125) collected from Chikamagulur town, (d) Kyanite bearing Fuchsite-Quartzite (PD17-61) collected from Mangalapura village near Holenarsipur town, (e) Muscovite bearing Quartzite (PD18-51) collected south of Ramagiri town.*

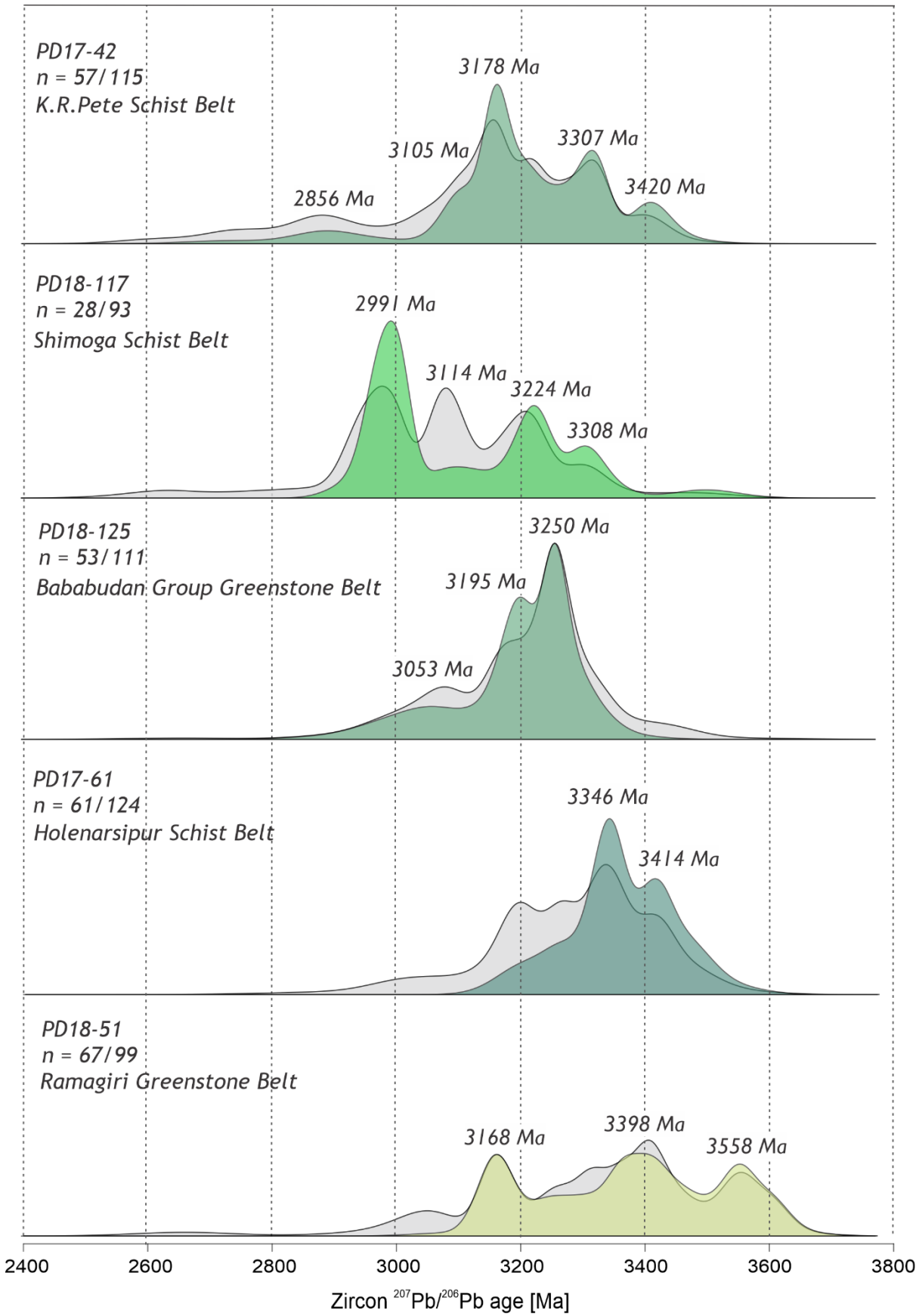
PD18-125 was collected from a quartzite formation in Chikamagulur town. One hundred eleven zircons have been analysed for U–Pb and REE data from which 53 analyses were filtered for U–Pb ages that are greater than 85 percentage concordance. The morphology of the analysed zircons included a significant fraction of elongated near-euhedral zircons with aspect ratios of 1:2 to 1:4 with a thickness of 40 – 60 μm. The remaining fraction contained rounded grains with broken edges with aspect ratios of 1:2 to 4:5 and thickness of 60 – 100 μm. The zircon grains reveal oscillatory zoning in response to CL imaging with no metamict textures. The KDE calculated using the near concordant zircons revealed major age peaks converging at mean $^{207}Pb/^{206}Pb$ age at 3250 ± 10 Ma (MSWD =0.57, n = 10) and 3194 ± 10 Ma (MSWD = 0.76, n = 12) with minor contributions at ca. 3.15 – 2.95 Ga and ca. 3.33 – 3.27 Ga. The youngest near-concordant zircon had $^{207}Pb/^{206}Pb$ age of 2965 ± 33 Ma. The measured Th/U ratios for the near-concordant zircons range from 0.051 to 1.16. The REE compositions from the near concordant zircons reveal Eu/Eu* values ranging from 0.06 to 0.86, $La_N/Yb_N$ values ranging from 0.0001 to 0.04 and $Gd_N/Yb_N$ values ranging from 0.02 to 0.307.

PD17-61 was collected from a kyanite bearing fuchsite-quartzite formation along the road from Holenarsipur town towards Mangalapura village. This sample was collected to represent the Sargur Group Greenstone detrital suite as the mineral assemblage of kyanite-muscovite quartzite was previously published to represent the regional metamorphism in Sargur Group supracrustal rocks (Hokada et al., 2013). The zircon grains were mostly rounded and imperfect shapes with broken edges with aspect ratios ranging from 1:4 to 3:2 with a thickness of 35 – 100 μm. The zircon grains mostly preserved oscillatory zoning with some grains showing metamict textures in response to CL imaging. One hundred twenty-four zircons were analysed for U–Pb data and REE compositions, of which 61 analyses were filtered for greater than 85 percentage concordance. The KDE for near concordant zircons revealed major detrital age peaks converging at mean $^{207}Pb/^{206}Pb$ age at 3414 ± 12 Ma (MSWD = 1.2, n =11) and 3346 ± 9 Ma (MSWD = 1.02, n =13) with decreasing contribution at ca. 3.3 – 3.17 Ga and ca. 3.55 – 3.45 Ga. The youngest near-concordant zircon had $^{207}Pb/^{206}Pb$ age of 3174 ± 46 Ma. The measured Th/U ratios for the near-concordant zircons range from 0.022 to 1.5. The REE compositions from the near concordant zircons reveal Eu/Eu* values ranging from 0.19 to 0.75, $La_N/Yb_N$ values ranging from 0.0018 to 0.471 and $Gd_N/Yb_N$ values ranging from 0.036 to 1.176.

PD18-51 was collected from a muscovite bearing quartzite bed within the Ramagiri greenstone belt in the Eastern Dharwar Craton near Ramagiri town. Ninety-nine zircons were analysed for U–Pb data and REE analysis of which 67 analyses were filtered for greater than 85 per cent concordance. The zircons were rounded with broken edges with aspect ratios of 1:3 to 1:1 and thickness of 30 – 90 μm. The zircon grains show typical darker CL imaging response with subtle oscillatory zoning and occasional metamict zones within the grains. The calculated KDE plot revealed major detrital

contributions converging at broad age peaks with mean $^{207}Pb/^{206}Pb$ age of 3558 ± 17 Ma (MSWD = 5.8, n= 13), 3398 ± 25 Ma (MSWD = 18, n = 23) and 3168 ± 13 Ma (MSWD = 2.1, n = 11) with minor contributions at ca. 3.3 – 3.2 Ga and ca. 3.65 Ga. The youngest near-concordant zircon had $^{207}Pb/^{206}Pb$ age of 3089 ± 25 Ma. The measured Th/U ratios for the near-concordant zircons range from 0.056 to 1.35 with one grain with high Th/U ratio of 13.3. The REE compositions from the near concordant zircons reveal Eu/Eu* values ranging from 0.07 to 1.19, $La_N/Yb_N$ values ranging from 0.0001 to 0.47 and $Gd_N/Yb_N$ values ranging from 0.015 to 0.99.

*Figure 4: Kernel Density Estimates (KDE) created using detrital zircon $^{207}Pb/^{206}Pb$ age. The KDE for zircons with near-concordant ages (> 85% concordance) has been represented with colour overlain on KDE created using $^{207}Pb/^{206}Pb$ ages from all analysed zircons from each detrital sample, here represented with a grey coloured KDE. The number of zircons used in calculating the KDE has been shown on the left with n = x/y format, where x and y represent the number of near-concordant zircons and total analysed zircons respectively. Major detrital age peaks for the coloured KDEs have been calculated using mean $^{207}Pb/^{206}Pb$ ages and the age representing the detrital peak is shown in the figure.*


PD17-42
n = 57/115
K.R.Pete Schist Belt
3178 Ma
3105 Ma
3307 Ma
3420 Ma
2856 Ma
PD18-117
n = 28/93
Shimoga Schist Belt
2991 Ma
3114 Ma
3224 Ma
3308 Ma
PD18-125
n = 53/111
Bababudan Group Greenstone Belt
3250 Ma
3195 Ma
3053 Ma
PD17-61
n = 61/124
Holenarsipur Schist Belt
3346 Ma
3414 Ma
PD18-51
n = 67/99
Ramagiri Greenstone Belt
3168 Ma
3398 Ma
3558 Ma
2400
2600
2800
3000
3200
3400
3600
3800
Zircon 207Pb/206Pb age [Ma]

### *4.2 Lu-Hf isotopic analysis:*

Lu-Hf isotopic analysis was carried out in situ, on zircons directly adjacent to where the U–Pb, REE data was obtained. Analyses were targeted in the same CL domain as the other analyses. A total of 49 zircons were analysed for Lu-Hf analysis which, shown in figure 5, includes two samples, PD17-42 and PD17-61, to focus on the Paleaoarchean—Mesoarchean crustal processes within the Western Dharwar Craton.

Twenty-six zircons were analysed from the sample PD17-61 representing Holenarsipur Schist Belt (HSB) for Lu-Hf analysis, and the results show initial $^{176}Hf/^{177}Hf$ ratios between 0.280521 – 0.280949. εHf(t) values range between -6.3 to +2.59 for zircons aged between ca. 3.35—3.2 Ga; -0.12 to +8.92 for zircons aged between ca. 3.55—3.35 Ga. The data indicate the involvement of Eoarchean to Paleoarchean juvenile sources until 3.35 Ga and a mixture of juvenile Paleoarchean and reworked Eoarchean crustal components as sources for the zircons from ca. 3.35—3.2 Ga.

Twenty-three zircons were analysed from the sample PD17-42 representing K.R.Pete Schist Belt (KSB) for Lu–Hf analysis, and the results show initial $^{176}Hf/^{177}Hf$ ratios between 0.280683—0.281042. εHft values range between -7.13 to +6.84 for zircons aged between ca. 3.6—3.4 Ga; -5.24 to +4.26 for zircons aged between ca. 3.35—3.1 Ga and -19.61 to -8.79 for zircons younger than ca. 2.9 Ga. The data indicates juvenile Paleoarchean sources until ca. 3.4 Ga with a minor contribution from older reworked sources, a mixture of juvenile Paleoarchean, and reworked Eoarchean sources.

## 5. Discussion:

### *5.1 Detrital zircon U–Pb age constraints, potential source regions and correlations:*

The detrital greenstone sequences in the Dharwar craton have been categorised into lithostratigraphic groups namely the Sargur group, and the younger Dharwar supergroup involving Bababudan group, Chitradurga group in the Western Dharwar Craton. The Yeshwantnagar formation is proposed to be analogous to the Bababudan group and the Kolar group greenstone belt is equivalent to the Chitradurga group in the Eastern Dharwar Craton (Ramakrishna and Vaidhyanathan, 2008).

The oldest detrital zircons occur in the muscovite bearing quartzite from the Ramagiri greenstone belt, sample PD18-51 (Figure 4). These zircons define a $^{207}Pb/^{206}Pb$ age range of ca. 3649 Ma to 3457 Ma clustering at 3558 ± 17 Ma (MSWD = 5.8, n= 13) in the kernel density estimate. These ages coincide with the presence of similarly-aged detritus from the metasedimentary sequences near the Kolar greenstone belt (Maibam et al., 2016) and Sargur Group (Lancaster et al., 2015). Limited detrital $^{207}Pb/^{206}Pb$ ages older than 3.5 Ga also occur in the fuchsite quartzite of the Holenarsipur Schist Belt within the Sargur

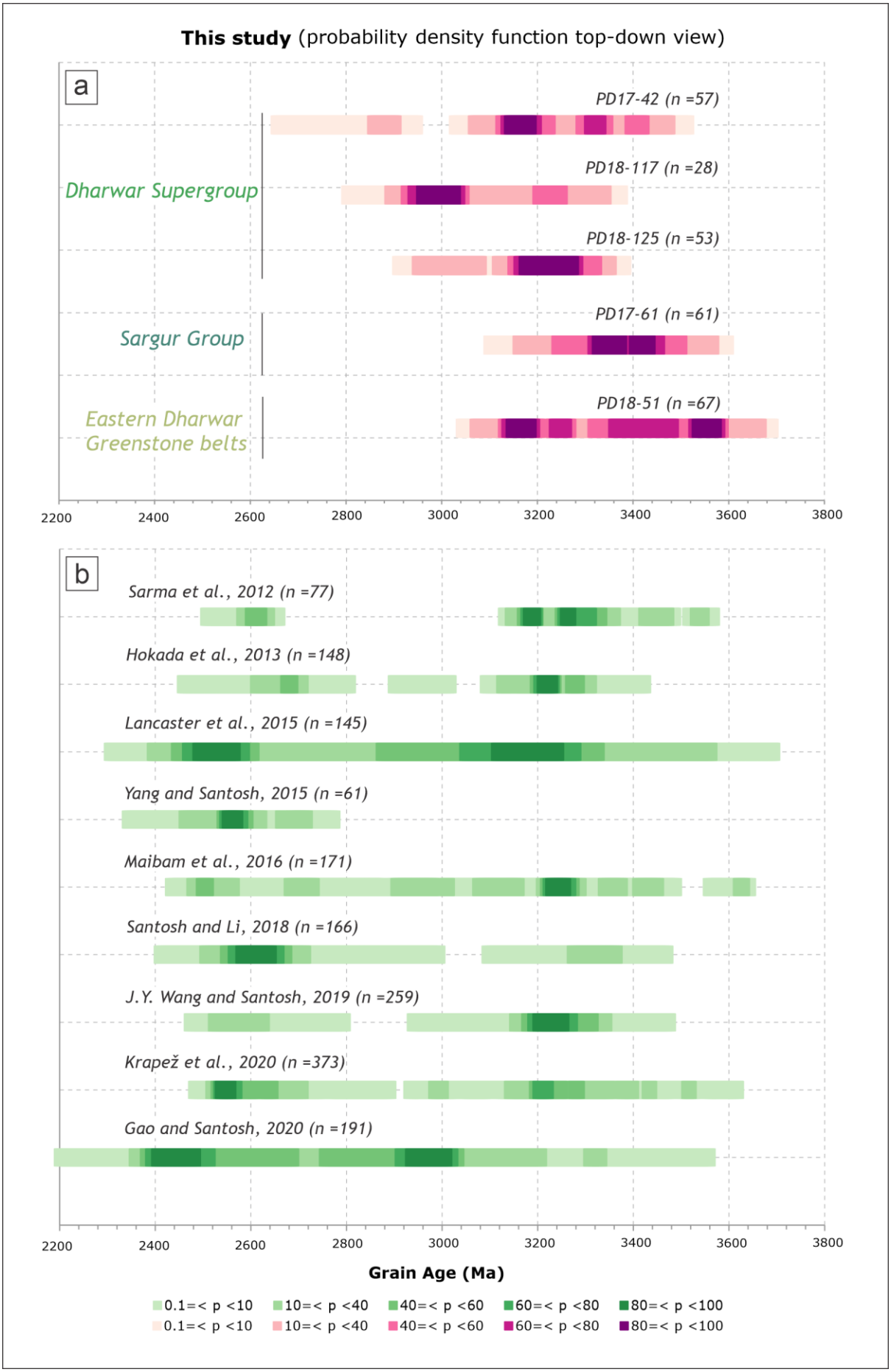
Group (sample PD17-61, Figure 4). The sources for the older Paleaoarchean zircons in PD18-51 are expected to be occurring as relicts within the Mesoarchean basement of the northern part of Eastern Dharwar Craton (Rajamanickam et al., 2014), which are yet to be explored (Maibam et al., 2016). The older TTG gneisses around the Gorur gneiss contain inherited zircons with ages older than 3.5 Ga are interpreted as potential sources for older Paleoarchean detrital zircons within PD17-61. The occurrence of detrital U–Pb ages older than ~3.5 Ga in the basal detrital sequences of both WDC and EDC suggests the involvement of coeval Palaeoarchean sources in the nucleation of the Dharwar Craton as a whole.

The subsequent crustal building episode within the Dharwar Craton around ca. 3.45 — 3.3 Ga was explained as formed by melting of hydrated basalts at differential crustal depths (Jayandanda et al., 2015; Jayananda et al., 2018). This has been observed from the detrital record of the Ramagiri greenstone belt quartzite (PD18-51) that has a group of zircons that range in $^{207}Pb/^{206}Pb$ age from ca. 3457—3357 Ma broadly clustering at 3398 ± 25 Ma (MSWD = 18, n = 23); the Holenarsipur greenstone belt (PD17-61) at mean $^{207}Pb/^{206}Pb$ age of 3414 ± 12 Ma (MSWD = 1.2, n =11) until 3346 ± 9 Ma (MSWD = 1.02, n =13) and fuchsite quartzite near Krishnarajpete (PD17-42) with mean $^{207}Pb/^{206}Pb$ age of 3420 ± 22 Ma (MSWD = 2.1, n = 7). In the Western Dharwar Craton, the gneisses to the west of the Holenarsipur schist belt were reported previously for zircons, both inherited and magmatic, at U–Pb age of ca. 3.4 Ga (Guitreau et al., 2017, S. Ranjan et al., 2020). This crustal building episode continued till ca. 3.3 Ga. This is reflected in detrital zircons from the Holenarsipur schist belt (PD17-61) with $^{207}Pb/^{206}Pb$ mean age of 3346 ± 9 Ma (MSWD = 1.02, n =13), the K.R.Pet schist belt (PD17-42) with a mean $^{207}Pb/^{206}Pb$ age of 3307 ± 15 Ma (MSWD = 1.8, n = 12) and the fuchsite quartzite to the south of Shimoga (PD18-117) with $^{207}Pb/^{206}Pb$ grain ages close to ca. 3.3 Ga. The ca. 3.3 Ga age signature has been reported in the detrital zircon U–Pb age data from several detrital studies across the supra-crustal sequences within the Dharwar Craton as shown in Figure 6 (Sarma et al., 2012; Hokada et al., 2013; Lancaster et al., 2015; Maibam et al., 2016; Santosh and Li, 2018; J.Y. Wang and Santosh, 2020; Krapez et al., 2020; Gao and Santosh, 2020). The sources for the ca. 3.3 Ga zircons in the WDC supra-crustals are proposed to be the older TTG gneisses towards the west of the Holenarsipur schist belt surrounding the Sargur Group greenstone belts (Guitreau et al., 2017; S. Ranjan et al., 2020; Jayananda et al., 2018, Santosh and Li, 2018) and also the reported magmatic U–Pb ages from the gneisses within the WDC from Chapter 2 from the west of Holenarsipur town at constrained protolith ages at 3302 ± 12 Ma (sample PD17-56 in Chapter 2) and 3284 ± 9 Ma (sample PD18-118 in Chapter 2). The Sargur group is proposed to have received primary detritus from the surrounding TTG gneisses, and the overlying detrital groups could have potentially received detritus aged at ca. 3.3 Ga from the combination of surrounding TTG gneisses and the eroding Sargur group greenstone belt. The presence of ca. 3.3 Ga detritus in the KDE of the Ramagiri greenstone belt has been explained to be sourced from the older crustal basement (>3.2 Ga) towards the western

margin of the Central Dharwar Craton (CDC) (Nasheeth et al., 2015; Jayananda et al., 2020), supported by the presence of zircon cores aged at 3301 ± 22 Ma (sample PD18-104 in Chapter 2). Relicts of Paleoarchean basement in the CDC interpreted from the inherited zircon with a $^{207}Pb/^{206}Pb$ age of 3323 ± 25 Ma, reported from the Closepet Granite in chapter 2 (sample PD17-1) supports the existence of relicts of Meso- to Paleoarchean crust in the CDC.

The following crustal building episode in the Dharwar Craton was explained as the two-stage accretion of the oceanic island arc crust resulting in the formation of TTG gneisses between ca. 3.25—3.2 Ga and ca. 3.15—3.0 Ga (Jayananda et al., 2020). The timing of the first stage of accretion has been observed as a significant detrital population in the KDEs of Bababudan Group at detrital age peaks at mean $^{207}Pb/^{206}Pb$ ages 3250 ± 10 Ma (MSWD = 0.57, n = 10) and 3194 ± 10 Ma (MSWD = 0.76, n = 12) for the quartzite sample (PD18-125), and at 3224 ± 18 Ma (MSWD = 0.95, n = 4) for the fuchsite quartzite north of Shimoga (PD18-117). This period coincides within the reported ages of detrital zircons between the ages of ca. 3.25—3.2 Ga on the Dharwar Craton (Sarma et al., 2012; Hokada et al., 2013; Lancaster et al., 2015; Maibam et al., 2016; J.Y. Wang and Santosh, 2020; Krapež et al., 2020) shown in Figure 6. In the WDC, the TTG gneisses surrounding the Sargur group and Dharwar Supergroup (which includes the Bababudan Group and the Chitradurga group greenstone belts) form the primary detrital sources for the zircons aged between ca. 3.25—3.2 Ga (Jayananda et al., 2015), whereas the supra-crustal sequences of CDC and EDC are expected to have sourced detrital zircons of this period sourced from the west of Closepet Granite where meta-igneous zircon ages older than ca. 3.2 Ga have been reported (Jayananda et al.,2020).

*Figure 5: Top-down view of Probability Density Estimates (PDE) of the samples used in this study compared with published detrital studies used in this study to compare the most probable $^{207}Pb/^{206}Pb$ age peaks. The PDE for zircons with near-concordant ages (> 85% concordance) has been plotted with the intensity of the colour representing higher probability shown by the legend below. In figure (a), the sample name is written next to the PDE with n representing the number of zircons used in the creation of the PDE. Figure (b) shows the PDEs representing various detrital studies used to reflect prevalent periods of crustal accretion and magmatism reflected in the detrital record across the craton. The number of zircons used in calculating the PDE is represented by n, and individual $^{207}Pb/^{206}Pb$ ages have been used to calculate the PDE.*


This study (probability density function top-down view)
a
PD17-42 (n =57)
PD18-117 (n =28)
PD18-125 (n =53)
PD17-61 (n =61)
PD18-51 (n =67)
Dharwar Supergroup
Sargur Group
Eastern Dharwar Greenstone belts
2200
2400
2600
2800
3000
3200
3400
3600
3800
b
Sarma et al., 2012 (n =77)
Hokada et al., 2013 (n =148)
Lancaster et al., 2015 (n =145)
Yang and Santosh, 2015 (n =61)
Maibam et al., 2016 (n =171)
Santosh and Li, 2018 (n =166)
J.Y. Wang and Santosh, 2019 (n =259)
Krapež et al., 2020 (n =373)
Gao and Santosh, 2020 (n =191)
Grain Age (Ma)
0.1=< p <10
10=< p <40
40=< p <60
60=< p <80
80=< p <100
0.1=< p <10
10=< p <40
40=< p <60
60=< p <80
80=< p <100

The timing of the second stage crustal accretion at ca. 3.15—3.0 Ga has been regarded as the time of predominant crustal recycling and metamorphism of the existing crustal components as a consequence of thickening of the crust (Nutman et al., 1992; Jayananda et al., 2013a, 2015, 2018) and intrusion of surrounding granitoids (Nutman et al., 1992; Lancaster et al., 2015). Detrital zircons representing this period have been identified in the detrital record across the meta-quartzites over Dharwar Craton (Maibam et al., 2016; Lancaster et al., 2015; Hokada et al., 2013; Gao and Santosh, 2020; J.Y. Wang and Santosh, 2019; Krapež et al., 2020). In this study except for the kyanite bearing fuchsite quartzite from Holenarsipur Greenstone Belt (PD17-61), this period has been represented as major age peaks among the KDE of the quartzites analysed in the WDC, in the fuchsite quartzite in Shimoga Schist Belt (SSB) (PD18-117) at 2991 ± 16 Ma (MSWD = 1.3, n = 11), K.R.Pete Schist Belt (KSB) (PD17-42) at 3105 ± 18 Ma (MSWD = 0.8, n = 4) and as a minor population within the KDE representing the detrital zircon record of Ramagiri greenstone belt (PD18-51) and the quartzite near Chikamaguluru, i.e. PD18-125. The potential sources have been noticed as surrounding TTG gneisses experiencing regional metamorphism (Jayananda et al., 2013). The regional metamorphism has been observed in the zircon U–Pb data reported in Chapter 2 from the gneisses to the west of the Chitradurga Greenstone Belt (CGB) (see sample PD18-110 in Chapter 2), and within the exposed basement to the east of CGB (Chardon et al., 2011) and sample PD18-34 in Chapter 2. The sources for the detrital zircons between ages of ca. 3.0—2.9 Ga include a) granitoid batholiths around ca. 3.06—2.94 Ga observed near the Kudremukh formation within the Western Ghat belt (Pahari et al., 2019), b) the Chikamaguluru granitoid pluton reported in Chapter 2 at 3060 ± 16 Ga (see sample PD18-126 in Chapter 2), and c) the pegmatoid bearing gneisses and granites in the vicinity of the CGB (reported in U–Pb data for samples PD17-14, PD17-21, PD17-27 in Chapter 2). The significant population of zircons in the detrital record of the Shimoga Schist Belt at ca. 3.0 Ga can be correlated with the Chitradurga Group greenstone sequences presuming that the zircons from this period have been sourced from the western margin of Chitradurga Greenstone Belt (CGB). However, Krapež et al. (2020) proposed that the Chitradurga Group and the Bababudan Group are spatially linked but temporally unrelated successions.

The youngest near-concordant $^{207}Pb/^{206}Pb$ age from the kyanite bearing fuchsite quartzite of Holenarsipur belt within the Sargur Group (PD17-61) is 3174 ± 46 Ma. Monazite U-Th-Pb age data from the kyanite bearing muscovite schists in the Sargur Group were reported at 3082 ± 66 Ma (Hokada et al., 2013) to represent the timing of the metamorphism to kyanite-muscovite grade. The possibility of the monazites being detrital persists lowering the MDA of the Holenarsipur belt towards ca. 3.0 Ga. Recent Sm-Nd isotopic data on layered intrusive ultramafic rocks from Holenarsipur and Nuggihalli greenstone belts within the Sargur Group have produced the youngest reported Sm-Nd isochron age of 2934 ± 88 Ma (Patra et al., 2020) which interpreted to have triggered the intrusive granitoid batholiths

around ca. 3.0—2.9 Ga in the WDC contributing detritus to quartzites belonging to the Bababudan group with MDA of 2925 ± 41 Ma for sample PD18-125 and 2965 ± 33 Ma for sample PD18-117 which coincides with the MDA reported from the basal quartzite of the Deogiri Formation, within the Sandur Group in Central Dharwar Craton, at 2958 ± 20 Ma (Krapez et al., 2020). Sm-Nd isochron age for the Kalasapura formation of the Bababudan group has been reported as 2911 ± 49 Ma (Kumar et al., 1996) which is coeval with the recently proposed MDA for the basal groups of Bababudan Group Greenstone Belt at 2934 ± 88 Ma. Patra et al. (2020) suggested that the Sargur Group rocks represent older ultramafic equivalents of the Dharwar Supergroup, which includes the Bababudan Group.

The fuchsite quartzite near Krishnarajpete (PD17-42) contains detrital zircons younger than ca. 2.9 Ga with the youngest near-concordant (>85% concordance) $^{207}Pb/^{206}Pb$ age at 2737 ± 54 Ma with a Th/U ratio of 0.036 which is usually attributed to the zircon experiencing open-system behaviour or metamorphism (Rubatto, 2017; Yakymchuk et al., 2018). This low Th/U ratio has been interpreted as potential Pb-loss event trending towards ca. 2.7 Ga which can be attributed to the formation of the intracontinental rift basin, the Bababudan basin, previously proposed to have initiated from ca. 2765 Ma (Krapež et al., 2020) and followed by the formation of the Chitradurga Group volcano-sedimentary sequences which intervened with simultaneous formation of the Bababudan Group supra-crustal sequences that continued until 2719 ± 7 Ma reported from zircon U–Pb ages from ash-fall tuffs (Trendall et al., 1997; Krapež et al., 2020). Hence, the fuchsite quartzite formation near Krishnarajpete (PD17-42) has been interpreted to be a part of the Bababudan Group stratigraphy. The claims of MDA for the Bababudan Group at two different periods – in the Mesoarchean at 2911 ± 49 Ma (Kumar et al., 1996; Patra et al., 2020) and the Neoarchean at 2719 ± 7 Ma (Trendall et al., 1997; Krapež et al., 2020), show the need for further investigation into the stratigraphic chronology of the Dharwar Supergroup as mentioned by Hokada et al. (2013). This discrepancy in the MDA can be explained by considering the formation of the Bababudan Group occurring in two-stages. The first stage initiated during the 3.0 Ga mafic volcanism and regional metamorphism in the WDC (Jayananda et al., 2013); the second stage of sedimentation happening as a result of Neoarchean mafic volcanism which has been reported across the Dharwar Craton. The alternate explanation for the Bababudan Group is continuous sedimentation across the Bababudan Basin from the Mesoarchean to Neoarchean with the above-contested ages (Trendall et al., 1997; Kumar et al., 1996) acting as the constraints for the opening and closure of the Bababudan basin, but requires further investigation due to lack of zircon populations between ca. 2.9—2.72 Ga.

The youngest detrital zircon $^{207}Pb/^{206}Pb$ age from the muscovite bearing quartzite from Ramagiri greenstone belt in the CDC is 3089 ± 25 Ma. The metabasalts from Ramagiri greenstone belt have been dated using Sm-Nd isochron at 2746 ± 64 Ma (Zachariah et al., 1995) and associated felsic volcanic

lithologies at 2707 ± 18 Ma (Balakrishnan et al., 1999). The surrounding granitoid rocks were dated using zircon U–Pb dating yielding ages ranging from ca. 2.65 — 2.52 Ga (Jayananda et al., 2020; Balakrishnan et al., 1999). The absence of Neoarchean ages within the detrital record of the sample PD18-51 has been interpreted as the formation of the quartzite occurring as a result of the mafic volcanism across the Hungund-Penakacherla-Ramagiri greenstone belts in the Neoarchean (Zachariah et al., 1995; Balakrishnan., 1990; Nutman et al., 1996) from eroding nearby Meso- to Paleaoarchean granitoids and basement gneisses prevalent in the CDC. The sources for the zircons representing the older $^{207}Pb/^{206}Pb$ ages at ca. 3.7—3.5 Ga are yet to be reported (Maibam et al., 2016). This interpretation makes the Ramagiri greenstone belt analogous to the formation of the Bababudan Basin within the WDC through ca. 2765 — 2720 Ma (Krapež et al., 2020).

### *5.2 Interpretation of detrital Lu-Hf isotopic data*

The samples PD17-61 and PD17-42 were selected for detrital Lu-Hf isotopic analysis representative of the detrital record of the Dharwar Craton during the period of Paleoarchean until the widespread Neoarchean magmatism around ca. 2.7 Ga. Metasedimentary sequences analysed for Lu-Hf isotopic data are the Holenarsipur Greenstone Belt (PD17-61) within the Sargur Group and the fuchsite quartzite near Krishnarajpete (PD17-42), which has been interpreted to represent the upper stratigraphic unit within the Bababudan Group. Figure 4 shows the Lu-Hf data from this study described as epsilon Hf notation at the timing of crystallisation for the zircon, denoted as $\varepsilon Hf(t)$, to reveal the crustal extraction ages of the source protoliths.

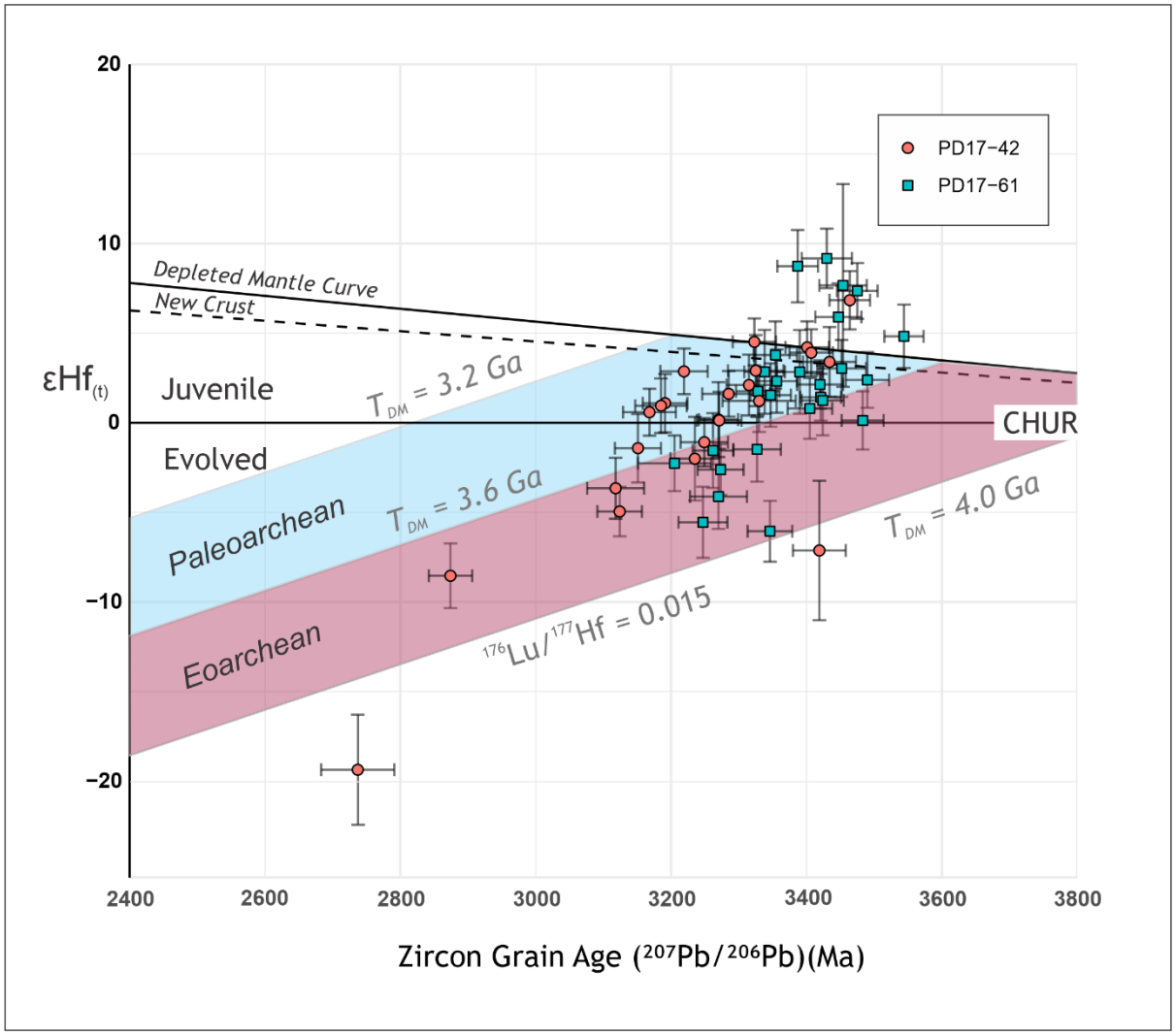



*Figure 6: The plot of εHf(t) vs. $^{207}Pb/^{206}Pb$ ages for the zircon grains analysed for Lu–Hf isotopic analysis in this study. The uncertainties plotted are at 2σ. CHUR – Chondritic Uniform Reservoir, representing the bulk Earth. The depleted mantle line is calculated by using the εHf(t) equation with the values: modern $^{176}Hf/^{177}Hf_{DM}$ = 0.28325 (Griffin et al., 2000) and modern $^{176}Hf/^{177}Hf_{CHUR}$ = 0.282785 (Bouvier et al., 2008). The new crust line has been adapted from Dhuime et al. (2011). The values of crustal model ages ($T_{DM}^{C}$) and crustal evolution lines were calculated using a $^{176}Lu$ decay constant of 1.865 × $10^{-11}$ year $^{-1}$(Scherer et al., 2001), modern $^{176}Hf/^{177}Hf$ = 0.28325, modern $^{176}Lu/^{177}Hf$ = 0.0384 (Griffin et al., 2000), and a bulk crust value of $^{176}Lu/^{177}Hf$ = 0.015 (Griffin et al., 2002).*

The εHf(t) data in figure 6 for the sample PD17-61 is represented by two clusters zircons. Zircons in the Holenarsipur schist belt with $^{207}Pb/^{206}Pb$ ages ranging from ca. 3544 — 3328 Ma define the first cluster with positive εHf(t) values that are interpreted to be derived from juvenile Paleoarchean sources with crustal extraction ages ranging from $T_{DM}$ = 3.6—3.4 Ga. The zircons with $^{207}Pb/^{206}Pb$ ages

ranging from ca. 3346—3205 Ma define the second cluster with negative εHf(t) values interpreted to be derived from evolved Eoarchean sources. This can be explained as the period of juvenile magmatic crust building episodes spanning from ca. 3.6—3.32 Ga has caused pre-existing Eoarchean protoliths to undergo crustal recycling around ca. 3.35—3.2 Ga which had eroded into the Holenarsipur schist belt. The komatiites dated from the vicinity of the Sargur Group, reported to have erupted at Sm-Nd isochron age of ca. 3352 ± 110 Ma (Jayananda et al., 2008), but this age was discounted for its poor precision by Patra et al. (2020) and suggested the usage of SHRIMP $^{207}Pb/^{206}Pb$ ages from zircons in a rhyolitic flow from the Holenarsipur greenstone belt at 3298 ± 7 Ma (Peucat et al., 1995) to precisely represent the Sargur supra-crustal rocks. The juvenile mafic, ultramafic magmatism and associated felsic lithologies around ca. 3.35—3.3 Ga could have been the cause for the recycling of the pre-existing Eoarchean protoliths after ca. 3346 Ma that continued till ca. 3205 Ma in the source regions for the Holenarsipur schist belt.

The εHf(t) values for PD17-42 revealed sources that form a linear array interpreted to be a result of continuous continental recycling through ca. 3.4—3.15 Ga with crustal extraction ages ranging from $T_{DM}$ = 3.6—3.4 Ga, also previously reported by Lu-Hf isotopic studies across the Dharwar Craton (Jayananda et al., 2018; Guitreau et al., 2017; Lancaster et al., 2015). One zircon grain aged at $^{207}Pb/^{206}Pb$ age of 3419 ± 39 Ma with an εHf(t) value of -7.12 ± 3.89 with a large error is interpreted to be derived from an evolved Eoarchean source protolith. The zircons younger with $^{207}Pb/^{206}Pb$ ages younger than ca. 3150 Ma in this sample reveal negative εHf(t) values that show a continuous recycling trend until ca. 2874 ± 32 Ma interpreted to derived from sources with crustal extraction ages in the Eoarchean which is interpreted to be sourced from further reworking of source protoliths for the Sargur Group supra-crustal rocks with crustal extraction ages in the Eoarchean. A highly negative εHf(t) value of -19.36 ± 3.07 at ca. 2737 ± 54 Ma has been regarded as an anomaly and excluded from interpretation due to low Th/U ratio, Th/U = 0.036, measured during the collection of U–Pb age data with suspected open-system behaviour for the zircon grain.

### *5.3 Comparison with published detrital and magmatic Lu-Hf isotopic studies on the Dharwar Craton*

Craton-wide isotopic studies have played a substantial role in the understanding of the crustal evolution and architecture of the Dharwar Craton. The detrital zircon Lu-Hf isotopic datasets have put forth the crustal evolution history of the Dharwar Craton as explained by comparing the εHf(t) values from detrital sequences across the western and eastern domains of the craton (WDC and EDC) (Lancaster et al., 2015; Maibam et al., 2016; Krapež et al., 2020). The detrital record of the Chitradurga Greenstone Belt (CGB) and Gadag Greenstone Belt (GGB) (Hokada et al., 2013; Sarma et al., 2012; Krapež et al., 2020) have contributed in understanding the process of mafic volcanism and

sedimentation during the Archean between WDC and CDC. The published Lu-Hf data from the detrital sequences across Dharwar Craton, compiled into a comprehensive database in this study, aids in further constraining the relationship between the evolutionary histories of crustal domains within the Dharwar Craton, now divided into Western Dharwar Craton (WDC), Central Dharwar Craton (CDC) and Eastern Dharwar Craton (EDC) (Peucat et al., 2013; Jayananda et al., 2018, 2020; Santosh and Li, 2018).

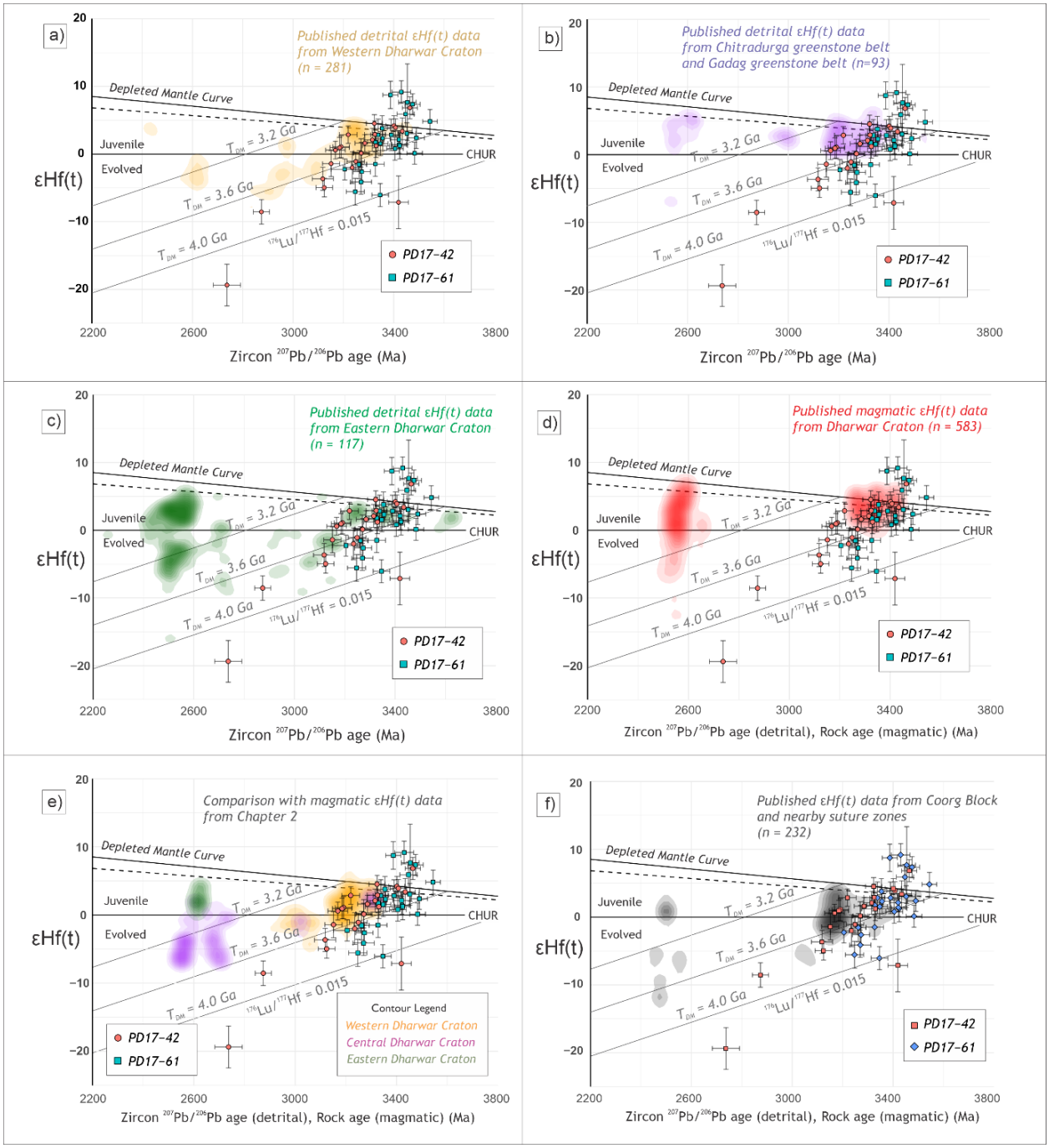


*Figure 7: The plot of εHf(t) vs. $^{207}Pb/^{206}Pb$ ages for the zircon grains analysed for Lu–Hf isotopic analysis in this study compared to published detrital and magmatic zircon Lu–Hf data across the Dharwar Craton and Coorg Block plotted as density contour plot. The number of analyses used to create the density plot is shown on the top right (n). (a)The εHf(t) values compared against published detrital zircon εHf(t) data from the detrital units associated with the WDC plotted here as density plot in εHf(t) space; (b) The εHf(t) values compared against published detrital zircon εHf(t) data from the detrital units associated with detrital studies along the Chitradurga Shear Zone, which marks the boundary between WDC and CDC, plotted as density plot; (c) εHf(t) values compared against published detrital zircon εHf(t) data from the detrital units associated with the former Eastern Dharwar Craton (includes CDC and EDC); (d) εHf(t) values compared against published zircon εHf(t) data from magmatic and meta-igneous lithologies within the Dharwar Craton (references mentioned in Chapter 2); (e) εHf(t) values compared against reported zircon εHf(t) data from the meta-igneous lithologies from Chapter 2; (f) εHf(t) values compared against published detrital zircon εHf(t) data from the detrital and meta-igneous units associated with the Coorg Block, Mercara Shear Zone.*

In this chapter, we compare our results with published detrital and magmatic Lu-Hf isotopic data from the Dharwar Craton (Sarma et al., 2012; Hokada et al., 2013; Lancaster et al., 2015; Yang and Santosh, 2015; Maibam et al., 2016; Santosh and Li, 2018; J.Y. Wang and Santosh, 2019; Krapež et al., 2020; Gao and Santosh, 2020) categorising based on their association with the western and eastern domains within the Dharwar Craton in Figure 7. The published Lu-Hf data have been expressed as εHf(t) data plotted against the reported zircon $^{207}Pb/^{206}Pb$ age as a density plot. The detrital sequences occurring to the west of the Chitradurga Greenstone belt (CGB) have been regarded as being associated with the Western Dharwar Craton (WDC). The detrital sequences to the east of CGB have been categorised to be associated with the former Eastern Dharwar Craton, which is divided further into the CDC and EDC (Peucat et al., 2013; Jayananda et al., 2020; Santosh and Li, 2018). The detrital Lu-Hf data from the Chitradurga Greenstone Belt (CGB) and Gadag Greenstone Belt have been compared separately due to their occurrence along the Chitradurga Shear Zone (CSZ), which acts as the dividing boundary between WDC and CDC (Ramakrishnan and Vaidhyanathan, 2008). The εHf(t) data published on the magmatic and meta-igneous granitoids (references in Chapter 2) across the entire Dharwar Craton has also been compared to the detrital data from this study to compare potential source regions. The reported magmatic and meta-igneous εHf(t) data from Chapter 2 has also been used to compare likely source regions and the continental evolution trend in εHf(t) plot.

The figure 7 (a) shows the published detrital εHf(t) for WDC detrital units plotted as density plot, which reveals the evolution trend of the source regions that show progressive crustal growth and recycling initiating around ca. 3.3 Ga from juvenile protoliths that were extracted at $T_{DM}$ = 3.7—3.2 Ga and continued till 2.8 Ga. The WDC was intruded at 2.6 Ga, by reworked magma from a combination of Meso- to Neoarchean sources. The εHf(t) data for the K.R.Pet schist belt (PD17-42) correlates effectively with the evolution trend formed by the published detrital Lu-Hf record of the WDC until ca

3.15 Ga with Paleoarchean crustal extraction ages. The negative εHf(t) values from 3.35 Ga in the detrital history of the Holenarsipur schist belt (PD17-61) show different sources extracted from the mantle during the Eoarchean. The presence of monazite and kyanite in the quartzites in Holenarsipur schist belt (HSB) with the age of monazite at 3082 ± 66 Ma (Hokada et al., 2013) along with the proposed maximum depositional age (MDA) for the HSB at 2934 ± 88 Ma (Patra et al., 2020), interpreted as detrital monazite and kyanite being deposited in the HSB after 2934 Ma. The collision of the Coorg Block with the WDC creating kyanite, sillimanite bearing assemblages in the Mercara Shear Zone around 3.0 Ga (Amaldev et al., 2016) supports this interpretation. Lu-Hf isotopic data from the Coorg block and Mercara Shear Zone (Santosh et al., 2014,2015; Amaldev et al., 2016) reveal negative εHf(t) values around ca. 3.35—3.1 Ga with crustal extraction ages dating back to the Eoarchean (see Figure 7(f)). These εHf(t) values correlate with the presence of similar zircons in the detrital record of HSB and KSB. This correlation suggests that the Coorg Block along with Mercara Shear Zone is a likely detrital source to the HSB for the zircons crystallising from an evolving Eoarchean protolith. The εHf(t) data from the southern part of the Coorg Block also correlate with the negative εHf(t) values reported from the K.R.Pet Schist Belt (KSB) from ca. 3.15—2.85 Ga with Eoarchean crustal extraction ages suggesting the involvement of the Coorg Block in the detrital record of the KSB.

The Lu-Hf data zircons from the detrital record of Chitradurga Greenstone Belt (CGB) and the Gadag Greenstone Belt (GGB) represented as εHf(t) in figure 7(b), reveal that the detrital sources for the zircons aged between $^{207}Pb/^{206}Pb$ ages of ca. 3.3—3.15 to be derived from juvenile depleted-mantle sources with short crustal residence times with crustal extraction ages in the Paleoarchean. The CGB and GGB share similar origins as the for detrital zircons with $^{207}Pb/^{206}Pb$ ages between ca. 3.3—3.1 Ga with the KSB, ca. 3.3 Ga with the HSB.

Figure 7(c) shows the εHf(t) values reported from the detrital record of the former Eastern Dharwar Craton (CDC and EDC) represented as a density plot. Positive εHf(t) values around ca. 3.65—3.55 Ga are interpreted to infer sources with shorter crustal residence time and have crustal extraction ages in the Eoarchean (Maibam et al., 2016). These sources are proposed to have acted as the pre-cursors for the protoliths derived from evolved Eoarchean sources, reported in the detrital record of the HSB (PD17-61). This interpretation provides an alternative explanation the zircons younger than 3.25 Ga with Eoarchean crustal extraction ages in the detrital history of the HSB and KSB are derived from identical sources that have deposited similar zircons into the detrital record of the former Eastern Dharwar Craton. The similarity between the crustal extraction ages of the Mesoarchean zircons in the detrital histories of the Coorg Block and the Central, Eastern Dharwar blocks, from the density plots in figures 7(c) and 7(f), requires further investigation. This hypothesis is justified by considering similar sources contributing detritus to the detrital sequences within Coorg Block and the Central and Eastern

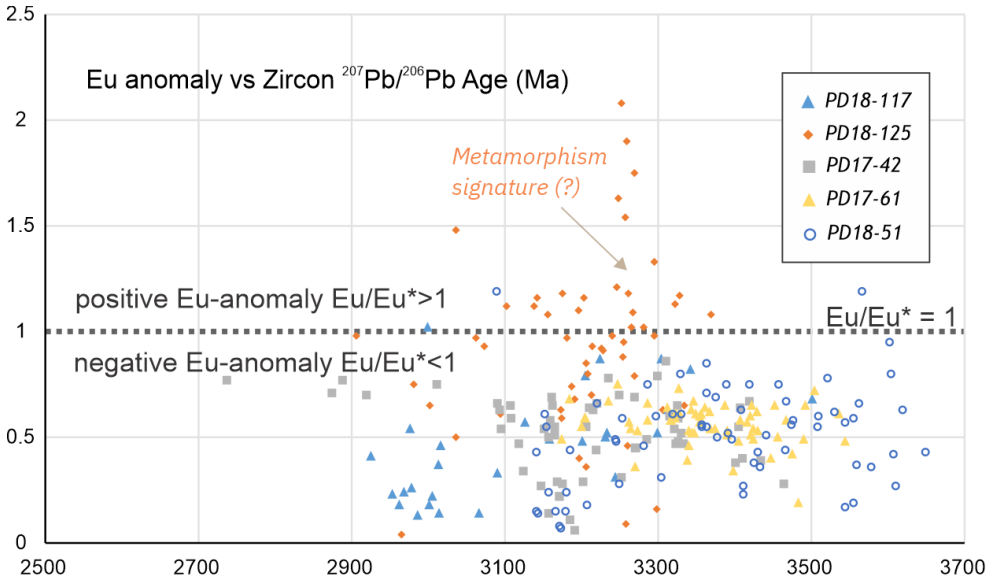
domains of Dharwar Craton. The most likely sources would be the basement gneisses and granitoid plutons occurring within the Western Dharwar Craton weathering on a large scale as observed by the spatial coverage of detrital sequences within the Western Dharwar Craton (e.g. Sirsi Shelf and greywacke formations north of Shimoga).

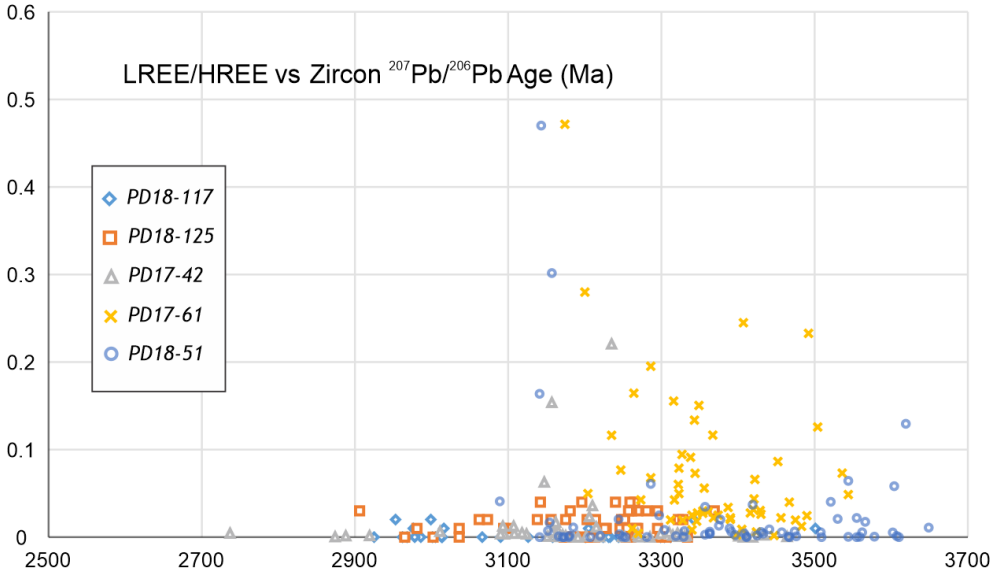
The εHf(t) values from this study have been compared to the published Lu-Hf data from Dharwar Craton to correlate the source regions with the reported detrital ages, as shown in figure 7(d). The older detrital zircons within the HSB and KSB between ca. 3.4—3.2 Ga with positive εHf(t) values correspond to be sourced from coeval juvenile lithologies in the Dharwar Craton. The εHf(t) values representing the published magmatic and meta-igneous granitoids across Dharwar Craton shows a gap in the record of the evolution of the craton between ca. 3.1—2.7 Ga due to lack of sampling or the localised nature of the studies published, and also does not represent the episodes of mafic volcanism across the Dharwar Craton. To complement the published magmatic Lu-Hf record of the Dharwar Craton, we compare the εHf(t) values from this study against the Lu-Hf data reported from Chapter 2 which includes magmatic and meta-igneous lithologies which also represent cratonisation episodes during ca. 3.0—2.9 Ga and categorised based on the sampled domain with the Dharwar Craton shown in figure 7(e). Similar to the correlation shown in figure 7(d), the juvenile εHf(t) values in the Paleoarchean detrital zircons correspond to the juvenile signatures from the oldest units dated in the Western Dharwar Craton and Central Dharwar Craton in Chapter 2. The Mesoarchean εHf(t) values from the KSB correlate with the evolution trend of the Western Dharwar Craton (WDC) (Lancaster et al., 2015; Jayananda et al., 2018) inferring the Mesoarchean lithologies in the WDC as the source regions for the KSB.

In conclusion, the detrital record of the Sargur Group and the lower Bababudan Group have been sourced from relicts of different pre-cursors for the Dharwar Craton until ca. 3.3 Ga. The Sargur Group has received detritus from juvenile to evolved crustal lithologies with crustal extraction ages in the Eoarchean possibly from the Coorg Block or other similar Archean cratons existing during that period (e.g. North China Craton (Lancaster et al., 2015)). The detrital zircons of Sargur Group with crustal extraction ages in the Paleoarchean are sourced from the surrounding TTGs and related granitoids in the WDC. The K.R.Pete Schist Belt (KSB) potentially representing the Bababudan Group received detritus mostly from the lithologies preserved in the WDC and CDC that formed during the Paleo- to Mesoarchean from the correlation between the εHf(t) values of the KSB, and the meta-igneous record of the Dharwar Craton reported in Chapter 2.

### *5.4 Detrital Zircon Rare Earth Element data and depth of crystallisation of source protoliths:*

The zircons analysed for U–Pb data were simultaneously measured for rare earth element (REE) concentrations. The europium anomalies in the zircons represented by Eu/Eu* values (Eu/Eu* = $Eu/\sqrt{(Sm_N \times Gd_N)}$ ) are measured to infer the changes in the amount of feldspar over time. Zircon Eu/Eu* reflects the ratios of $Eu^{3+}/Eu^{total}$ for the crystallising melt hosting the zircons which can be used qualitatively to estimate the fraction of plagioclase or alkali feldspar (Trail et al., 2012; Holder et al., 2020). The Eu/Eu* in zircon can be influenced by the growth and breakdown of feldspars and plagioclase (Holder et al., 2015, 2020; Rubatto et al., 2006, 2013) which is sensitive to changes in pressure and temperatures because of processes like high-pressure metamorphism and partial melting (Holder et al., 2020). The ratios between light rare earth elements (LREE) and middle rare earth elements (MREE) against the heavy rare earth elements (HREE) in zircon have been used to correlate with regional-scale trends in the depth of crystallisation and magma diversification (Chapman et al., 2015; Profeta et al., 2015; Farner and Lee, 2017; McKenzie et al., 2018). Elevated LREE/HREE and MREE/HREE ratios in zircons are predicted to occur in rocks experiencing fractionation in the presence of garnet and amphibole, which both require pressures greater than 1 GPa (Rapp and Watson, 1995; Rubatto, 2002). The temperatures needed for the formation of such residual phases could not be easily translated into geodynamic regimes due to the early Earth's mantle being generally hotter with higher thermal gradients that are compared to be equivalent to the metamorphism at the base of thickened Archean mafic crust (Huang et al., 2020). The MREE/HREE ratio is more resistant to open system and thermal diffusion behaviour in zircon that has the propensity to sequester heavy rare earth elements (HREE) into its crystal lattice relative to light rare earth elements (LREE). Oceanic crust melting during subduction resulting in intermediate magmas with low LREE/HREE ratios, due to LREE depleted nature of mid-oceanic ridge basalts (MORB) (Defant and Drummond, 1990), which could affect the LREE/HREE ratios in the zircons crystallising in the melt. The caveat for using these trace-element ratios to infer the depth of crystallisation of sources is the assumption that the fractionation of REEs into the zircons occurs during crystallisation alone and not by other processes that involve partitioning of REEs from the crystallising melt (McKenzie et al., 2018; Holder et al., 2020). This assumption includes that the petrogenesis of the tonalite-trondhjemite-granodiorite (TTG) lithologies has occurred majorly by partial melting of thickened tholeiitic crust (Condie et al., 1994; McKenzie et al., 2018) as the TTGs form the primary detrital sources for the Neoarchean and Mesoarchean detrital sequences reported in this study. We have plotted, in figure 8, the REE compositions from the near-concordant ( > 85% concordance) against the measured $^{207}Pb/^{206}Pb$ age as the discordant zircons were suspected of displaying open-system behaviour.


Eu anomaly vs Zircon 207Pb/206Pb Age (Ma)
PD18-117
PD18-125
PD17-42
PD17-61
PD18-51
Metamorphism signature (?)
positive Eu-anomaly Eu/Eu*>1
Eu/Eu* = 1
negative Eu-anomaly Eu/Eu*<1
2.5
2
1.5
1
0.5
0
2500
2700
2900
3100
3300
3500
3700


LREE/HREE vs Zircon 207Pb/206Pb Age (Ma)
PD18-117
PD18-125
PD17-42
PD17-61
PD18-51
0.6
0.5
0.4
0.3
0.2
0.1
0
2500
2700
2900
3100
3300
3500
3700

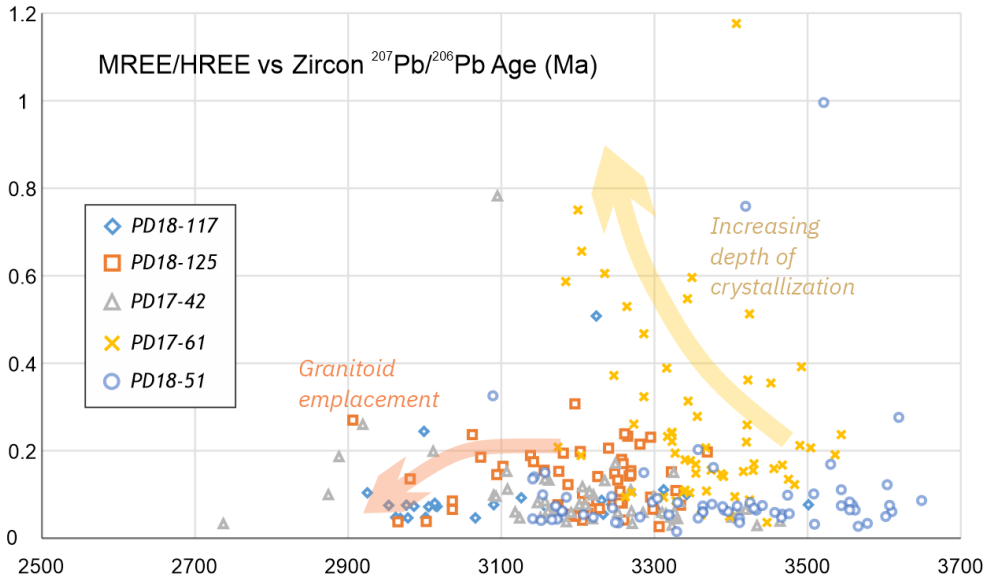

MREE/HREE vs Zircon 207Pb/206Pb Age (Ma)
PD18-117
PD18-125
PD17-42
PD17-61
PD18-51
Increasing depth of crystallization
Granitoid emplacement
1.2
1
0.8
0.6
0.4
0.2
0
2500
2700
2900
3100
3300
3500
3700

*Figure 8: The Rare Earth Element composition from analysed zircons plotted against $^{207}Pb/^{206}Pb$ ages with concordance greater than 85%. The concentrations of REE have been normalised to chondritic values from Bonython et al., 1984. (a) Eu-anomaly represented by $(Eu/Eu^*)_N$ plotted against $^{207}Pb/^{206}Pb$ ages for near-concordant zones. The dotted line represents Eu/Eu* = 1 interpreted as zircons exhibiting no Eu-anomaly. (b) LREE/HREE ratio represented by $La_N/Yb_N$ plotted against $^{207}Pb/^{206}Pb$ ages with individual zircons coloured using the legend in the inset. (c) MREE/HREE ratio represented by $Gd_N/Yb_N$ plotted against $^{207}Pb/^{206}Pb$ ages with individual zircons coloured using the legend in the inset. Arrows represent the trends observed in the REE plots to infer the depth of crystallisation of the protolith.*

Figure 8(a) shows the Eu-anomalies in zircon plotted against the measured $^{207}Pb/^{206}Pb$ age. The values of Eu/Eu* show negative Eu-anomalies (Eu/Eu* < 1) varying between 0.3—0.7 during the period ca. 3.55—3.25 Ga in the zircons representing the detrital record of the Ramagiri Greenstone Belt (RGB), Holenarsipur Schist Belt (HSB) and the K.R.Pet Schist Belt (KSB). The varying negative Eu-anomalies represent the variable amount of plagioclase or alkali feldspars within the crystallising melt which could be explained by the variance in partial melting of the tholeiitic basalt (Nagel et al., 2012) involved in the generation of TTG magmas. The quartzite near the Chikamagalur pluton (PD17-125) revealed zircons that display highly positive Eu-anomaly (Eu/Eu* > 1) around ca. 3.25 Ga, which continued until ca. 3.1 Ga with slightly positive Eu-anomalies. The positive Eu-anomalies could be related to zircon saturation occurring before plagioclase/feldspar fractionation (Trail et al., 2012) as a result of non-equilibrium processes such as metamorphism or alteration. Hence the zircons around ca. 3.2—3.1 Ga reported from PD18-125 possibly represent the beginning of metamorphic processes that occurred during the crustal building episodes involving metamorphism and reworking in the Dharwar Craton about ca. 3.15—3.0 Ga (Jayananda et al., 2018). The melts generated as a result of such reworking processes, like the melting of subducted basalts, would be depleted in LREE (Martin et al., 2014). These in turn, would crystallise high fractions of feldspars/plagioclase and zircons with highly negative Eu-anomalies. Zircons with highly negative Eu-anomalies are observed (figure 8 (a)) around ca. 3.2—3.1 Ga in the samples from the KSB (PD17-42) and the RGB (PD18-51) inferring that the reworking was craton-wide during this period. The zircons around ca. 3.0 Ga from the fuchsite quartzite near Shimoga town (PD18-117) show similar highly negative Eu-anomalies and could have been sourced from the granitoid plutons, with high feldspar fraction, emplaced in the WDC around 3.1—3.0 Ga that formed as a result of the previous craton-wide reworking. One such Mesoarchean granitoid pluton was reported in Chapter 2 from the Chikamagulur granite (PD18-126 in chapter 2) at 3060 ± 16 Ma. The zircons with $^{207}Pb/^{206}Pb$ ages between ca. 3.05—2.85 Ga from the KSB and sample PD18-125 exhibit Eu-anomaly values closer to 1 (Eu/Eu* = 1) suggesting the presence of residual garnet in the source, but requires further evidence to confirm.

$La_N/Yb_N$ and $Gd_N/Yb_N$ values from zircons represent the LREE/HREE and MREE/HREE ratios, plotted against $^{207}Pb/^{206}Pb$ ages in figure 8(b), 8(c) respectively. The lower LREE/HREE and MREE/HREE ratios in zircons represent the source magmas being generated at lower levels of thickened crust or a volcanic plateau (Huang et al., 2020) which was observed throughout the detrital record of all the detrital units reported in this study. The LREE/HREE and MREE/HREE ratios in zircons from the Holenarsipur Schist Belt (HSB) reveal an increasing trend in $La_N/Yb_N$, $Gd_N/Yb_N$ ratios from ca. 3.5—3.2 Ga. These zircons could have been sourced from TTG magmas that have crystallised from sources with increasing residual garnet and amphibole (Huang et al., 2020) which require high pressures (> 1 GPa)(Rapp and Watson, 1995). This high-pressure signature in the geochemistry of TTGs, produced before the Neoarchean, has been explained as evidence for the beginning of localised subduction in the early Earth in the process of a secular change in the global tectonic regime (Huang et al., 2020). Hence, we conclude that the zircons showing an increasing trend of LREE/HREE and MREE/HREE ratios in the HSB are likely to be sourced from a localised subduction-like regime forming small island arcs, which accreted together until ca. 3.2 Ga across the Dharwar Craton, as previously proposed by Guitreau et al. (2017). Subduction-accretion processes could have been prevalent in the Mesoarchean previously reported by trace-element systematics in greenstone belts in the Yilgarn and Pilbara cratons in Australia (Smithies et al., 2018). The Sargur Group, to which the HSB belongs to, is interpreted to represent an example of a Mesoarchean greenstone belt preserving oceanic crust due to subduction-accretion processes (Patra et al., 2020). Elevated LREE/HREE ratios are also observed in the zircons from the Ramagiri Greenstone Belt (RGB) and K.R. Pete Schist Belt (KSB) aged between ca. 3.2—3.1 Ga, inferring similar source regions as the HSB for zircons of this period. The quartzite (PD18-125) near Chikamagalur also revealed zircons with relatively high LREE/HREE ( $La_N/Yb_N > 0.04$) and MREE/HREE ( $Gd_N/Yb_N > 0.15$) ratios during the periods of ca. 3.25—3.1 Ga, which could have been sourced from reworked magmas through localised subduction occurring near the HSB, with lower fractions of residual garnet and amphiboles. The lower MREE/HREE and LREE/HREE ratios in zircons aged between ca. 3.05—2.95 Ga in the detrital record of samples PD18-125 and PD18-117 reveal identical sources which could have formed at lower levels of thickened crust. The MREE/HREE ratios at ca. 2.9 Ga, in figure 8(c), are relatively higher, possibly representing the thickening of the crust, marking the end of Mesoarchean cratonisation of the Dharwar Craton (Lancaster et al., 2015). The initiation of subduction style tectonics in the Dharwar Craton has been extended to the Neoarchean where it was explained as the preservation of oceanic crust as an Archean analogue of melange formation in the Paleozoic era (Gao and Santosh, 2020).

The Eu-anomalies, LREE/HREE and MREE/HREE ratios reported from the detrital sequences are consistent with the interpretations from the magmatic and meta-igneous granitoids detailed in

Chapter 2 (figure 12, Chapter 2). The meta-igneous zircon record from Chapter 2 reveals elevated LREE/HREE and MREE/HREE ratios from zircons around ca. 3.2—3.1 Ga which were collected from the TTGs and granitoids concentrated in the Western Dharwar Craton and to the east of Chitradurga Greenstone Belt (CGB) in the Central Dharwar Craton, interpreted to have crystallised under thickened crust with residual garnet and amphibole. Meta-igneous zircons, crystallising between ca. 3.1—2.95 Ga (Chapter 2), show lower LREE/HREE and MREE/HREE which could be interpreted as potential source regions for zircons reported in PD18-117, PD18-125 and the KSB (PD17-42) with similar $^{207}Pb/^{206}Pb$ ages.

### *5.5 Stratigraphic and Tectonic implications:*

The WDC experienced limited sedimentation in the Mesoarchean which was confined in the form of narrow linear belts that could be explained by submarine sedimentation. Widespread distribution of the upper Neoarchean greenstone and detrital units suggest the emergence of the Western Dharwar Craton above the sea-level between the Mesoarchean—Neoarchean, with sedimentation happening northward towards the Shimoga Schist Belt followed by the formation of the Gadag Duplex. The basal units from the Shimoga Schist Belt have comparable MDA with the Bababudan Group but regarded as a basal group belonging to the Chitradurga Group, inferring the correlation of the basal units of Chitradurga Group and Bababudan Group. We suggest the Dharwar Supergroup consisting of the similar basal units and lower groups which branched out into different sub-groups based on the spatial occurrence of the upper Neoarchean detrital units into Chitradurga and Bababudan Groups. The Chitradurga Group has detrital groups that are younger than the upper groups of the Bababudan Group greenstone belts. The K.R.Pete Schist Belt is correlated with the lower groups within the Dharwar Supergroup instead of its previous association with the Sargur Group. The Ramagiri Greenstone Belt can be considered an equivalent to the upper groups of the Bababudan Group that is estimated to have formed around ca. 2.7 Ga and proposed to have formed with limited deep-water sedimentation resulting in narrow linear belts.

The positive εHf(t) values from ca. 3.4 Ga, in this study, reveal episodes of juvenile crustal extraction from ca. 3.4 Ga (Guitreau et al., 2017) and reworking of inherited Eoarchean—Paleoarchean pre-cursors which we propose to have been inherited from the same pre-cursors for the Coorg Block. The Coorg Block contributed to the detrital units forming in the Western Dharwar Craton observed in the similarities in εHf(t) values of detrital zircons reported in this study with the density plot of εHf(t) values reported from the Coorg Block and Mercara Shear Zone (Santosh et al., 2015, 2016; Amaldev et al., 2016). This supports the collisional accretion between the Coorg Block and Western Dharwar Craton occurring around ca. 3.1 Ga (Amaldev et al., 2016). The MREE/HREE ratios plotted against $^{207}Pb/^{206}Pb$ age reveal an increasing depth of crystallisation between ca. 3.5—3.2 Ga, coupled with the positive Eu-

anomalies around ca. 3.25 Ga suggest localised subduction style reworking (Huang et al., 2020) in the WDC during the Paleoarchean resulting in the emplacement of protoliths which show a positive Eu-anomaly in their zircons. This reworking is supported by negative εHf(t) values from zircons crystallising after ca. 3.25 Ga in the detrital record reported from the Holenarsipur Schist Belt (HSB) and the K.R.Pete Schist Belt (KSB).

## 6. Conclusion:

1) Comparison with ~1300 previously published Lu-Hf isotopic data from detrital zircons in a categorical manner reveal similarities in provenance to each other and also correlate with our data.
2) The WDC had multiple episodes of sedimentation that coincide with the episodes of crustal accretion from multiple sources witnessed by similar Eoarchean crustal extraction ages between the detrital zircon record of the WDC and the crustal extraction ages in Mercara shear zone, Coorg Block, WDC, CDC, EDC sequences.
3) The WDC experienced limited sedimentation in the Mesoarchean in form of linear narrow belts that could have occurred through submarine sedimentation. During the Neoarchean, there was extensive sedimentation of the Neoarchean greenstone sequences leading to widespread upper greenschist detrital sequences.
4) The basal group within the Shimoga Schist Belt has comparable maximum depositional age (MDA) with the Bababudan Group. From the detrital zircon record, these groups are correlated to the basal groups of the Chitradurga Group. The lithostratigraphic correlation of the K.R. Pete Schist Belt with the Dharwar Supergroup is at the basal groups of the Bababudan Group, instead of the Sargur Group as previously mapped, and is also proposed here to be an equivalent to the basal groups of the Chitradurga Group. The Ramagiri Group in the EDC can be considered an equivalent to the upper groups of the Bababudan group which formed at ca. 2.7 Ga with the assumption that the Bababudan group has formed during two episodes of sedimentation.
5) The +ve εHf(t) values from ca. 3.4 Ga detrital zircons reveal juvenile crustal extraction from ca. 3.5 Ga onwards with a potential reworking of Eoarchean precursors inherited alongside the crustal evolution of the CDC, EDC and the Coorg Block.
6) The Coorg Block and the Dharwar Craton could have shared similar pre-cursors which evolved during juvenile accretionary events across the Coorg Block and WDC. This leads to the conclusion that the Coorg Block contributed detritus to the Mesoarchean detrital sequences across WDC and shared similar crustal evolution history with the WDC until the Neoarchean.

7) The MREE/HREE ratios from the detrital zircons in the HSB reveal an increasing depth of crystallization with time inferring a localised subduction zone near the Holenarsipur greenstone belt around ca. 3.2 Ga and the decreasing MREE/HREE ratios in the detrital sequences near the Bababudan Group reveal the decreasing depth of crystallization which could infer granitoid emplacement such as the Chikamagulur pluton.

## 7. Acknowledgements:

We acknowledge the support of Dr Sarah Gilbert for support at Adelaide Microscopy who has been instrumental in the acquisition of the zircon U–Pb and REE data using LA—ICPMS respectively during 2017 and 2018. We acknowledge the John De Laeter Centre at Curtin University, Western Australia for facilitating the detrital zircon Lu–Hf isotopic analysis. The Petrology lab team at Indian Institute of Science, India are acknowledged for their assistance during fieldwork logistics and sample preparation. Mr Kiran Sasidharan and Mr Thamam Mubarish are acknowledged for the assistance in fieldwork. Pavan Katuru is supported during his PhD by the scholarship provided by the University of Adelaide.

## 8. Appendix:

Zircon U–Pb data provided in appendix 3.1. The REE compositions of the detrital zircons provided in appendix 3.2. Detrital zircon Lu–Hf isotope data provided in appendix 3.3.

## 9. References:

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# 4

## Detrital zircon record of the Kaladgi-Badami basin: Correlation with Paleoproterozoic basins across India and Madagascar

## Abstract:

Peninsular India is comprised of a collage of Archean cratons separated by Proterozoic mobile-belts and intracratonic basins, collectively termed as 'Purana basins', that formed across the Indian peninsula during extensional tectonic events. In this chapter, we present detrital zircon U–Pb geochronological data from the Kaladgi-Badami basin and then compare it against previously reported detrital record of Paleoproterozoic sequences across southern India and Madagascar. The rare earth element (REE) compositions from the analyzed zircons have been interpreted to fingerprint the depth of crystallization of the sources, which is coupled with published zircon U–Pb ages from the Dharwar Craton and paleocurrent data to interpret source regions. The detrital formations analyzed here preserve major detrital age peaks at 2.6—2.5 Ga, which are interpreted to be sourced from the adjacent Eastern Dharwar Craton and Hungund Schist Belt. The maximum depositional age of the older Lokapur Group is constrained at 2332 ± 65 Ma. The younger Badami Group contains a near-concordant zircon that has a $^{207}Pb/^{206}Pb$ age of 1820 ± 26 Ma that we interpret to constrain the maximum age of its deposition. Multidimensional scaling (MDS) analysis comparing the Kaladgi-Badami Basin, with other Paleoproterozoic sequences across southern India and Madagascar, demonstrate the provenance similarity between the lower groups of the Kaladgi-Badami basin with the greenstone sequences of the Dharwar Craton. The younger Badami Group, however, shares similar age provenance to the Papagni Formation in the Cuddapah Basin. Dyke swarms across the northern Dharwar Craton are interpreted to reflect rifting that created the basin for the Lokapur Group. The younger Badami Group arenites are suggested to have formed similarly to the Papagni Group in the Cuddapah Basin when the Dharwar Craton was surrounded by a shallow sea.

## 1. Introduction:

Peninsula India hosts a series of large intra-continental basins that are known as the 'Purana basins' (Holland, 1909). These cover up to twenty per cent area of peninsular India and, although they are recognized as Proterozoic (Kale and Phansalkar, 1991), their detailed geochronology and correlation are only now being revealed (Saha et al. 2016). The disparities in the ages and tectonic settings between the individual basins have been previously explored and earlier correlations were mostly based on lithostratigraphy (Basu and Bickford, 2014; Meert and Pandit, 2014). Existing geochronological data from the Purana basins largely consists of older Rb–Sr, Sm–Nd isochrons, and Pb–Pb model ages that have large uncertainties (Padmakumari et al. 1998, Joy et al. 2019). More recently, detrital zircon U–Pb geochronological data has begun to allow correlation between the basins (e.g. Saha et al. 2016). However, to date, the enigmatic Kaladgi-Badami and Bhima basins have very limited geochronological data, hindering the correlation of Proterozoic basins (Saha et al., 2016).

The significance of these basins is has been highlighted in the recent controversy as to the origin and configuration of the supercontinents Columbia/Nuna and Rodinia that in part rely on correlations between Palaeoproterozoic basins in Africa, Madagascar and India (Collins and Windley 2002; Collins and Pisarevsky, 2005; Cox et al. 2004; Fitzsimons and Hulscher, 2005; Tucker et al. 2011; Armistead et al. in review). Specifically, the Greater Dharwar Craton model (Tucker et al. 2011) suggests that the Kaladgi-Badami and Bhima basins form a potential missing link between the Itremo Group of Madagascar and the Cuddapah Basin of SE India—linking central Madagascar to the Dharwar Craton in the late Palaeoproterozoic/early Mesoproterozoic. Alternatively, central Madagascar is depositionally linked to eastern Africa and was separate from India at the time (Cox et al. 1998; 2004; Collins and Windley 2002; Collins and Pisarevsky 2005; Armistead et al, 2020).

In this study, detrital zircon U–Pb geochronological data from the Kaladgi-Badami basin are presented and correlated with existing published detrital zircon sedimentary records of Paleoproterozoic formations across southern India and Madagascar to address these hypotheses. The source regions contributing to the sedimentation of the Kaladgi-Badami basin also have been fingerprinted using the rare earth element (REE) composition of the zircons analysed to qualitatively estimate the depth of crystallization of the source protolith and compared against zircon U–Pb ages reported from the Dharwar Craton (Jayananda et al. 2015, 2020; Wang J.Y. et al., 2020; new data Chapter 2).

## 2. Geological Background:

The Kaladgi-Badami basin is thought to contain rocks deposited in the late Palaeoproterozoic/Mesoproterozoic to Neoproterozoic (Dey 2015). The basin lies in the northern part of Karnataka state and has an east-west trend. It overlies the Peninsular Gneiss of the Dharwar Craton and is covered by the volcanic Deccan traps (Jayaprakash et al., 1987). The basin sequence is subdivided into the older Bagalkot Group, which is overlain by the Badami Group. These are divided by an angular unconformity. The rocks of the Bagalkot Group include arenite, shale, and carbonate rocks along with their associated cherts and conglomerates. The Bagalkot Group is further divided into Simikeri and Lokapur groups by the presence of a disconformity. The basement of the Bagalkot Group is made up of the peninsular gneisses and greenstone belts of the Dharwar craton and the closepet Granite, which provided the detritus to Kaladgi – Badami basin (Joy et al. 2019). The Bagalkot Group was deformed and eroded before deposition of the Badami Group (Viswanathaiah, 1977).

The Badami Group comprises undeformed, horizontally bedded arenites, shales and limestones unconformably overlying both the Bagalkot Group and Archean rocks of the Dharwar Craton.

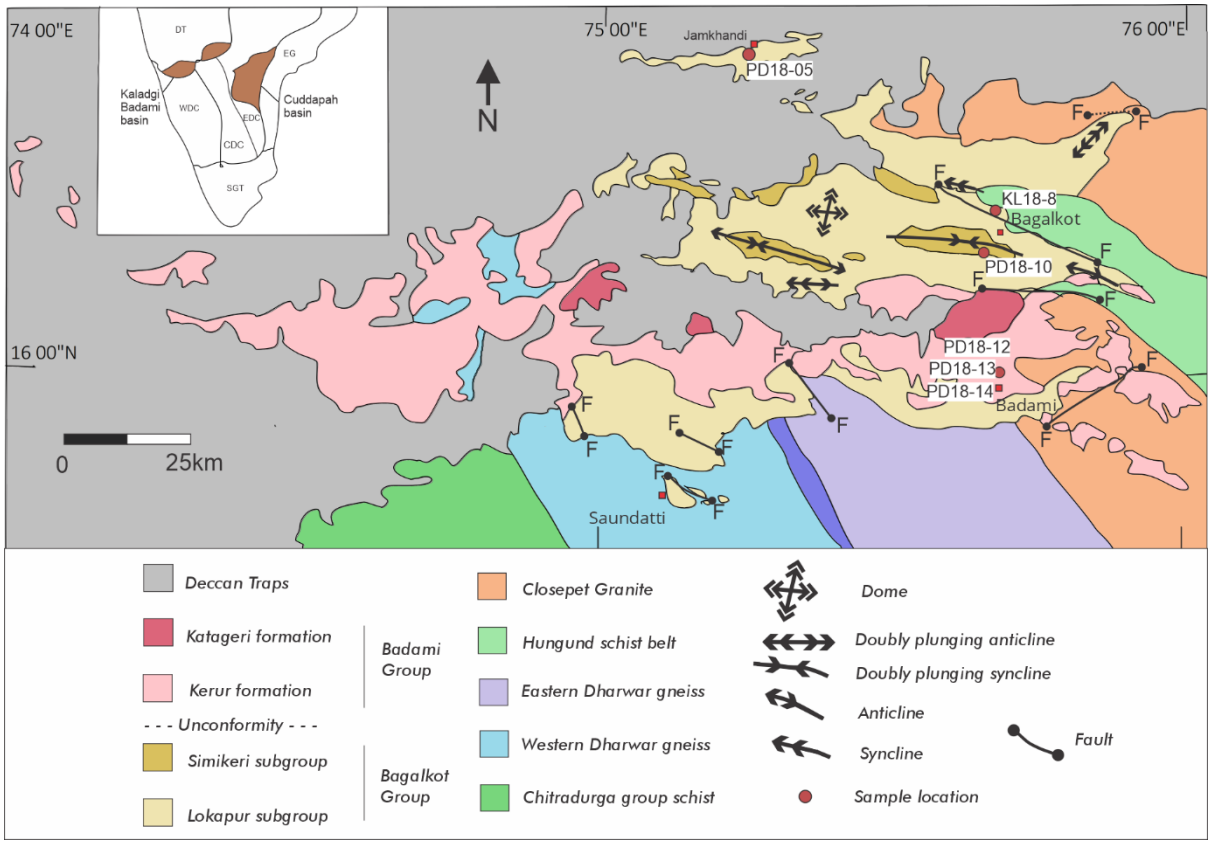


*Figure 1: Geological map of the Kaladgi-Badami basin (modified after Jayaprakash et al., 1987, Dey et al., 2009), the inset showing the placement of major Proterozoic basins across southern India with major tectono-stratigraphic domains outlined as DT – Deccan Traps; WDC – Western Dharwar Craton; EDC – Eastern Dharwar Craton; CDC – Central Dharwar Craton; EG – Eastern Ghats domain; SGT – Southern Granulite Terrane.*

The evolution of deposition in the basin has been explained by initial sedimentation limited to detritus eroded only from the basement gneisses, followed by sediments derived from mixed sources of basement gneisses and greenstone belts, as well as the Closepet Batholith. (Dey et al. 2008b, 2009b, 2015). The Peninsular Gneiss basement is mainly composed of tonalite-trondhjemite-granodiorite (TTG) in NNW trending belts, ranging in age from Mesoarchaean to Neoarchaean. The Closepet Granite comprises of K- and LREE rich granodiorites and granites (Dey et al., 2003, 2006, 2009b). The volcano-sedimentary sequences underlying the Bagalkot Group (greenstone belts) form the Hungund-Kushtagi Belt, located on the SE fringe of the basin, and the Chitradurga Group (Dharwar Supergroup) to the SW. They are both dominated by metagreywackes, metapelites, and metabasalts.

The cyclic nature of sedimentation was explained through repeated phases of marine transgression caused by episodes of foundering of the cratonic basin (Kale and Phansalkar, 1991). Depositional environments for the two subgroups of the Bagalkot Group are explained with the Lokapur Subgroup deposited in a transgressive beach environment along with basal minor fluvial

deposits leading to cycles of alternating muddy tidal flat deposits and carbonates (Kale and Phansalkar, 1991; Kale et al., 1996; Bose et al., 2008, Dey et al., 2009b). The overlying Simikeri Subgroup is thought to reflect high energy beach deposits grading up to tidal flat deposits (Kale and Phansalkar, 1991). The Badami Group reflects a major transgressive of shallow marine/esturine environments (Kale and Phansalkar, 1991; Sathyanarayana, 1994).

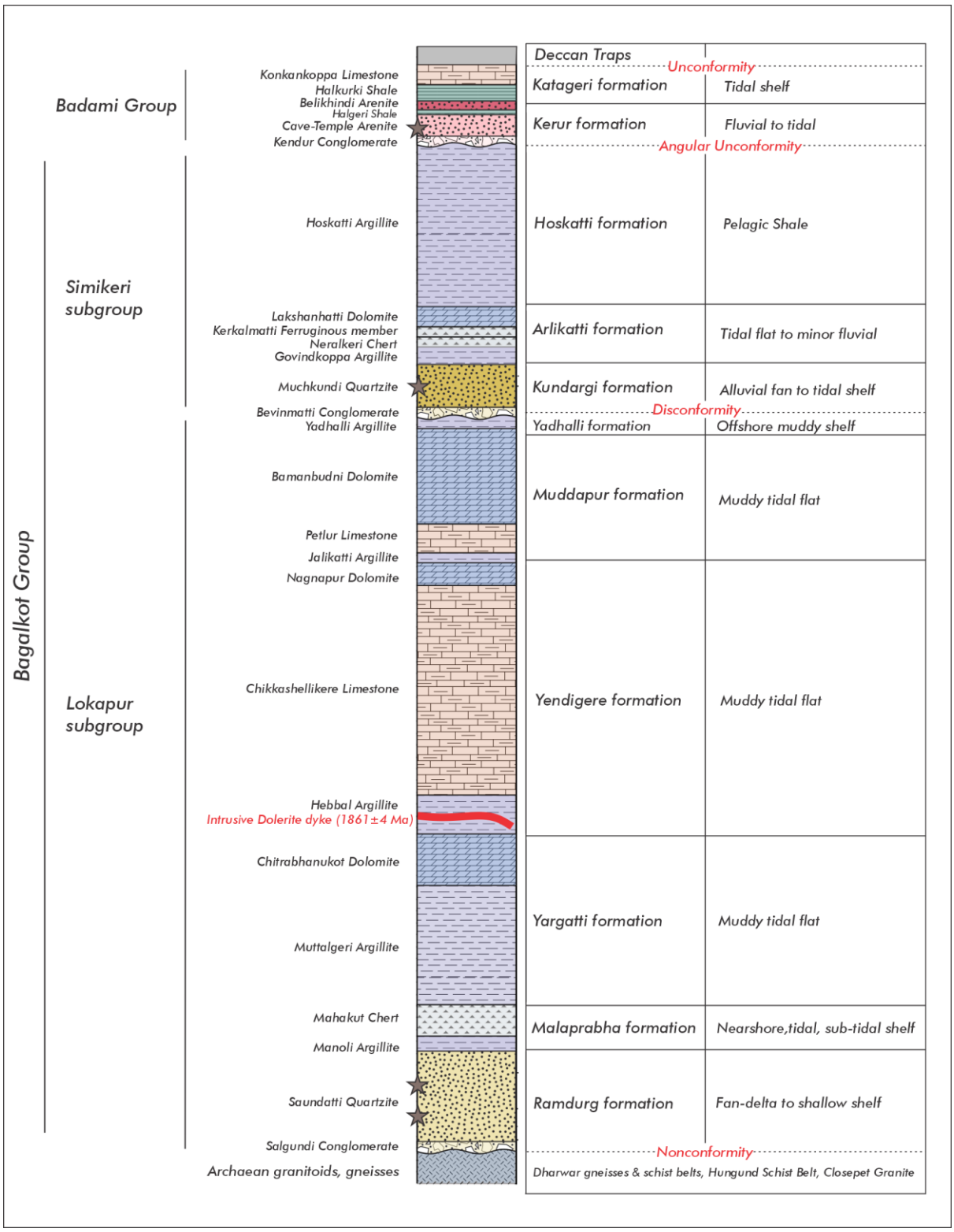

*Figure 2: The stratigraphy of the Kaladgi-Badami basin. Sedimentary structures are not drawn to scale. The relative thickness of each layer was adapted from Jayaprakash et al.,2007. Individual formations have been marked on the right of the stratigraphic column. Sedimentary environments of each formation and reported intrusive dyke age has been adapted from Joy et al., 2019. The star symbols represent the stratigraphic units sampled for this study.*

Isotopic age data are rare for the Kaladgi basin sediments. A Nd depleted mantle model age ($T_{DM}$) of ~2540 Ma was published (Padmakumari et al., 1998) for the Govindkoppa Argillite from the Kundargi Formation, which was interpreted as the age of the source. In the absence of absolute age data, Kale and Phansalkar (1991), correlated the Bagalkot and Badami Groups, based on lithostratigraphey, with unmetamorphosed Neoproterozoic and Mesoproterozoic successions of other supercratonic basins of Peninsular India (collectively termed the 'Purana basins'). Joy et al. (2019) recently constrained the formation of the lower Lokapur Group to >1861 ± 4 Ma, by obtaining a U–Pb baddeleyite age from an intrusive dolerite dyke. Limestones from the Katageri Formation (upper Badami Group) have also been analyzed for U–Th–Pb isotopes, which yielded an imprecise isochron age of 0.96 Ga (Joy et al., 2019). These authors proposed that the two Badami Group represented a return to deposition after an almost billion year Ma gap.

The quartzite and arenite members of the Kaladgi Basin sucession have been targeted in this study shown in Figure 1 and Figure 2, to understand the detrital record and to isotopically constrain the depositional time period of the subgroups. The Saundatti Quartzite occurs along the margin of the basin, hosting the Bagalkot Group and varies in composition. The Muchkundi Quartzite, is present higher in the succession, is a highly mature quartz arenite of which the lower portion of the formation contains altered feldspar clasts. The Cave-Temple Arenite is a 200 km continuous formation overlaying a variety of Archaean basement and Bagalkot Group in an irregular E–W trend and contains fragments of Bagalkot Group rocks, signifying that a component of it is recycled from lower in the basin (Dey et al., 2006, 2009b).

The provenance, tectonics, and basin evolution of the Kaladgi Basin was discussed by Dey et al. (2009b, 2015). These authors proposed that the intracratonic Kaladgi Basin initiated by faulting along the northern margin that uplifted a granitic source and transported immature detritus to the northern margin (Dickinson et al.,1983), explaining the presence of fresh potassic feldspars within the northern margins of Saundatti Quartzite and Salgundi Conglomerate. Predominant exposure of Na-rich granitoids (TTG gneisses) along the northern margin today led to speculation that K-rich granites lie beneath the Deccan traps (Dey, 2006). The southern Saundatti Quartzite is more mature than its northern counterpart as the feldspar grains are highly altered inferring a more stable tectonic condition characterized by low relief in the source. The Muchkundi Quartzite is a quartz arenite belonging to the

Simikeri Subgroup. It also contains altered feldspars inferring that the Simikeri Subgroup deposited over the whole source area under stable tectonic setting (Dey et al., 2009b). The Simikeri Subgroup deposition was followed by the closure of the marine basin, and deformation and uplift of the Bagalkot Group sediments. The Badami Group sediments were deposited in an E–W trending basin on top of the Bagalkot Group and Archean basement. The northern border of the Badami Group involving the Cave Temple arenite is marked by an E-W trending fault called Sirur-Katageri fault. The southern side of the fault was downthrown, which acted as the depositional basement for the Badami Group (Dey, 2006).

## 3. Methods:

Six samples of arenites were crushed for zircons at the Indian Institute of Science, Bangalore, India. They were created into grain bearing epoxy mounts at the University of Adelaide. The polished zircon mounts were carbon-coated and imaged by a Gatan cathodoluminescence (CL) detector attached to Quanta 600 MLA Scanning Electron Microscope to identify various domains within the zircons suitable for analysis. U–Pb geochronology from the zircon was performed at the Adelaide Microscopy facility at the University of Adelaide using the Agilent 7900 ICP-MS attached to New Wave (NWR-213) 213nm laser ablation system with a spot size of 30 μm and frequency of 5 Hz. The isotopes $^{204}Pb$, $^{206}Pb$, $^{207}Pb$, $^{208}Pb$, $^{232}Th$, $^{238}U$ have been measured for U-Pb zircon geochronology. GEMOC GJ-1 zircon (Thermal Ionization Mass Spectrometry (TIMS) ages $^{207}Pb/^{206}Pb$ = 602 ± 4.3 Ma, $^{206}Pb/^{238}U$ = 600.7 ± 1.1 Ma and $^{207}Pb/^{235}U$ = 602.0 ± 1.0 Ma; Jackson et al., 2004) was used for the correction of U–Pb fractionation for the analysis. The Plesovice zircon (ID-TIMS $^{206}Pb/^{238}U$ age = 337.13 ± 0.37 Ma) was used as a secondary standard. Seventy two Plesovice standard zircon grains were analyzed yielding $^{206}Pb/^{238}U$ age of 331 ± 1 Ma (2SD, MSWD = 1.3), which was within the acceptable uncertainty compared to the ID-TIMS age of Slama et al. (2008). Rare Earth Elements $^{139}La$, $^{140}Ce$, $^{141}Pr$, $^{146}Nd$, $^{147}Sm$, $^{153}Eu$, $^{157}Gd$, $^{159}Tb$, $^{163}Dy$, $^{165}Ho$, $^{166}Er$, $^{169}Tm$, $^{172}Yb$, $^{175}Lu$, $^{49}Ti$, $^{89}Y$, $^{178}Hf$ were simultaneously measured over the same spots on the zircons along with U–Pb isotopes using 50 μm spot size analyses over NIST SRM 610 glass as reference material (Norman et al., 1996, Norman et al., 1998, Jochum et al., 2011). The U–Pb and REE data were separately processed using Iolite (Paton et al., 2011). The processed U–Pb data were plotted using IsoplotR (Vermeesch, 2018) and the Isoplot 4.15 plugin in Microsoft Excel (Ludwig, 2003). The rare earth elemental concentrations and ratios were calculated using the Geochemical data toolkit for R (GCDkit 6.0) (Janousek et al., 2006) and were normalized to the uniform reservoir published in Boynthon (1984).

## 4. Results:

| Sample No | Lithology | Stratigraphy | Latitude | Longitude | Elevation |
|---|---|---|---|---|---|
| **KL 18/8** | Pink felspathic Arenite | Saundatti Quartzite | 16.25322 N | 75.69061 E | - |
| **PD18-05** | Pink felspathic Arenite | Saundatti Quartzite | 16.49388 N | 75.28836 E | 520 m |
| **PD18-10** | Quartz Arenite | Muchkundi Quartzite | 16.14263 N | 75.66629 E | 524 m |
| **PD18-12** | Quartz Arenite | Cave Temple Arenite | 15.93813 N | 75.67631 E | 575 m |
| **PD18-13** | Quartz Arenite | Cave Temple Arenite | 15.93813 N | 75.67631 E | 590 m |
| **PD18-14** | Quartz Arenite | Cave Temple Arenite | 15.93813 N | 75.67631 E | 610 m |

*Table 1: Lithology and location of the detrital quartzites sampled for this study.*

PD18-05 has been collected from the exposed felspathic arenite beds exposed at the Jamkundi tree-park near Jamkhandi town. The sample collected was a pink feldspar rich arenite with well-rounded grains of quartz and feldspar within a siliciclastic cement implying a mature sandstone member of the Saundatti Quartzite litho-stratigraphic unit. The quartzite beds are along a North 20 degree towards West strike with 200 degree dip direction, show symmetrical ripple patterns on the exposed surface, was interpreted as a marine transgressive regime. 107 analyzed zircon grains yielded 34 results that passed a <10% discordance filter to reveal broadly clustered $^{207}Pb/^{206}Pb$ age peak with a maxima at ~2550 Ma in a probability density plot. The youngest $^{207}Pb/^{206}Pb$ age from the population is 2332 ± 65 Ma. Few grains reveal older Archean components around ca. 2.77 Ga. The rare earth element ratios for the near concordant zircons range from 0.13 – 0.9 for Eu/Eu*, 0.00005 – 0.0327 for $La_N/Yb_N$ and 0.0228 – 0.5881 for $Gd_N/Yb_N$.

KL18-8 is a pink felspathic arenite collected towards north of Bagalkot town to the western periphery of the Hungund schist belt. The location lies in a trough and is cross-stratified with the thickly bedded felspathic pink arenite which also belongs to the Saundatti Quartzite in Ramdurg Formation member of the Lokapur Subgroup. 90 analyzed zircons yielded 14 results that passed the <10% discordance filter, reveal a bimodal distribution in the probability density plot at ~2.55 Ga and ~2.6 Ga. One grain shows older inheritance at $^{207}Pb/^{206}Pb$ age at 3043 ± 55 Ma. The rare earth element ratios for

the near concordant zircons range from 0.36 – 1.11 for Eu/Eu*, 0.0105 – 0.0551 for $La_N/Yb_N$ and 0.1725 – 0.8035 for $Gd_N/Yb_N$.

PD18-10 is from a quartz rich arenite interbedded with well-rounded feldspar rich conglomerate, collected near Muchkundi temple, known as the Muchkundi quartzite from the Kundargi formation that forms the base of the Simikeri subgroup. 83 analyzed zircons yielded only 11 results that passed <10% discordance filter, revealed probability peaks at ca. ~2.55 Ga, 2.64 Ga and 2.7 Ga. One zircon reveals older Archean inheritance at $^{207}Pb/^{206}Pb$ age of 3104 ± 70 Ma. The rare earth element ratios for the near concordant zircons range from 0.08 – 0.82 for Eu/Eu*, 0.00001 – 0.0428 for $La_N/Yb_N$ and 0.0361 – 0.5741 for $Gd_N/Yb_N$.

PD18-12 is collected at the bottom section of a channel cross stratified sandstone containing quartz arenite in mostly horizontal undeformed beds. The location appears to have experienced extensive large scale weathering and contains undeformed layers of sandstone with occasional conglomerate beds which is believed to be part of the Kerur Formation in the lower Badami Group. 104 analyzed zircons yielded 20 results that passed <10% discordance filter. The resultant ages cluster at ca. 2.55 Ga, 2.6 Ga with older inheritance around 2.9 – 3.0 Ga and 3.35 Ga. Three analysed zircons cluster at younger $^{207}Pb/^{206}Pb$ age peak of 1.8 Ga, with the youngest near-concordant detrital zircon having a $^{207}Pb/^{206}Pb$ age at 1820 ± 26 Ma. The rare earth element ratios for the near concordant zircons range from 0.09 – 0.84 for Eu/Eu*, 0.0001 – 0.3148 for $La_N/Yb_N$ and 0.0363 – 0.1447 for $Gd_N/Yb_N$.

PD18-13 is collected fifty meters above from PD18-12 representing a stratigraphically younger mostly horizontal surface. The distribution of interlayered conglomerate beds was sparse and the sample was taken from a quartz rich arenite bed. 90 analyzed zircons yielded only two results that passed the <10% discordance filter at $^{207}Pb/^{206}Pb$ ages of 2537 ± 40 Ma and 3291 ± 20 Ma. The rare earth element ratios for the near concordant zircons range from 0.3 – 0.67 for Eu/Eu*, 0.00036 – 0.0019 for $La_N/Yb_N$ and 0.0607 – 0.0479 for $Gd_N/Yb_N$.

PD18-14 has been collected from a horizontal ferrogenuous quartz arenite bed lying approximately 100 metres above PD18-12. 60 analyzed zircons yielded five results that passed the <10% discordance filter which revealed minor probability density peaks at $^{207}Pb/^{206}Pb$ ages of 2580 Ma, 2630 Ma with the youngest $^{207}Pb/^{206}Pb$ age at 2539 ± 34 Ma. The rare earth element ratios for the near concordant zircons range from 0.3 – 0.67 for Eu/Eu*, 0 – 0.0005 for $La_N/Yb_N$ and 0.0481 – 0.0842 for $Gd_N/Yb_N$.

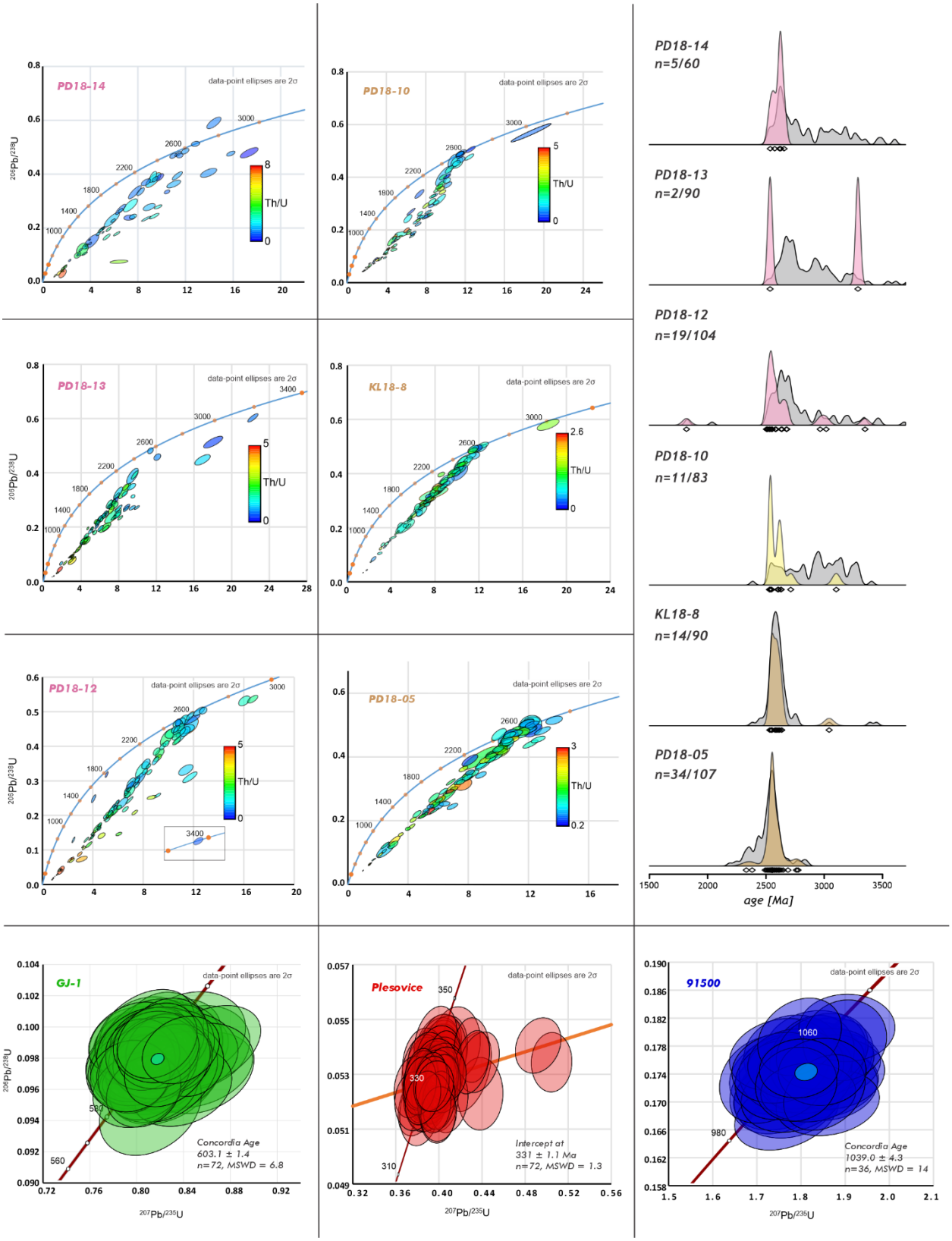


*Figure 3: a) The U–Pb zircon concordia plot showing the detrital record of samples labelled on the top left in each Concordia plot. b) The detrital KDE plotted relative to stratigraphy, the coloured plot defining the KDE based on <10% discordant zircons, the grey KDE reflecting all the grains analyzed. The number n =*

*x/y representing x as the number of near concordant zircons with < 10% discordance, y as the total number of zircons analyzed.*

## 5. Discussion:

### *5.1 U–Pb data and potential source regions*

The zircon populations analyzed display high amounts of discordance within the U–Pb isotopic data plots. The physical transport of sediments involved in the formation of sandstones are expected to favour the least isotopically disturbed zircon grains resulting in concordant U–Pb ages. However, high amount of discordant ages were previously reported from the Kaladgi-Badami basin (Joy et al., 2019). This could be explained by Pb-loss happening to the detrital zircons post-deposition. The detrital populations in the Concordia diagrams appear to form broad discordant arrays that converge towards modern near zero aged Pb-loss which is interpreted as postdepositional Pb-loss in the Phanerozoic. Moreover, the immature nature of the arenitic members of the Kaladgi-Basin has been speculated to the poor sorting on the quality of zircons (Joy et al., 2019). Hence only near-concordant U-Pb ages have been filtered and used for discussing the provenance of the detrital zircon populations.

The samples KL18-8 and PD18-05 are collected from the Ramdurg Formation that forms the base of the lower Lokapur Group. KL18-8 recorded detrital components predominantly at ca. ~ 2.55 Ga, 2.6 Ga and older Archean component from ca 3.0 Ga. Previously published paleocurrent directions in Joy et al., 2019, infer N- to NW-directed transport implying the source regions occurring to the S- to SE of the basin. In these southern areas, the Closepet Granite formed at ca. 2.55 Ga (Friend and Nutman, 1991) and the Eastern Dharwar Craton contains bimodal volcanism that occurred in episodes of 2.7 - 2.6 Ga and 2.57 – 2.52 Ga (Wang J.Y. et al. 2020, Chapter 2 this thesis). The older Archean age could have resulted from detrital material transported from the weathering of the Hungund schist-belt underlying the base of the lower group. The younger detrital age zircon at ca. 2332 ± 65 Ma is inferred to have derived from zircons affected by nearby dyke swarms which have intruded the Dharwar Craton post-assembly (Soderlund et al., 2019). The presence of post-Archean sources underlying the Deccan traps could be a possible explanation for the detrital zircons younger than the ages correlating to the Closepet Granite.

Sample PD18-10 is collected from Muchkundi Quartzite from the Kundargi Formation, that forms the base of the Simikeri Group that overlies the lower Lokapur Group. The detrital U–Pb data mostly record ages of ca. 2.55 Ga and 2.6 Ga with slightly older components dated at ca. 2.75 Ga and ca. 3.1 Ga. These ages are representative of the transitional type gneisses occurring in the Central Dharwar Craton and younger TTGs towards the Eastern Dharwar Craton (Jayananda et al., 2020;

Chapter 2 in this thesis). The older age peaks at 2.75 Ga and 3.1 Ga could have been sourced from the Hungund Schist belt that underlies the basin and older basement gneisses of the Dharwar Craton.

Sample PD18-12 was collected from the base of undeformed horizontal arenite beds from the Cave-temple arenite member of the Kerur Subgroup within the Badami Group. The major age peaks occur at ca. 2.55 Ga, 2.6 Ga with older detrital signatures from ca. 3.1 – 2.9 Ga and ca. ~ 3.35 Ga. The published paleocurrents of the lower Kerur Group (Joy et al., 2019) record a strong SW direction implying the sources occurring to the NE to E of the basin. The Eastern Dharwar Craton and associated volcano-sedimentary schist belts including the nearby Hungund Schist belt are inferred to be potential source regions. The younger peak of 1.8 Ga in the detrital record can be vaguely attributed to affect of the ca. 1.8 Ga dolerite dyke that intruded the lower Lokapur Group. The SW-directed paleocurrent also allows contributions from far away sources beyond the Dharwar Craton, including possibly the Cuddapah basin.

### *5.2 Depth of crystallization of detrital source protoliths:*

Zircon is known to incorporate rare earth elements (REEs) into its structure. In this study, we have adapted a previously published strategy from McKenzie et al. (2018), using various REE normalized ratios to obtain the crystallization conditions of the source protoliths to potentially fingerprint the source regions contributing to the detrital record of the Kaladgi-Badami basin. The ratios of Eu/Eu* , $(La/Yb)_N$ and $(Gd/Yb)_N$ from the zircons were used to represent Eu-anomaly (+ve when >1, -ve when <1), light REE versus heavy REE (LREE/HREE typically ranging from 0 – 0.1) and middle REE versus heavy REE (MREE/HREE typically ranging from 0 – 1) to infer potential source protoliths.

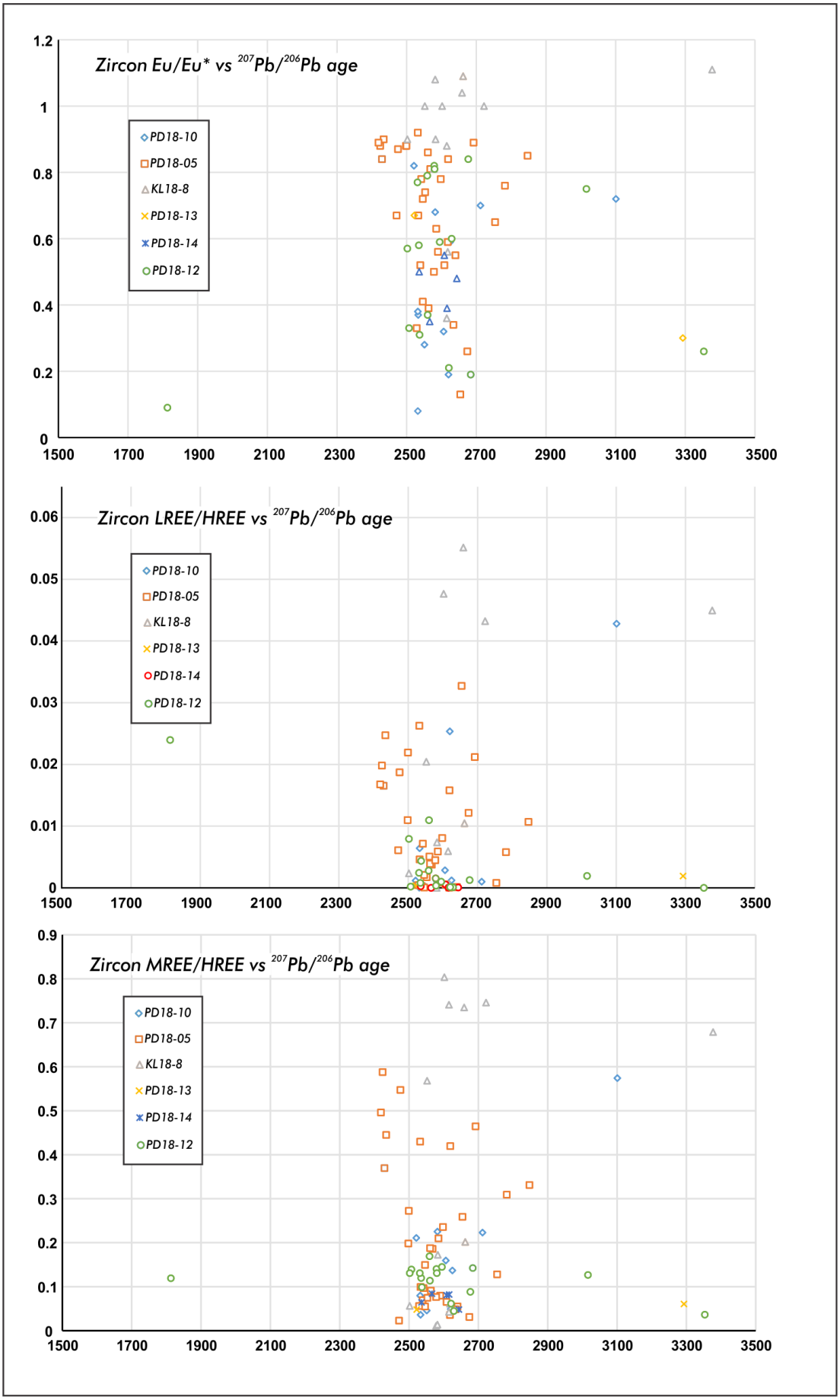
Zircon Eu/Eu* vs $^{207}Pb/^{206}Pb$ age
PD18-10
PD18-05
KL18-8
PD18-13
PD18-14
PD18-12
1.2
1
0.8
0.6
0.4
0.2
0
1500
1700
1900
2100
2300
2500
2700
2900
3100
3300
3500
Zircon LREE/HREE vs $^{207}Pb/^{206}Pb$ age
PD18-10
PD18-05
KL18-8
PD18-13
PD18-14
PD18-12
0.06
0.05
0.04
0.03
0.02
0.01
0
1500
1700
1900
2100
2300
2500
2700
2900
3100
3300
3500
Zircon MREE/HREE vs $^{207}Pb/^{206}Pb$ age
PD18-10
PD18-05
KL18-8
PD18-13
PD18-14
PD18-12
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1500
1700
1900
2100
2300
2500
2700
2900
3100
3300
3500

*Figure 4: The rare earth elements (REE) ratios plotted for < 10% discordance zircons from each sample. The inset legend shows each sample associated with the plotted symbol. a) The Eu-anomaly, $(Eu/Eu^*)_N$ where $Eu^* = \sqrt{Sm*Gd}$, versus $^{207}Pb/^{206}Pb$ age; b) $(La_N/Yb_N)$ representing LREE/HREE versus $^{207}Pb/^{206}Pb$ age; c) $(Gd_N/Yb_N)$ representing the MREE/HREE versus $^{207}Pb/^{206}Pb$ age.*

In the upper Badami Group, the samples collected at the Kerur Formation, PD18-12, PD18-13, PD18-14 exhibit highly varied Eu/Eu* but negative Eu anomalies (Eu/Eu*<1) infer the crystallization of the zircons in the source protolith was in presence of plagioclase which incorporates Eu into its crystal lattice. The ratios of $(La/Yb)_N$ and $(Gd/Yb)_N$, however, were consistent and low signifying zircon originated from magmatic protoliths crystallizing at relatively shallow depths. We hypothesize that the TTG gneisses from the Eastern Dharwar Craton, which records bimodal magmatism in episodes spanning 2.7–2.6 Ga and 2.6–2.54 Ga (Jayananda et al, 2020; J.Y. Wang et al., 2020) as probable source regions as the lithologies contain plagioclase that formed during their formation through crustal anatexis leading to varied negative Eu-anomaly values in the associated crystallizing zircons. Older zircons (>3.0 Ga ) show highly negative Eu-anomalies and low and consistent LREE/HREE, MREE/HREE values signifying an older Archean source which can be correlated with the Western Dharwar Craton (WDC) (Jayananda et al., 2018). The detrital zircon at 1820 ± 26 Ma shows large negative Eu-anomaly signifying highly differentiated source.

In the Simikeri Group, the detrital zircons from the sample PD18-10 show varied negative Eu-anomaly values similar to the above Badami Group. The detrital zircons with ages of 2.7–2.5 Ga show consistently low LREE/HREE and MREE/HREE ratios showing shallow crystallization compared to the stability field of minerals like garnet and amphibole which incorporate the HREE into their crystal structure increasing the LREE/HREE and MREE/HREE values in the zircons. The detrital zircon at 3104 ± 70 Ma shows higher LREE/HREE and MREE/HREE signifying deeper crystallization of the protolith, which might be correlated to crustal thickening events which are previously reported across the Dharwar Craton. (Jayanada et al., 2015).

In the lower Lokapur Group, samples PD18-05 and KL18-8 show varied REE compositions in their detrital zircon record. The sample KL18-8 contains zircons that show a positive Eu-anomaly between the ages of 2.7–2.5 Ga and slightly negative Eu-anomalies for the majority of remaining zircons. The Eu/Eu* values from the sample KL18-8 show positive Eu-anomalies (Eu/Eu*>1) which signifies the europium saturating into the zircon before differentiation into plagioclase/feldspar, which can happen in a non-equilibrium process like metamorphism or alteration (Trail et al., 2012). The sample KL18-8 was collected at the margin of the Hungund-Kushtagi Neoarchean greenstone sequence, which explains the alteration or metamorphism of adjacent protoliths probably during the Neoarchean

bimodal volcanism previously reported across the Eastern and Central Dharwar Craton during the same period. The LREE/HREE and MREE/HREE ratios range from low to moderately high signifying input from deeper crystallizing protoliths. The Closepet batholith and coeval granitic intrusions across the Dharwar Craton are inferred to be major source regions for the detritus along with a minor contribution from older components from the older TTG gneisses or the adjacent Hungund Schist belt. Sample PD18-05, collected from the same stratigraphic unit, reflects varied negative Eu-anomaly inferring presence of plagioclase in the source which was previously proposed to be underlying the Deccan Traps (Dey et al., 2015). The LREE/HREE and MREE/HREE ratios increase after 2.55 Ga signifying increasing crystallization depth, which can be associated with the crustal thickening due to the final assembly of Dharwar Craton.

### *5.3 Comparison of detrital ages across Kaladgi-Badami basin and other Paleoproterozoic basins across India and Madagascar using Multidimensional scaling (MDS)*

An extensive database of published detrital data from India and Madagascar has been adapted from Armistead et al. (in review), to test possible correlations between the Paleoproterozoic sediments within the Kaladgi-Badami basin with Paleoproterzoic basins across Madagascar and India. Regions from India that are compared are, the lower groups of the Cuddapah Basin and the Southern Granulite Terrane. From Madagascar, the datasets from the Ambatolampy Group, the Itremo Group along with other associated groups pooled into the Greater Itremo Group, which include the Maha Group, the Sahantaha Group and Southern Madagascar (Armistead et al., in review). These are all thought to be part of the Greater Dharwar Craton of Tucker et al. (2011a), but to have been part of Africa in the alternative models of Collins and Windley (2002; Collins and Pisarevsky, 2005; Armistead et al. in review). Previously published U–Pb detrital ages from the Kaladgi-Badami basin (Joy et al., 2019) have been added to our data to increase the database. The Kernel Density Estimates (KDEs) of the samples from the Kaladgi-Badami basin (this study) have been plotted against the database of the combined data from each domain with a top-down view in Figure 5. The U–Pb detrital ages from the datasets have been filtered for ten per cent discordance to remove discordant peaks from the age spectra.

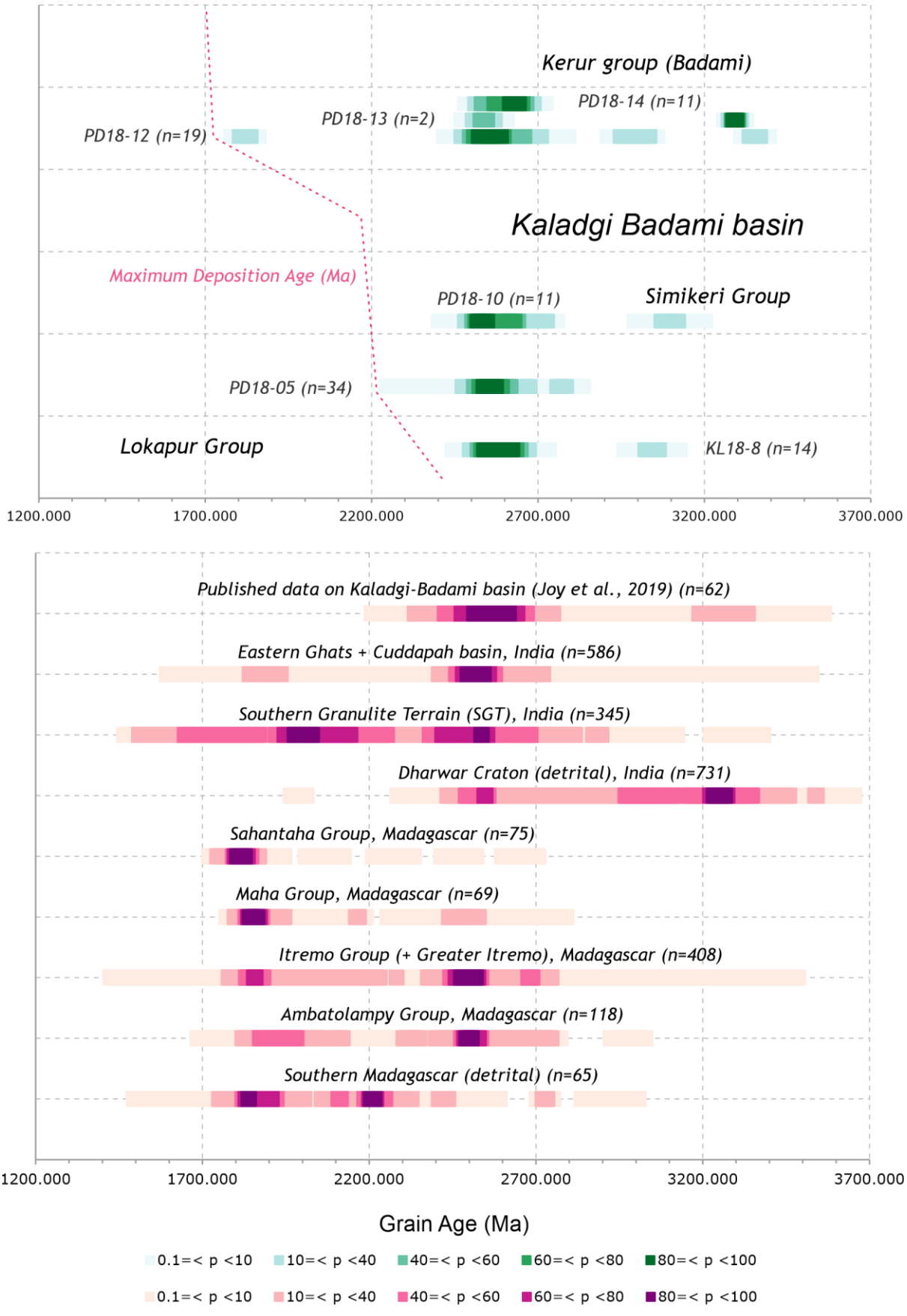
Kerur group (Badami)
PD18-14 (n=11)
PD18-13 (n=2)
PD18-12 (n=19)
Kaladgi Badami basin
Maximum Deposition Age (Ma)
PD18-10 (n=11)
Simikeri Group
PD18-05 (n=34)
Lokapur Group
KL18-8 (n=14)
1200.000
1700.000
2200.000
2700.000
3200.000
3700.000
Published data on Kaladgi-Badami basin (Joy et al., 2019) (n=62)
Eastern Ghats + Cuddapah basin, India (n=586)
Southern Granulite Terrain (SGT), India (n=345)
Dharwar Craton (detrital), India (n=731)
Sahantaha Group, Madagascar (n=75)
Maha Group, Madagascar (n=69)
Itremo Group (+ Greater Itremo), Madagascar (n=408)
Ambatolampy Group, Madagascar (n=118)
Southern Madagascar (detrital) (n=65)
1200.000
1700.000
2200.000
2700.000
3200.000
3700.000
Grain Age (Ma)
0.1=< p <10
10=< p <40
40=< p <60
60=< p <80
80=< p <100
0.1=< p <10
10=< p <40
40=< p <60
60=< p <80
80=< p <100

*Figure 5: Top down view of probability density estimates of detrital U–Pb zircon data from (a) The samples dated from various formations of Kaladgi-Badami basin. (b) The published data used for correlation with the detrital data from sedimentary formations in India: Cuddapah basin, Southern Granulite Terrain (SGT), Dharwar Craton; in Madagascar: Sahantaha Group, Maha Group, Itremo Group, Ambatolampy Group, Southern Madagascar detritals.*

The Lokapur Subgroup shows major detrital signatures at 2.6–2.5 Ga is interpreted as to have sourced from the basement gneisses and granite domains from the Central Dharwar Craton and Eastern Dharwar Craton. The younger detrital age at 2.3 Ga is comparable to the previously published study on the Kaladgi-Badami basin. The Simikeri Subgroup has similar detrital peak at 2.55 Ga, which is attributed to the Closepet Granite, but the depositional age is previously constrained by an intrusive dolerite dyke with U–Pb baddeleyite age at 1861 ± 4 Ma (Joy et al., 2019). The upper Badami Group has similar age peaks slightly shifting from 2.55 Ga to 2.6 Ga, but the sample at the base of the Cave-Temple Arenite has a near concordant zircon dated at 1820 ± 26 Ma, which forms the maximum depositional age of the Kerur Group. The lower bound on the depositional age is poorly constrained with an imprecise U–Th–Pb isochron at ca. 0.96 Ga (Joy et al., 2019).

The detrital age peaks at ca. 2.6–2.5 Ga in the Kaladgi-Badami basin along with the minor 1.8 Ga contributions are well correlated with the presence of similar-aged peaks within the lower groups of the Cuddapah basin (Collins et al. 2015). The older ages correlate well with the published detrital record of the Dharwar Craton confirming its contribution. The Southern Granulite Terrane combined detrital record has slightly younger depositional ages, but has major detrital peaks around ca. 2.55 Ga and ca. 2.1–1.9 Ga, which appears to have a different depositional history compared to the Kaladgi-Badami basin after 2.5 Ga.

The Paleoproterozoic sequences in Madagascar contain detritus with significant age peaks at 2.5 Ga and 1.8 Ga. While low volume older (pre 2.5 Ga) detrital contributions in the Itremo Domain could be explained to be sourced from the Greater Dharwar Craton (Tucker et al., 2011), the significant contribution at 1.8 Ga in the Itremo is hard to attribute to Palaeoproterozoic southern India, and contrasts with the Kalagdi-Badami basin and corollaries in the Cuddapah Basin (Collins et al. 2015). The Malagasy Palaeoproterozoic sedimentary rocks have been interpreted to be sourced from African rocks (Cox et al., 1998; Cox et al., 2004; Fitzsimons and Hulscher, 2005) and recently revised to be Tanzania Craton in east Africa (Armistead et al., in review). The detrital record of the Ambatolampy Group (Archibald et al. 2015) does overlap with the detrital record of the lower groups of the Cuddapah basin and the ages prevalent in Kaladgi-Badami basin. However, the Ambatolampy Group samples do still show numerous ca. 1.8 Ga detritus, it is just that much of this is discordant and therefore not counted in this data treatment. The detrital KDE peaks from Southern Madagascar have age peaks at

1.8 Ga which is present in the upper Badami basin, and 2.2 Ga which is not reflected in any of the groups of the Kaladgi-Badami basin.

To compare the sedimentary environment of the Kaladgi-Badami basin, we have compared the detrital record of each sample within the domains against each other using an MDS (multidimensional scaling) plot. Similar sedimentary records will plot closer on the graph and are enveloped by a contour to represent their domain. Each sample has been marked on the map with India together with Madagascar in the Paleoproterozoic (Ishwar Kumar et al., 2013). The samples are represented by a pie-diagram representing their detrital record within specified intervals to reflect the sedimentary contributions from source regions. The table below summarizes the studies used to create the data set for the MDS plot.

| Type | Country | References |
|---|---|---|
| Detrital | Madagascar | Archibald et al. (2015); Armistead et al. (2020); BGS-USGS-GLW (2008); Boger et al. (2014); Collins et al. (2012); Collins et al. (2003b); Costa et al. (2019); Cox et al. (1998); Cox et al. (2004); De Waele et al. (2011); Fitzsimons and Hulscher (2005); Tucker et al. (2011a); Tucker et al. (2011b). |
| Detrital | India | Armistead et al. (2017); Collins et al. (2007a); Collins et al. (2015); Henderson et al. (2014); Ishwar-Kumar et al. (2013); Joy et al. (2015); Kooijman et al. (2011); Kumar et al. (2016); Lancaster et al. (2015); Li et al. (2017); Maibam et al. (2016); Maibam et al. (2011); Plavsa et al. (2014); Prakash and Sharma (2011); Raith et al. (2010); Sarma et al. (2012); Teale et al. (2011); Upadhyay et al. (2009) |

For this comparison, the detrital data sets with maximum depositional ages between 2700 – 1500 Ma have been used to omit older detrital sequences that are related to the older greenstone sequences on the Antongil–Dharwar Craton and other younger Mesoproterozoic sequences. The ages from each sample have been filtered for concordance between 85% and 105%. The samples with less than 5 grains after filtering have been removed to minimize overweighting of fewer ages. The detrital data used from the Itremo Group have been consolidated into three age groups that have been represented by their respective KDE in piechart form.

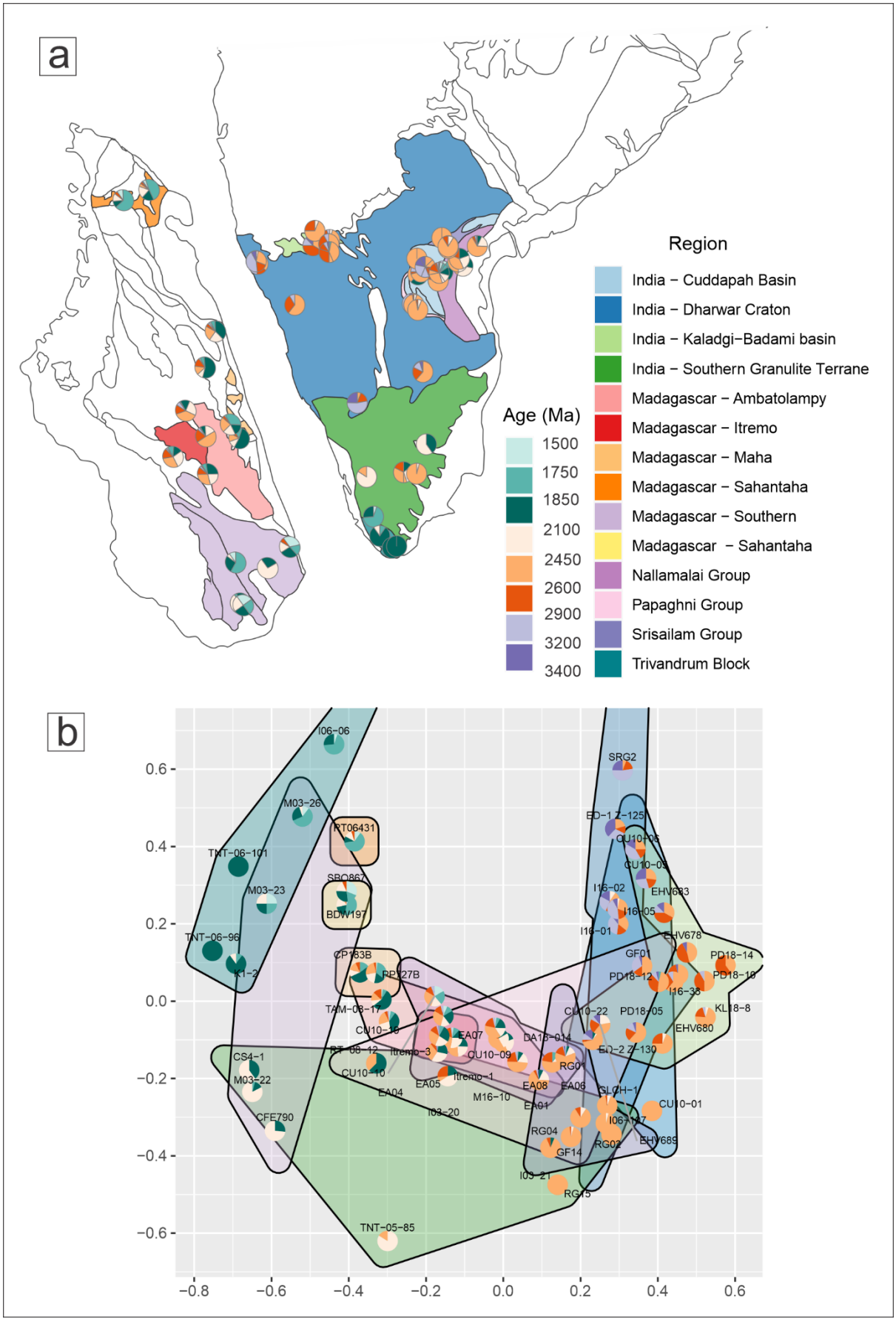
a
Region
India – Cuddapah Basin
India – Dharwar Craton
India – Kaladgi–Badami basin
India – Southern Granulite Terrane
Madagascar – Ambatolampy
Madagascar – Itremo
Madagascar – Maha
Madagascar – Sahantaha
Madagascar – Southern
Madagascar – Sahantaha
Nallamalai Group
Papaghni Group
Srisailam Group
Trivandrum Block
Age (Ma)
1500
1750
1850
2100
2450
2600
2900
3200
3400
b
I06-06
M03-26
RT06431
TNT-06-101
M03-23
SBO857
BDW197
TNT-06-96
K1-2
CP183B
RP127B
TAM-08-17
CU10-10
RT-08-12
Itremo-3
CS4-1
M03-22
CU10-10
CFE790
EA04
EA05
Itremo-1
I03-20
EA07
CU10-09
M16-10
EA01
EA08
EA06
DA18-014
RG01
RG04
GF14
I03-21
RG15
RG02
TNT-05-85
SRG2
ED-1 Z-125
CU10-05
CU10-03
I16-02
EHV683
I16-05
I16-01
EHV678
GF01
PD18-14
PD18-12
PD18-10
I16-35
CU10-22
PD18-05
KL18-8
EHV680
ED-2 Z-130
GLCH-1
CU10-01
I06-147
EHV689
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
−0.8
−0.6
−0.4
−0.2
0.0
0.2
0.4
0.6

*Figure 6: a) Geographical locations of detrital zircon U–Pb data from Paleoproterozoic basins across southern India and Madagascar (including this study) represented by piecharts depicting the fractions of age data using the age brackets shown in the legend. The sedimentary formations have been coloured using the legend over the map. b) Multidimensional scaling analysis of the detrital samples filtered by maximum depositional ages between 2700—1500 Ma to include only Paleoproterzoic detrital sequences. The samples have been grouped based on sedimentary formations and coloured using the same colour scheme as the map in (a).*

From the MDS plot, the provenance record of the Kaladgi-Badami basin, including the published data, plot closer to the detrital record of the lower formations in the Cuddapah basin and the Dharwar Craton, and show significant dissimilarity to the provenance record of basins in Madagascar, which in turn are closely related. This implies a similar sedimentary system across the Madagascar Paleoproterozoic basins. The Ambatolampy Group, which contained similar ages to that of the Kaladgi-Basin, plots far from its contour representing the dissimilarity in sedimentary environments.

The southern regions of Madagascar plot in similar positions to some of the detrital records of those belonging to the Southern Granulite Terrane, with the possibility of being related sedimentary systems (Plavsa et al. 2014). The Maha and Sahantaha groups appear to be closely related in sedimentary environments to the Itremo Group which has been reported by Armistead et al. (2020).

The formations of the Cuddapah Basin share some similarities to the Itremo Group with some formations preserving significant ca. 1.8 Ga detritus. The Nallamalai Group, in particular, shares similar detrital zircon age record to that of the Itremo Group. Collins et al. (2015), interpreted the Nallamalai Group to represent a foreland basin sequence deposited proximal to the evolving Krishan Orogen. These authors demonstrated how coeval sediments deposited in a platform setting to the west (the Srisalam Group) did not contain much Krishna Orogen-derived detritus. The Kaladgi-Badami Basin continues this trend of decreasing Palaeoproterozoic zircon seen progressively in the Cuddapah Basin. This questions the idea that Malagasy Palaeoproterozoic basins were sourced from India as the dominant ca. 1.8–2.0 Ga detritus in these rocks are not reflected in the Indian basins found between a possible Madagascan-extension to the Palaeoproteroozic Dharwar Craton and the possible source in the SE Indian Krishna Orogen. Instead, Palaeoproterozoic zircon in the Itremo and other Paleoproterozoic groups across Madagascar has been proposed to be sourced from Tanzania Craton in east Africa.

The Kaladgi-Badami basin is now proposed to have shared similar sedimentary environment as the lower groups of the Cuddapah basin such as the Papagni Group and was part of wide-spread sedimentation across the Indian subcontinent during the Paleoproterozoic. After the deposition of the Lokapur Group, it was intruded by a dolerite dyke at ca. 1860 Ma, which may be part of an extensive

mafic intrusive event that includes mafic sills within the Cuddapah Basin Tadipatri Formation (Joy et al., 2019). The paleocurrent flow in the lower groups has been reported to be towards NW-N direction implying the contribution of Eastern Dharwar Craton which is in agreement with our findings. Paleocurrents are then reported to have changed towards an SW direction during the sedimentation of the upper Badami Group, which may have brought the rare ca. 1.8 Ga zircons from far sources such as the Cuddapah Basin.

### *5.4 Formation of the Kaladgi-Badami basin post-assembly of Dharwar Craton*

The Kaladgi-Badami basin formed as an intra-cratonic basin after the final assembly of the Dharwar Craton. Its formation may have been initiated by the dyke swarm activity across the craton (Soderlund et al., 2019), weakening the crust. Dyke intrusions occur throughout the eastern Dharwar Craton at ca. 1.86 Ga (Sarma et al., 2020), and these may correlate with the formation of the basin. The lower groups formed due to the contribution from the Dharwar Craton with paleocurrent flows occurring in NW-N directions (Joy et al., 2019). The presence of 1861 ± 4 Ma dolerite dyke intruding through the lower Lokapur Subgroup provides evidence that sedimentation was deposited before ca. 1.86 Ga. The Simikeri Group may post-date ca 1.86 Ga, as no dykes are reported to intrude it. The Badami Group contains zircons aged at ca 1.8 Ga is interpreted to have been deposited by river systems, with unidirectional paleocurrents trending to the SW. The significance of a U–Th–Pb isochron from the

Katagiri limestone formation at ca 0.96 Ga (Joy et al., 2019) has been questioned (Patil Pillai et al. 2019), however, it has been interpreted to suggest that the Bhima Formation was deposited in the Neoproterozoic, and may correlate with lithologically similar quartz arenites of the Kurnool Group of the Cuddapah basin (Collins et al., 2015). This would suggest a major transgression across the northern Dharwar Craton at this time.

## 6. Conclusions:

1) The lower groups of the Kaladgi-Badami basin within the Bagalkot Group have a maximum depositional age of 2332 ± 65 Ma. Whereas the youngest detrital zircon in the Badami Group is 1820 ± 26 Ma.
2) The major peaks in the detrital record of the lower Lokapur subgroup coincide with the crystallization ages of major lithologies in the region around ca. 2.6—2.55 Ga. The felspathic arenite collected at the margin of the Hungund-Kushtagi greenschist belt revealed detrital zircons with distinct geochemical signatures inferring alteration of the source protoliths.

3) The multidimensional scaling (MDS) revealed that the upper Badami Group has deposited from similar sources as the Papagni Group within the Cuddapah basin and does not bear similarities to the Itremo Group, hence not in agreement with the Greater Dharwar Craton hypothesis proposed by Tucker et al., (2011).
4) The initiation of sedimentation in the Kaladgi-Badami basin is proposed to have occurred after the assembly of the Dharwar Craton around ca. 2.3 Ga, and constrained between ca. 2.3 Ga and 1.86 Ga, due to dyke swarm activity weakening the crust and causing asymmetry from extensional tectonics within the northern and southern margins of the current basin.

## 7. Acknowledgements:

We acknowledge the support of Dr Sarah Gilbert for support at Adelaide Microscopy, the University of Adelaide in performing the detrital zircon U–Pb isotope and REE compositional analysis. We thank Dr Amlan Banerjee for assistance during fieldwork along with the PhD students from the Geological Studies Unit (GSU) at the Indian Statistical Institute, India. The Petrology lab team at Indian Institute of Science, India are acknowledged for their assistance during fieldwork logistics and sample preparation. We thank Dr Sheree Armistead for discussions related to R programming to create multidimensional scaling plots and pie-charts during her PhD at the University of Adelaide. Venkata Pavan Katuru is supported during his PhD by the scholarship provided by the University of Adelaide.

## 8. Appendix

The U–Pb data from the detrital zircons have been provided in appendix 4.1. The REE compositions of the detrital zircons from the Kaladgi-Badami basin have been provided in appendix 4.2.

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# 5

# Thermal history of the Dharwar Craton, India: Implications from multiple accessory mineral U–Pb geochronology, REE compositions from the western margin of the Dharwar Craton, Karwar Block and Coorg Block

## Abstract:

Zircon U–Pb and Lu–Hf isotopic studies have been widely used infer major geological and magmatic events from rocks in the continental crust. Recently, low temperature (> 350° C) geochronology has been employed coupled with zircon U–Pb isotopic data to infer the exhumation history of the lower crust or reactivation history in lithologies across active margins. In this study, we have sampled granitoid lithologies along the western margin of the Dharwar Craton in India, in the vicinity of shear zones, to the west of Dharwar, namely – the Kumta Shear Zone (KSZ) in the north which separates the Dharwar Craton from the Karwar Block; the Mercara (MCSZ) which acts as a boundary between the Coorg Block and the southern domain of the Dharwar Craton and Moyar Shear Zone (MSZ) that forms the southern boundary of the Coorg Block. We obtained U–Pb isotopic data and REE compositions from zircon, apatite and monazite (2 samples) to understand the timing of crystallization, metamorphism, nature of exhumation across the western margin of the Dharwar Craton. The zircon U–Pb ages from the Karwar Block coincide with major widespread crustal growth and metamorphism episodes previously reported across the Dharwar Craton with apatite cooling ages slightly younger than the zircon U–Pb ages. The Mesoarchean gneisses to the east of the MCSZ reveal apatite cooling ages around ca. 2.4 Ga and inferred to have been reactivated by the Neoarchean amalgamation of microblocks to the south of Dharwar Craton and Coorg Block around ca. 2.5 Ga. The Mesoarchean gneisses on the northern margin of the Coorg Block near MCSZ show apatite cooling ages closer to the crystallization ages of the Neoproterozoic granite and alkali plutons that have intruded the suture zones around the Coorg Block and the apatites show LREE depletion inferring hydrothermal alteration in the Neoproterozoic. In conclusion, we support the previous studies that proposed the Karwar Block as a N-W extension of the Dharwar Craton. The gneisses on the western margin of western Dharwar Craton to the east of MCSZ have experienced their last thermal reactivation around ca. 2.4 Ga and the apatite cooling ages in the Neoproterozoic volcanics within the Mercara — Moyar Shear Zone have been resultant of crustal accretion events on the northern margin of the Southern Granulite Terrane.

## 1. Introduction:

The continental evolution history of the rocks that make up the continental crust and the timing of major geological events have been traced from the zircon record of the respective protoliths (Corfu et al., 2003). The mineral zircon, occurs as a common accessory mineral within silica-rich rocks and has been widely used to infer magmatic, hydrothermal and metamorphic events (Li et al.,2019) along with the crustal and mantle evolution history (Dhuime et al., 2011). One such craton where extensive zircon U–Pb and Lu–Hf systematics have been studied is the Dharwar Craton in India. However, recent low (> 500 °C) temperature thermochronology techniques such as Rb-Sr isotopic dating on K-rich minerals, to interpret the timing of orogenic events, uplift and exhumation histories (Hogmalm et al., 2017; Tillberg et al., 2020), have been applied to the western margin of the Dharwar Craton and the Karwar Block (Li et al., 2020) to supplement the zircon isotopic data (U–Pb, Lu–Hf) as a new approach to gain better insights into history of crustal evolution and major orogenic, crystallization and metamorphic events (Armistead et al., 2020).

In this study, we have followed an alternative approach to address the low-medium temperature (> 350 °C) chronology, which has been established within the last few years, by analyzing apatites for U–Pb isotopes using Laser Ablation—Inductively Coupled Plasma Mass Spectrometer (LA-ICPMS) (Cochrane et al., 2014). The apatites, sensitive to temperatures greater than 350 °C (Blackburn et al., 2011) have been used to understand a) exhumation processes within lower crustal rocks, b)tectonic stability of cratons and lower crust, c) tectonic history of active margins which have experienced multiple collisions and orogenic events resulting in significant exhumation (Cochrane et al., 2014). Alternatively, the apatite ages can also reflect interaction with aqueous fluids during retrograde metamorphism or growth of apatites during prograde metamorphism (Nutman et al., 2007) however, caution has to be exercised in attempting to infer thermal histories from apatite U–Pb dates. The apatite U–Pb ages can be used to understand ancient Pb-loss events reflected in the Concordia diagrams from the zircon U–Pb isotopic data and the exhumation histories of lithologies in the vicinity of active margins.

In this study, we have sampled across the active margins to the western margin of the Dharwar Craton, near the Kumta Shear Zone which acts as a boundary between the Karwar Block and the Western Dharwar Craton; along the Mercara Shear Zone which acts as a suture zone between the Coorg Block and the southern region of the Western Dharwar Craton; and the southern margin of the Coorg Block separated from the Nilgiri Block by the Moyar Shear Zone. We have separated and analysed the accessory minerals for U–Pb mainly zircon and apatite, also monazite for two samples, to understand the timing and spatial extent of the thermal record of the Dharwar Craton from north to south. We have

also studied the rare earth element (REE) compositions of these accessory phases to infer about depth of protolith crystallization and role of fluids in the cooling ages from apatite U–Pb data.

## 2. Geological Background:

The Dharwar Craton is one of the major cratonic nuclei in Peninsular India and has been further divided into three crustal domains namely the western, eastern and the central Dharwar Craton. The Western Dharwar Craton (WDC) and the Central Dharwar Craton (CDC) are separated by the Chitradurga greenstone belt; and the CDC and the Eastern Dharwar Craton have amalgamated along the Kolar—Kadiri greenstone belt to the south (Jayananda et al., 2018; Li et al., 2018a; Wang and Santosh, 2019; Santosh and Li, 2018) and along the Ramagiri—Penakacherla greenstone sequences in the north (see discussion in Chapter 2 this thesis). The Dharwar Craton was amalgamated with a number of microblocks in the southern margin which include the Coorg Block accreting in the Mesoarchean (Amaldev et al., 2016), and the meso- to Neoarchean accreting Nilgiri, Biligirirangan, Shevaroy and Madras Blocks from west to east (Li et al., 2018b; Ishwar Kumar et al., 2016; Peucat et al., 2013). The western margin of the WDC has been defined by the presence of a discrete block called the Karwar Block separated by the Kumta Shear Zone. The Karwar Block's tectonic history and its correlation with the Dharwar Craton is still controversial, with studies correlating the Kumta Shear Zone to Betsimisaraka Shear Zone in Madagascar (Ishwar-Kumar et al., 2016) and another classification considering Karwar Block to be a northwestern extension of the Dharwar Craton (Rekha et al., 2013,2014; Armistead et al., 2017).

The continental crust of the Dharwar Craton comprises of different types of Tonalite-Trondhjemite-Granodiorite (TTG) gneisses, anatectic granites and sanukitoids which have formed over major magmatic crustal accretion events during ca. 3.45 —3.3 Ga, 3.23 — 3.15 Ga, 3.0 — 2.96 Ga, 2.7 — 2.6 Ga and 2.56 — 2.5 Ga (Jayananda et al., 2015,2018, Chapter 2 in this thesis). The WDC contains older protoliths with ages ca. 3.45 — 3.2 Ga adjacent to the gneisses in the CDC forming at ca. 3.23 — 2.96 Ga. The Dharwar Craton is overlain by sequences of greenstone belts that have been categorised into the older Sargur Group and the younger Dharwar Supergroup which was further divided into the Bababudan Group and the Chitradurga Group, detailed further in Chapter 3.

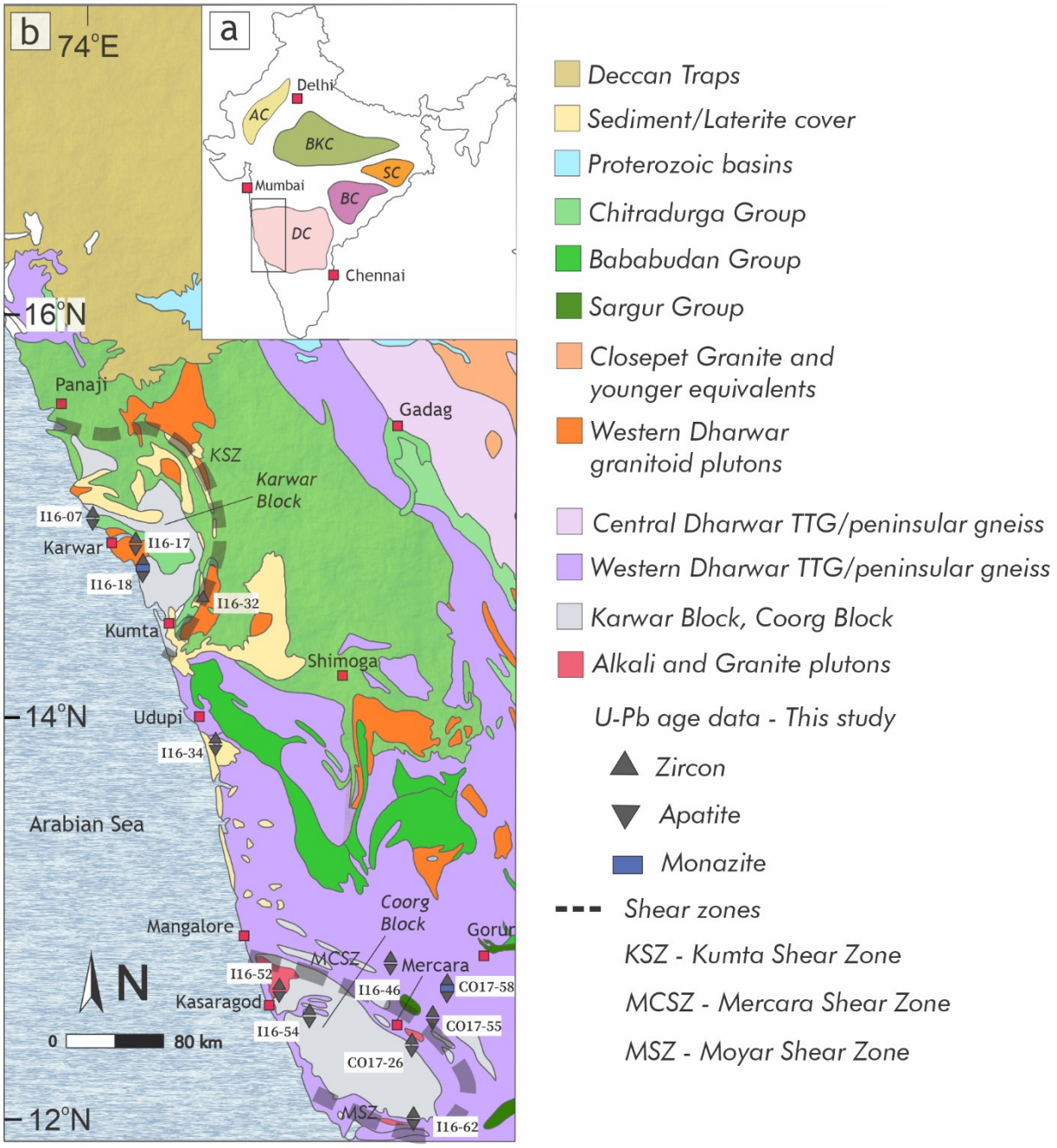


*Figure 1: a) The distribution of major cratons across the Indian peninsula (after Rogers, 1986). DC: Dharwar Craton, BC: Bastar Craton, SC: Singhbhum Craton, BKC: Bundelkhand Craton, AC: Aravalli Craton. b) Geological map of the Western Dharwar Craton with adjacent Karwar Block and Coorg Block showing sample locations with major towns marked in red squares. The symbols in the legend indicate the accessory minerals analysed for U–Pb data.*

The Karwar block on the west of WDC has been studied primarily with focus on models for India-Madagascar correlations (Ishwar-Kumar et al., 2013, 2016; Rekha et al., 2013,2014; Armistead et al., 2017). The basement has been initially dated for Rb-Sr whole rock dating for 3400 ± 140 Ma with migmatites between ca. 2.65—2.4 Ma and Goa group sedimentary sequences which have been correlated to extend towards the younger groups within the Chitradurga Group (Dhoundial et al., 1987). Metamorphism in the Karwar block was broadly contemporaneous with major metamorphic events reported in the Dharwar Craton (Armistead et al., 2017; Jayananda et al., 2013) around ca. 3.1—3.0 Ga and ca. 2.55—2.52 Ga (Jayananda et al., 2013; Peucat et al., 2013). The younger monazite U-Pb ages reported by Rekha et al. (2013) have been explained to represent the closure of the Goa Basin by Armistead et al., (2017) also discounting the correlation by Ishwar-Kumar et al., (2013) between the Kumta Shear Zone and the Betsimisaraka Shear Zone in Madagascar due to lack of lithostratigraphic correlation.

The Coorg Block lies to the west of the Dharwar Craton separated by the Mercara Shear Zone and has been explained to have distinct structure, chronology and metamorphic P–T conditions (Ishwar-Kumar et al., 2013, 2016; Santosh et al., 2015). The Coorg Block is characterised by hornblende gabbro, charnockite and layered hornblende anorthosite interpreted as rocks forming in a magmatic arc (Santosh et al., 2015). The Mercara Shear Zone (MCSZ) contains highly sheared and deformed gneisses and it terminates in the south against the Moyar Shear Zone (MSZ) which forms the southern boundary of the Coorg Block and the northern boundary of the Nilgiri Block (Ishwar-Kumar et al., 2016). Both the MCSZ and MSZ are intruded by younger granite and alkali plutons which have been explained as a part of widespread Cryogenian magmatism across the network of suture zones between the Dharwar Craton and the Southern Granulite Terrane (SGT) (Santosh et al., 2014). A number of metamorphic ages have been proposed for the MCSZ portraying complex tectonic history. Mesoproterozoic suturing ages of ca. 1.2 Ga and 1.5 Ga have been proposed (Ishwar-Kumar et al., 2016; Santosh et al., 2015). Textural dating of monazite grains revealed chemical ages between ca. 2.5—2.2 Ga to the west of the MCSZ and were correlated to the metamorphic ages in the Betsimisaraka Shear Zone in Madgascar (Rekha et al., 2013). Metamorphic overgrowths on zircon dated at ca. 3.0 Ga have been identified by Amaldev et al. (2016) and constrained the peak P–T conditions for mafic granulites to 10–12 kbar at 700—900 °C. Santosh et al. (2015) reported P–T conditions of 6 kbar at 820–870 °C for the hornblende in charnockites and Ishwar-Kumar et al. (2013) reported 15–20 kbar at 1000 °C peak P–T conditions for the mafic granulites in MCSZ.

## 3. Methods:

**T**he samples were processed and panned for heavy minerals. Magnetic minerals were removed, and resulting fractions were handpicked for zircons, apatite and monazite, mounted in epoxy resin and polished at the University of Adelaide. The grain mounts were carbon-coated and imaged by a Gatan cathode luminescence (CL) detector attached to Quanta 600 MLA Scanning Electron Microscope to identify various domains within the zircons suitable for analysis. U–Pb geochronology was performed at Adelaide Microscopy, The University of Adelaide, using an Agilent 7900 ICP-MS attached with a RESOlution LR 193nm Excimer laser system. The laser used a spot size of 31 μm and a frequency of 5 Hz for zircon. The isotopes $^{204}Pb$, $^{206}Pb$, $^{207}Pb$, $^{208}Pb$, $^{232}Th$ and $^{238}U$ were measured for U–Pb geochronology. GEMOC GJ-1 zircon (Isotope dilution TIMS ages $^{207}Pb/^{206}Pb$ = 602 ± 4.3 Ma, $^{206}Pb/^{238}U$ = 600.7 ± 1.1 Ma and $^{207}Pb/^{235}U$ = 602.0 ± 1.0 Ma; Jackson et al., 2004) was used for the correction of U–Pb fractionation for zircon laser sessions. The Plesovice zircon (ID-TIMS $^{206}Pb/^{238}U$ age = 337.13 ± 0.37 Ma; Sláma et al., 2008) and 91500 zircon (aged at ca. 1065 Ma; Wiedenback et al., 1995) were analysed alongside the samples as an internal standard to test the accuracy of the laser sessions. The secondary standards yielded a calculated ages of 340.5 ± 1.5 Ma (2σ, MSWD = 3.5, n = 36) for Plesovice, and 1035 ± 32 Ma (2σ, MSWD = 0.97, n = 36) for 91500 zircon.

McClure Mountain apatite (Isotope dilution $^{207}Pb/^{235}U$ age = 523.5 ± 2 Ma, LA-ICPMS age = 516 ± 9 Ma; Schoene and Bowring, 2006; Thompson, 2016) was used as the primary standard for U–Pb fractionation correction in apatite dating along with OD306 (Isotope dilution age = 1596.7 ± 7.1 Ma, LA-ICPMS age = 1544.8 ± 23.5), 401-apatite (Isotope dilution age = 530.3 ± 1.5 Ma, LA-ICPMS age = 506.2 ± 8.1 Ma; Thompson et al., 2016) which were used as internal standards to test the laser accuracy. The data reduction was performed using "VisualAge_UcomPbine" data reduction scheme (DRS) (Chew et al., 2014) in the Iolite software package (Paton et al., 2011). This DRS was selected as it could account for variable common Pb in the standards and analysed samples and apply it for the baseline, downhole fractionation and drift corrections in the ICP-MS data. The McClure Mountain apatite analysed for this study revealed a lower intercept age of 537 ± 11 Ma (2σ, MSWD = 1.2, n = 19), the secondary standards show lower intercept ages of 1628 ± 11 Ma (2σ, MSWD = 1.8, n = 38) for OD306 and 530.2 ± 2.6 Ma (2σ, MSWD = 0.67, n = 38) for 401-Apatite.

An internal monazite standard, MAdel ($^{206}Pb/^{238}U$ age = 520–510 Ma; Payne et al., 2008) was used as a primary standard for the U–Pb fractionation correction in monazite U–Pb dating along with secondary standard Ambat ($^{206}Pb/^{238}U$ age at ca. 520 Ma) and 94-222/Bruna-NW (aged at ca. 450 Ma, Payne et al., 2008) to check the accuracy of the laser. The ages calculated from this study for the

standards are 518.2 ± 2.7 Ma (2σ, MSWD = 0.046, n = 15) for MAdel, 450 ± 2.9 Ma (2σ, MSWD = 0.102, n = 10) for 94-222/Bruna-NW apatite and 517.8 ± 3.9 Ma (2σ, MSWD = 0.91, n = 10) for the Ambat standard.

Rare Earth Elements (REE) – $^{139}$La, $^{140}$Ce, $^{141}$Pr, $^{146}$Nd, $^{147}$Sm, $^{153}$Eu, $^{157}$Gd, $^{159}$Tb, $^{163}$Dy, $^{165}$Ho, $^{166}$Er, $^{169}$Tm, $^{172}$Yb, $^{175}$Lu, $^{178}$Hf, and $^{89}$Ywere simultaneously measured from the zircons and monazite along with U–Pb isotopes using 50 μm spot size analyses over NIST-SRM 610 glass as reference material (Jochum et al., 2011). The analysed apatite grains were measured for $^{88}$Sr and $^{90}$Zr along with REE and $^{89}$Y against NIST-SRM 612 glass as reference material. The U–Pb and REE data were separately processed using Iolite™ (Paton et al., 2011). The REE concentrations in monazite grains were calculated normalised to an internal standard assuming thirty per cent weight per volume (30% w/v) of cerium (Ce) compared to the sum of the REEs (∑REE) during data reduction against NIST-SRM 610 standard in Iolite.

Concordia diagrams ($^{207}$Pb/$^{235}$U vs $^{206}$Pb/$^{238}$U) were generated to represent the data using the Isoplot 4.15 plugin on Microsoft Excel (Ludwig, 2003) and an online version of IsoplotR (Vermeesch, 2018) was used to calculate the intercepts of the discordia lines and mean ages. The analytical ellipses have been coloured to represent Th/U ratios for zircons and monazites. The Sr/Y ratios were used to discriminate the apatites analysed, with higher Sr/Y ratios attributed to more mafic melts (Belousava et al., 2002). The REE compositions have been normalised against chondrite values from Boynthon et al. (1984), using the Geochemical Data Toolkit for R (GCDkit6.0) (Janousen et al., 2006) to calculate REE ratios. In particular, Eu anomalies represented by Eu/Eu* (where $Eu^* = \sqrt{(Sm_N \times Gd_N)}$), $La_N/Sm_N$ ratios (light rare earth element (LREE) vs middle rare earth element (MREE)), and $Gd_N/Yb_N$ ratios (middle rare earth element (MREE) vs HREE) were calculated and plotted against individual zircon $^{207}$Pb/$^{206}$Pb ages and isochron corrected ages for apatites.

## 4. Results:

Eleven samples were chosen to represent felsic to intermediate granitoids occurring at the western margin of the Western Dharwar Craton, Karwar Block and Coorg Block. The locations are summarised in the table below.

| Sample | Latitude | Longitude | Rock type | Category | Zircon Ages | Inherited Zircons | Apatite Ages | Monazite Ages |
|---|---|---|---|---|---|---|---|---|
| **I16-07** | 15.018 | 74.034 | Porphyritic granite | Karwar Block | 3000 ± 32 Ma | n/a | 3015 ± 80 Ma | n/a |
| **I16-17** | 14.847 | 74.258 | Bt-rich granite | Karwar Block | 3210 ± 37 Ma | n/a | 3127 ± 219 Ma | n/a |
| **I16-18** | 14.749 | 74.251 | Bt-rich granitic gneiss | Karwar Block | 2971 ± 14 Ma | n/a | 2781 ± 71 Ma | 2962 ± 17 Ma |
| **I16-32** | 14.621 | 74.604 | Kfs-rich Syenite | Karwar Block | 3000 ± 31 Ma | 3270 ± 23 Ma | n/a | n/a |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **I16-34** | 13.848 | 74.668 | Granodioritic Gneiss | Western Dharwar Craton | 3266 ± 5 Ma, 3206 ± 10 Ma | n/a | 3169 ± 44 Ma | n/a |
| **I16-46** | 12.520 | 75.478 | Granodioritic Gneiss | Coorg Block | 3299 – 3087 Ma | n/a | 755 ± 23 Ma | n/a |
| **I16-52** | 12.635 | 75.028 | Syenite | Coorg Block | 842 ± 20 Ma | 3257 ± 18 Ma, 3197 ± 21 Ma | 837 ± 12 Ma | n/a |
| **I16-54** | 12.527 | 75.071 | TTG melanosome | Coorg Block | 3187 ± 9 Ma | 3357 ± 34 Ma | 838 ± 34 Ma, 646 ± 43 Ma | n/a |
| **I16-62** | 12.062 | 75.761 | Biotite-microgranite | Coorg Block | 856 ± 20 Ma | n/a | 622 ± 52 Ma | n/a |
| **CO17-26** | 12.373 | 75.704 | Granite | Coorg Block | 812 ± 29 Ma | 3235 ± 18 Ma | 711 ± 37 Ma | n/a |
| **CO17-55** | 12.501 | 75.802 | Felsic gneiss | Western Dharwar Craton | 3476 – 3112 Ma | n/a | 2414 ± 74 Ma | n/a |
| **CO17-58** | 12.597 | 75.845 | TTG Gneiss | Western Dharwar Craton | 3412 – 2897 Ma | n/a | 2382 ± 62 Ma | 3045 ± 29 Ma |

*Table 5.1 Summary of samples and accessory mineral U–Pb ages from this study. The zircon ages shown as single ages are upper intercepts of discordia lines or calculated mean $^{207}Pb/^{206}Pb$ age, the spread in $^{207}Pb/^{206}Pb$ ages in archean samples are shown here as x – y where x, y are the maximum and minimum $^{207}Pb/^{206}Pb$ ages. The reported inherited zircons are older zircons with greater than 90% concordance. The apatite ages shown are lower intercepts calculated in the Tera-Wasserburg plots. The monazite ages reported are upper intercepts of discordia lines calculated in the Concordia diagram.*

## *4.1 Accessory mineral U–Pb dating and REE compositions*

I16-07 is collected from a porphyritic granite collected near Karwar town on the west coast of the Karwar Block. The zircons appear euhedral and elongated with aspect ratios of 1:5 to 2:3 and width ranging from 50—100 μm. Zircon U–Pb dating revealed only two concordant zircons with a mean $^{207}Pb/^{206}Pb$ age of 3000 ± 32 Ma with Th/U ratios ranging from 0.09—1.49, Eu/Eu* values ranging from 0.22—0.8 and $La_N/Sm_N$ values ranging from 0.004 to 1.895, $Gd_N/Yb_N$ values between 0.028—0.173. The Apatite U–Pb dating data plotted on a Tera-Wasserburg plot revealed a discordia line with a lower intercept at 3015 ± 80 Ma (MSWD = 1.1, n = 30) with Eu/Eu* values ranging from 0.14—0.23 and $La_N/Sm_N$ values ranging from 0.283—0.58 and Sr/Y ratios between 0.04—0.11.

I16-17 is collected from a biotite rich granitoid near the east of Karwar town within the Karwar Block. The sample yielded a low fraction of zircons, and the apatite grains contained zircon inclusions which appear to be exsolving from the apatite grains. Zircons appear euhedral with aspect ratios between 1:5 to 2:3 with width ranging from 50 — 150 μm. Near-concordant zircons were used to define a mean $^{207}Pb/^{206}Pb$ age of 3210 ± 37 Ma (MSWD = 3.4, n = 6) interpreted as the age of the protolith. The analysed zircons reveal Th/U ratios ranging from 0.17—0.65, Eu/Eu* values ranging from 0.53—0.97 and $La_N/Sm_N$ values ranging from 0.082—1.258, $Gd_N/Yb_N$ values between 0.09—0.568. Apatite U–Pb

data plotted on Tera-Wasserburg plot define an imprecise discordia line with a lower intercept of 3127 ± 219 Ma (MSWD = 3.8, n = 29) with Eu/Eu* values ranging from 0.27—1.08 and $La_N/Sm_N$ values ranging from 0.12—0.563 and Sr/Y ratios between 0.17—0.34.

I16-18 is medium-grained biotite rich granitoid gneiss collected towards the south-east of Karwar town. The zircons are mostly euhedral with aspect ratios 1:5 to 1:3 with width ranging from 50—100 μm. The zircons mostly display oscillatory zoning in response to CL imaging with occasional metamict textures and presence of core and rim textures in a few rounded zircons which were interpreted to be inherited zircons. The zircon U–Pb dating revealed four near concordant zircons which were used to calculate a mean $^{207}Pb/^{206}Pb$ age of 2971 ± 14 Ma (MSWD = 0.15, n = 4) and an inherited zircon with $^{207}Pb/^{206}Pb$ age of 3115 ± 44 Ma. Analysed zircons show Th/U ratios between 0.07—0.86, Eu/Eu* values ranging from 0.14—0.81 and $La_N/Sm_N$ values ranging from 0.02—3.69 and $Gd_N/Yb_N$ values between 0.023—0.286. Apatite U–Pb dating reveals a discordia line in Tera-Wasserburg plot, defined by 30 apatite grains with a lower intercept of 2781±71 Ma (MSWD = 1.5, n = 30) with Eu/Eu* values ranging from 0.24—0.34 and $La_N/Sm_N$ values ranging from 0.332—0.48. Monazite grains appear to be euhedral in shape and analysed for U–Pb data which reveal a mean $^{207}Pb/^{206}Pb$ age of 2962 ± 17 Ma (MSWD = 0.01, n = 31) with Th/U ratios ranging between 15.99—37.82 and $La_N/Sm_N$ values ranging from 3.50—6.649 and Sr/Y ratios between 0.024 — 0.089.

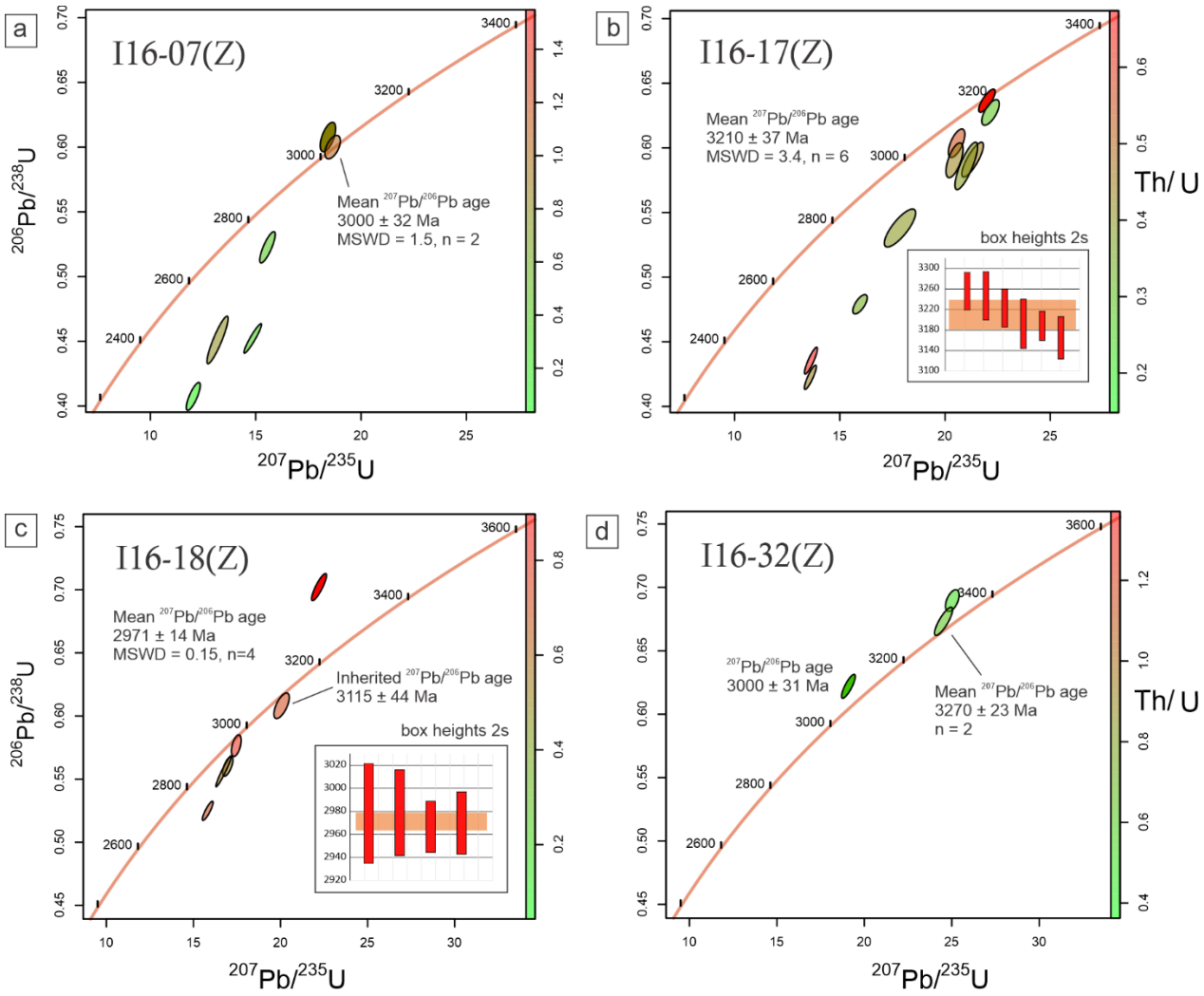


*Figure 2: The zircon U–Pb age data from the basement granitoids within Karwar Block and vicinity of proposed Kumta Shear Zone (Ishwar-Kumar et al., 2013) plotted as Concordia diagrams using IsoplotR (Vermeesch et al., 2018). The zircon U–Pb data ellipses are coloured using the Th/U ratios from the analysed zircons. The mean $^{207}Pb/^{206}Pb$ ages have been calculated for zircons that show greater than 85% concordance.*

I16-32 is a K-felspar rich syenite collected from a granitoid pluton along the Kumta Shear Zone. The zircons appear to be euhedral with several cracks and inclusions with aspect ratios between 1:3 to 2:3, and width ranging from 50—100 µm. The zircons display subtle oscillatory zoning in response to CL imaging with visible cracks and inclusions in the majority of the zircons. Zircon U–Pb dating revealed only three near concordant zircons with two older zircons with mean $^{207}Pb/^{206}Pb$ age of 3270 ± 23 Ma and a younger zircon with $^{207}Pb/^{206}Pb$ age of 3000 ± 31 Ma with Th/U ratios between 0.4—1.33. The analysed zircons exhibit Eu/Eu* values between 0.15—1.58; $La_N/Sm_N$ values between 0.025—3.784 and $Gd_N/Yb_N$ values between 0.04—0.163. The sample contained a low fraction of apatite grains which were reverse discordant, interpreted to contain large amounts of common Pb, could not be constrained to reveal a U–Pb age, however, exhibit Eu/Eu* values between 0.18—0.46 and $La_N/Sm_N$ values between 0.062—2.32 and Sr/Y ratios between 0.01 — 1.5.

I16-34 is a granodioritic gneiss collected near the town of Udupi on the western margin of the Western Dharwar Craton. The zircons appear to be partial to well-rounded with aspect ratios between 1:1 to 1:4 and width ranging from 45—120 μm. Most zircons reveal uneven shaped cores with preserved oscillatory zones surrounded by bright thin (15—20 μm) rims in response to CL imaging. Zircon U–Pb dating was targeted into the zircon cores and revealed two groups of zircons in the concordia plot. The older cluster of zircon analyses clustered around a mean $^{207}Pb/^{206}Pb$ age of 3266 ± 5 Ma (MSWD = 1; n = 26) and a younger group of zircons which define a discordia line with an upper intercept age of 3206 ± 10 Ma (MSWD = 0.5, n = 3) interpreted to represent the interference from the rims of the zircons. The Th/U ratios range between 0.287—0.698. The REE concentrations from the analysed zircons reveal Eu/Eu* ratios range between 0.1—0.66, $La_N/Sm_N$ values between 0.002—1.146 and $Gd_N/Yb_N$ values between 0.028—0.073. Apatite U–Pb dating revealed mostly reverse discordant data and the younger grains on the Tera-Wasserburg plot were constrained with a mean $^{207}Pb/^{206}Pb$ age of 3169 ± 44 Ma (MSWD = 4, n = 11). The apatite grains analysed reveal Eu/Eu* ratios between 0.41—0.95 and $La_N/Sm_N$ values between 0.295—1.057 and Sr/Y ratios between 0.11 — 1.77.

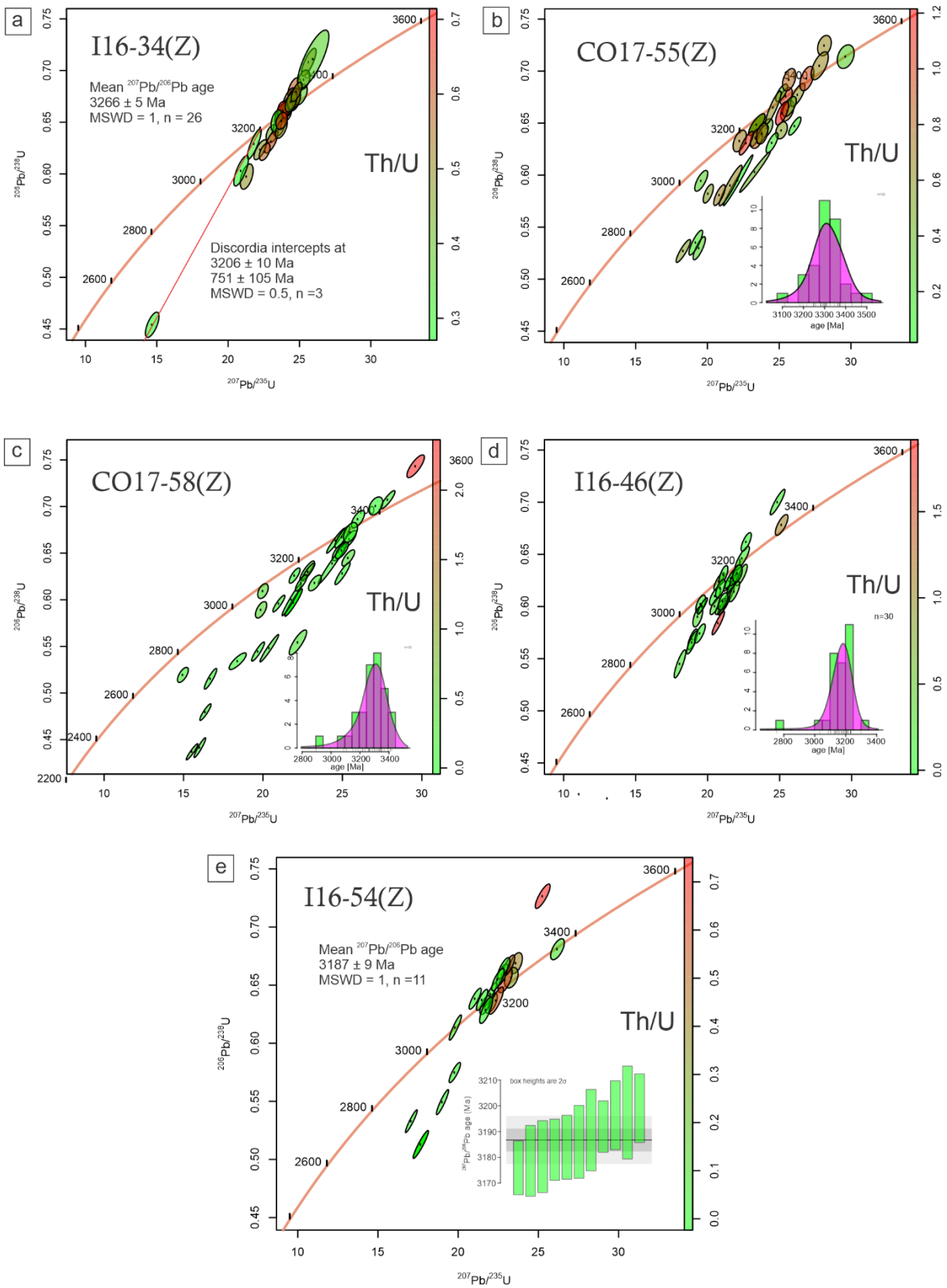


*Figure 3: The zircon U–Pb data from Mesoarchean granitoid gneisses along (a) the western margin of the Dharwar Craton near Udupi town, (b),(c) the western boundary of the Western Dharwar Craton east of the Mercara Shear Zone, (d),(e) from the northern margin within the interior of the Coorg Block. The samples with a spread in $^{207}Pb/^{206}Pb$ ages have been represented by Kernel density estimate in the bottom right of*

*figures (b),(c) and (d). For figures (a),(e) the mean $^{207}Pb/^{206}Pb$ age has been calculated to interpret the protolith ages.*

I16-46 is a granodioritic gneiss collected towards the north-west of Madikeri town (also known as Mercara) at the boundary of the Coorg Block. The zircons were elongated with rounded edges with several grains containing inclusions, in aspect ratios from 1:4 to 2:3 with width ranging between 75—200 μm. The zircons in response to CL imaging display oscillatory zoning along with metamict textures occurring in zones. Zircon U–Pb data plotted on the concordia diagram show near concordant (>85% concordance) $^{207}Pb/^{206}Pb$ ages ranging from ca. 3299 — 3087 Ma. The zircons show Th/U ratios between 0.04—1.84, Eu/Eu* ratios between 0.02—0.63, $La_N/Sm_N$ values between 0.007—12.77 and $Gd_N/Yb_N$ values between 0.013—0.372. Apatite U–Pb data plotted on Tera-Wasserburg plot reveal a discordia line with lower intercept age of 755 ± 23 Ma (MSWD = 2, n = 29) with Eu/Eu* values ranging from 0.54—3.07 and $La_N/Sm_N$ values between 0.116—0.371 and Sr/Y ratios between 0.02 — 0.89.

I16-52 is a syenite collected from the western margin of the Coorg Block south of Mangalore town. The zircons appear euhedral and crystalline in elongated and angular shapes with aspect ratios from 1:3 to 2:3 with width ranging between 50—150 μm. The CL imaging revealed two fractions of zircons, the first group with oscillatory zoning and the second group with dark cores surrounded by thick oscillatory zoned rims. Zircon U–Pb data show inherited zircons with near-concordant (> 85% concordance) $^{207}Pb/^{206}Pb$ ages of 3129 ± 40 Ma, 3121 ± 26 Ma, 3257 ± 36 Ma, 3197 ± 42 Ma. The zircons were estimated to have crystallised at a mean $^{207}Pb/^{206}Pb$ age at 842 ± 20 Ma (MSWD = 3, n = 27). The analysed zircons reveal Th/U ratios between 0.04—1.45, Eu/Eu* ratios between 0.29—0.76, $La_N/Sm_N$ ratios between 0.003—0.503, $Gd_N/Yb_N$ ratios between 0.02—0.244. Apatite U–Pb data plotted on Tera-Wasserburg plot reveals a discordia line with a lower intercept age of 837 ± 12 Ma (MSWD = 0.8, n = 30) with Eu/Eu* ratios between 0.23—1.22 and $La_N/Sm_N$ ratios between 0.163—3.18 and Sr/Y ratios between 0.25 — 4.07.

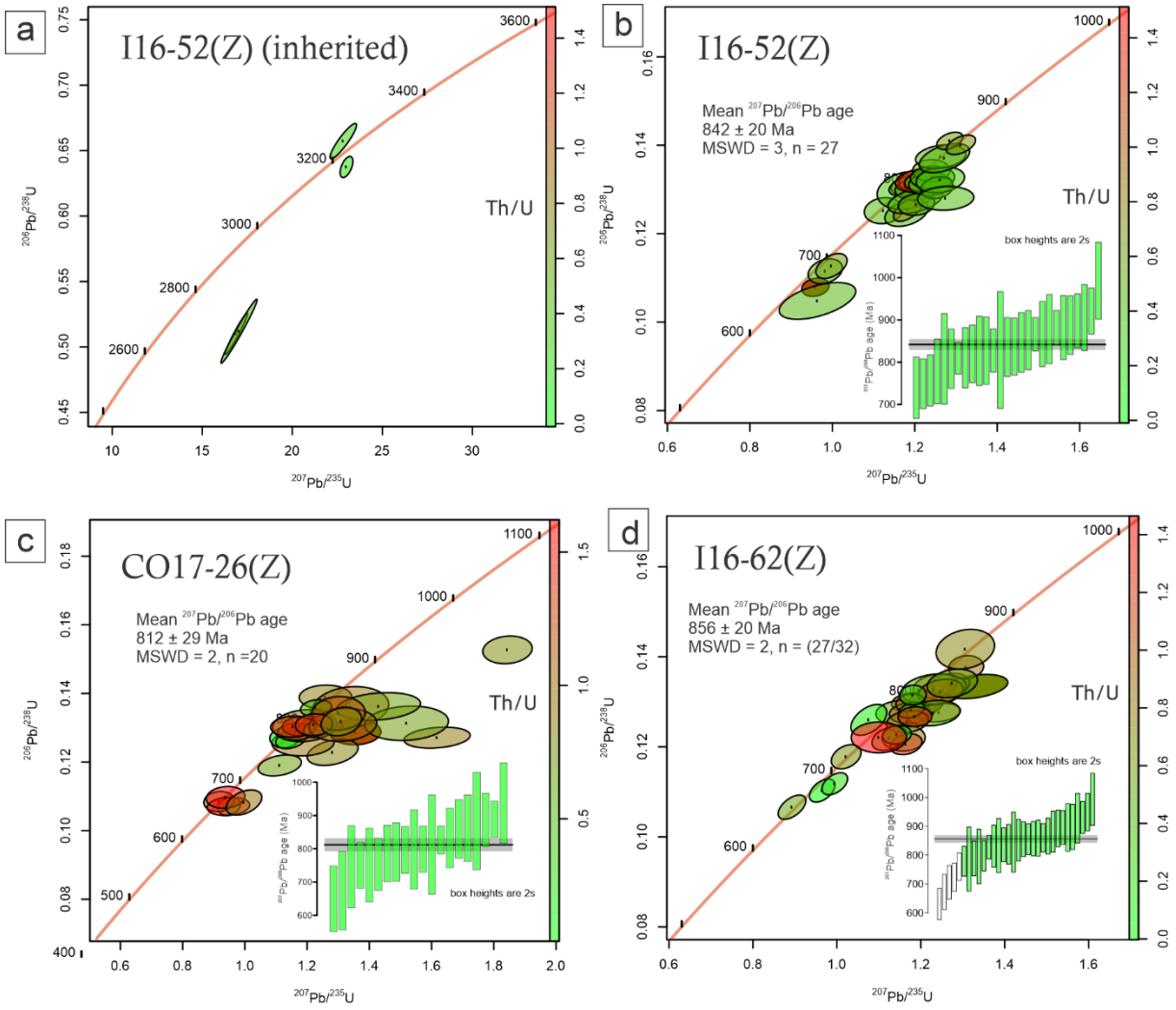


*Figure 4: Zircon U–Pb data plotted as Concordia for the Neoproterozoic volcanics around the Coorg Block. (a),(b) show the zircon U–Pb data from the syenite sampled from the alkali complex north of the Coorg Block. (c) shows the zircon U–Pb data from the granite sampled from within the Mercara Shear Zone, (d) shows the zircon U–Pb data from the alkali pluton sampled from the vicinity of the Moyar Shear Zone south of the Coorg Block. Mean $^{207}Pb/^{206}Pb$ ages were used to constrain protolith crystallisation ages due to high variability in $^{206}Pb/^{238}U$ ages.*

I16-54 is from a granodioritic melanosome from a granitoid gneiss near Kasaragod town in Kerala state. The zircons are elongated with rounded edges with aspect ratios from 1:3 to 4:5 with width ranging between 75—200 μm. The analysed zircons exhibit oscillatory zoning with a few grains containing cracks running through laterally. Zircon U–Pb data plotted on Wetherill concordia diagram show inherited zircon at $^{207}Pb/^{206}Pb$ age of 3357 ± 34 Ma and a cluster with mean $^{207}Pb/^{206}Pb$ age 3187 ± 9 Ma (MSWD = 1, n = 11) and a younger concordant zircon with $^{207}Pb/^{206}Pb$ age of 3082 ± 20 Ma. The analysed zircons reveal Th/U ratios between 0.005—0.72, Eu/Eu* ratios between 0.2—2.67, $La_N/Sm_N$ ratios between 0.007—1.723, $Gd_N/Yb_N$ ratios between 0.004—0.272. Apatite U–Pb dating revealed two groups of apatite analyses that define two distinct discordia lines with lower intercept ages of 838 ± 34

Ma (MSWD = 0.9, n = 8) and 646 ± 43 Ma (MSWD = 1, n = 8) with Eu/Eu* ratios between 0.21—1.44 and $La_N/Sm_N$ ratios between 0.012—0.194 and Sr/Y ratios between 0.06 — 0.5.

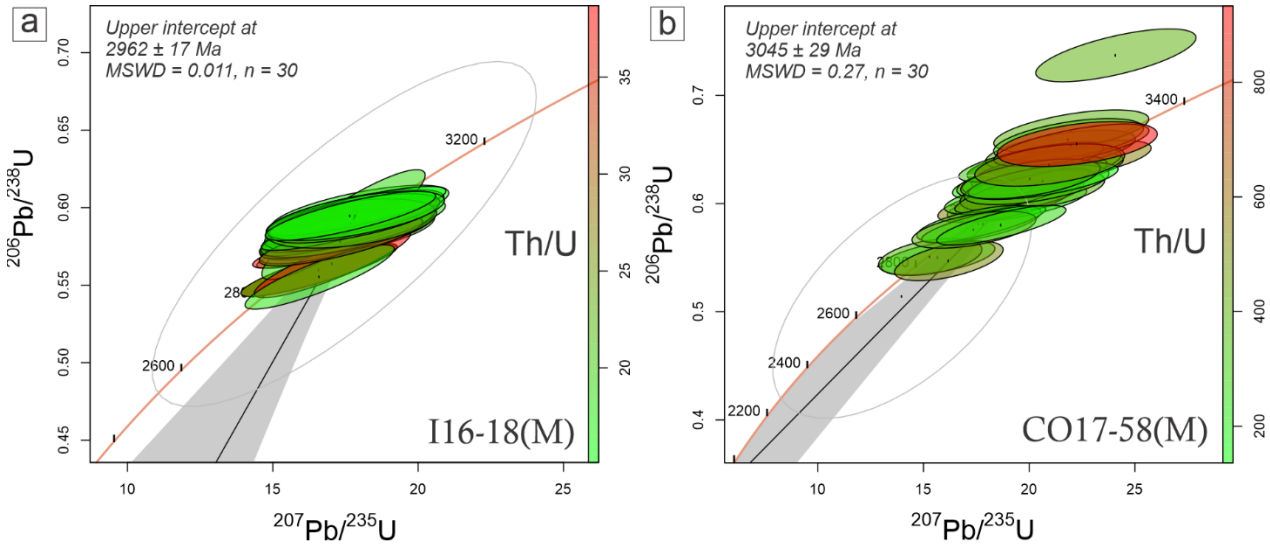


*Figure 5: Monazite U–Pb age data plotted on Concordia diagram using IsoplotR and the data-ellipses have been coloured using Th/U ratios. (a) is the monazite dated from the biotite-rich granitic gneiss collected within the Karwar Region. (b) The monazites dated from the Tonalite–Trondhjemite–Granodiorite gneiss collected to the east of the Mercara Shear Zone at the boundary of the Dharwar Craton.*

I16-62 is collected from a biotite-rich microgranite from the southern margin of the Coorg Block. The zircons appear elongated, mostly euhedral with a low fraction of grains displaying curved edges and aspect ratios ranging from 1:5 to 1:3 with the width between 50—120 μm. Zircon CL imaging revealed most zircons exhibiting euhedral crystalline shapes and oscillatory zoning. Zircon U–Pb dating plotted on the Wetherill Concordia diagram show the zircons constrained to a mean $^{207}Pb/^{206}Pb$ age of 856 ± 20 Ma (MSWD = 2, n = 27). Zircon analyses exhibit Th/U ratios between 0.05—1.41, Eu/Eu* ratios between 0.42—0.76, $La_N/Sm_N$ ratios between 0.001—4.976, $Gd_N/Yb_N$ ratios between 0.027—0.121. Apatite U–Pb data plotted on Tera-Wasserburg plot reveal a discordia line with a lower intercept age of 622 ± 52 Ma (MSWD = 2, n = 27) with Eu/Eu* ratios between 0.37—1.26 and $La_N/Sm_N$ ratios between 0.137—2.143 and Sr/Y ratios between 0.28 — 0.8.

CO17-26 has been collected from a granite body near Madikeri (Mercara) town. The zircons appear elongated and euhedral with aspect ratios of 1:5 to 1:3 and width between 50—120 μm. Zircons display clear oscillatory zoning in response to CL imaging. Zircon U–Pb data have been constrained to a mean $^{207}Pb/^{206}Pb$ age of 843 ± 41 Ma (MSWD = 1.3, n = 26) as they have high variability in $^{206}Pb/^{238}U$ ages ranging from 916 ± 37 Ma to 666 ± 26 Ma. An inherited zircon at $^{207}Pb/^{206}Pb$ age of 3234 ± 36 Ma has been identified. The analysed zircons reveal Th/U ratios between 0.1—1.56, Eu/Eu* ratios between 0.52—0.92, $La_N/Sm_N$ ratios between 0.001—0.197, $Gd_N/Yb_N$ ratios between 0.022—0.142. Apatite U–Pb

dating revealed a discordia constrained to a lower intercept age of 711 ± 37 Ma (MSWD = 2, n = 30) with Eu/Eu* ratios between 0.91—3.17, $La_N/Sm_N$ ratios between 0.231—0.608 and Sr/Y ratios between 0.21 — 0.59.

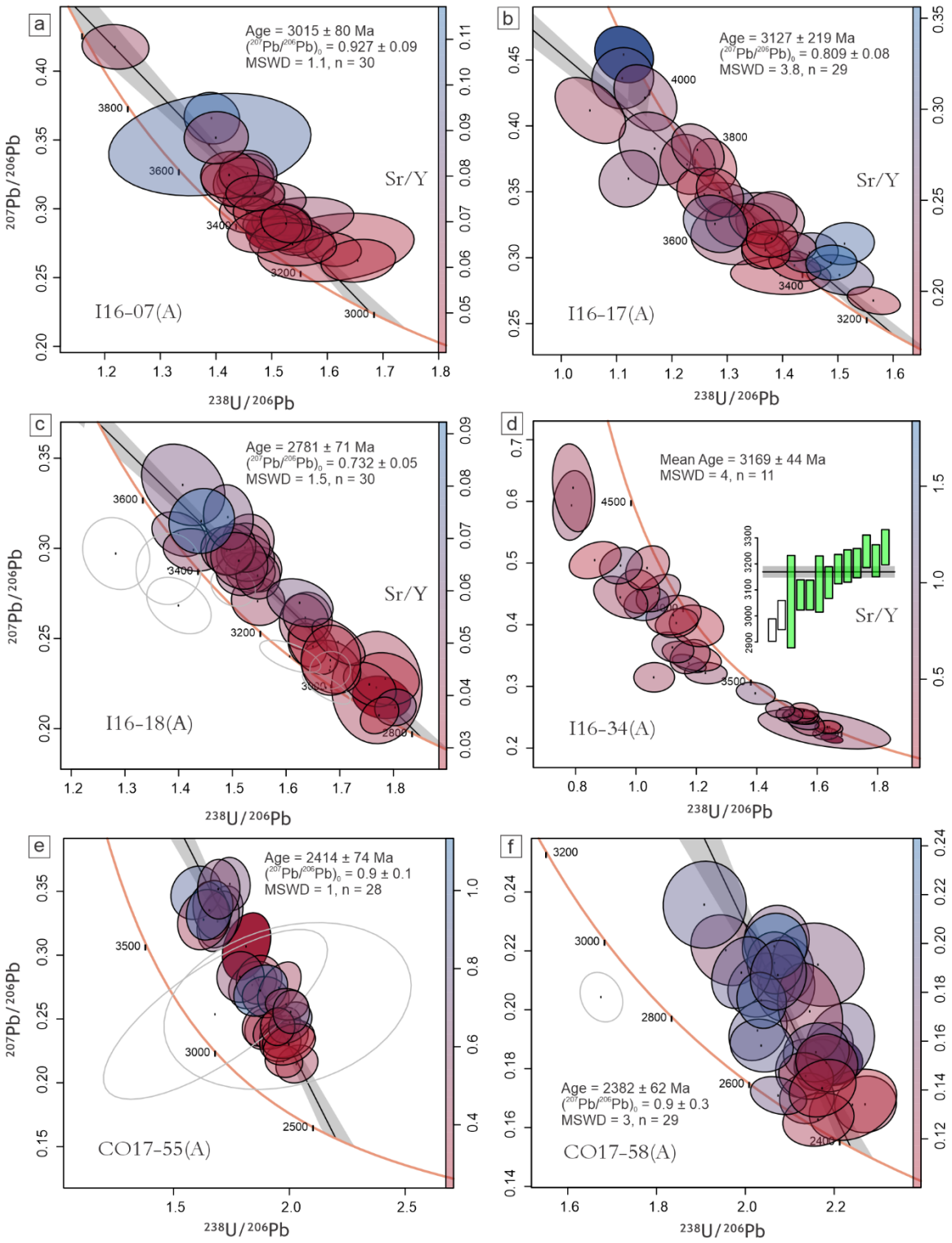


*Figure 6, Apatite U–Pb age data represented on Tera-Wasserburg plot. The data ellipses have been coloured using Sr/Y ratios to differentiate felsic/mafic characteristic of source material (Belousava et al.,*

*2002). The sample names have been written in the bottom left and denoted with (A) to represent apatite age data. The hollow ellipses were not used int the calculation of the regression lines using IsoplotR (Vermeesch et al., 2018). (a),(b),(c) are lithologies sampled in and around the Karwar Block. (d) has been sampled at the western margin of the Western Dharwar Craton. (e),(f) have been sampled northeast from the Mercara Shear Zone towards the Western Dharwar Craton.*

CO17-55 has been collected from a felsic granitoid gneiss with visible leucosomes and melanosomes, towards the north-east of Madikeri town in the vicinity of the Mercara Shear Zone (MSZ). The zircons appear elongated with well-rounded edges with aspect ratios from 1:4 to 2:3 with the width between 50—150 μm. The zircons show visible cores with magmatic oscillatory zoning along with bright overgrowths with a thickness between 10—30 μm. Zircon U–Pb dating revealed near concordant $^{207}Pb/^{206}Pb$ ages between 3476 ± 53 Ma and 3112 ± 42 Ma with Th/U ratios between 0.062—1.17, Eu/Eu* ratios between 0.17—0.99, $La_N/Sm_N$ ratios between 0.003—3.11, $Gd_N/Yb_N$ ratios between 0.02—0.086. Apatite U–Pb dating reveals a discordia line with a lower intercept age of 2414 ± 74 Ma (MSWD = 1, n = 28) with Eu/Eu* ratios between 0.24—0.72, $La_N/Sm_N$ ratios between 0.199—5.088 and Sr/Y ratios between 0.27 — 1.1.

CO17-58 has been collected from a TTG granitoid gneiss with leucosomes and melanosomes present within the sample collected from the western margin of the Western Dharwar Craton. The zircons appear elongated to well-rounded in shape with the width between 40—150 μm. The zircons display dark CL response with oscillatory zoning and a fraction of zircons showing cores and thin rims (5—10 μm). Zircon U–Pb dating reveals the zircons with near-concordant (> 85% concordance) $^{207}Pb/^{206}Pb$ ages between 3412 ± 31 Ma to 2897 ± 46 Ma. The Th/U ratios from the zircons range between 0.04—2.27 with Eu/Eu* ratios between 0.09—0.97, $La_N/Sm_N$ ratios between 0.119—6.564, $Gd_N/Yb_N$ ratios between 0.047—0.767. Monazite grains separated from powdered sample appear to be rounded in shape, and a few monazite grains contain apatite inclusions. Monazite U–Pb dating revealed a constrained discordia line on the Concordia diagram with the upper intercept of 3050 ± 35 Ma (MSWD = 0.18, n = 29) with Th/U ratios between 91—903, $La_N/Sm_N$ values between 5.513—10.747. Apatite U–Pb dating revealed a discordia line on Tera-Wasserburg plot defined with a lower intercept age of 2382 ± 62 Ma (MSWD = 3, n = 29) with Eu/Eu* ratios between 0.07—0.18 and $La_N/Sm_N$ ratios between 0.134—2.895 and Sr/Y ratios between 0.07 — 0.23.

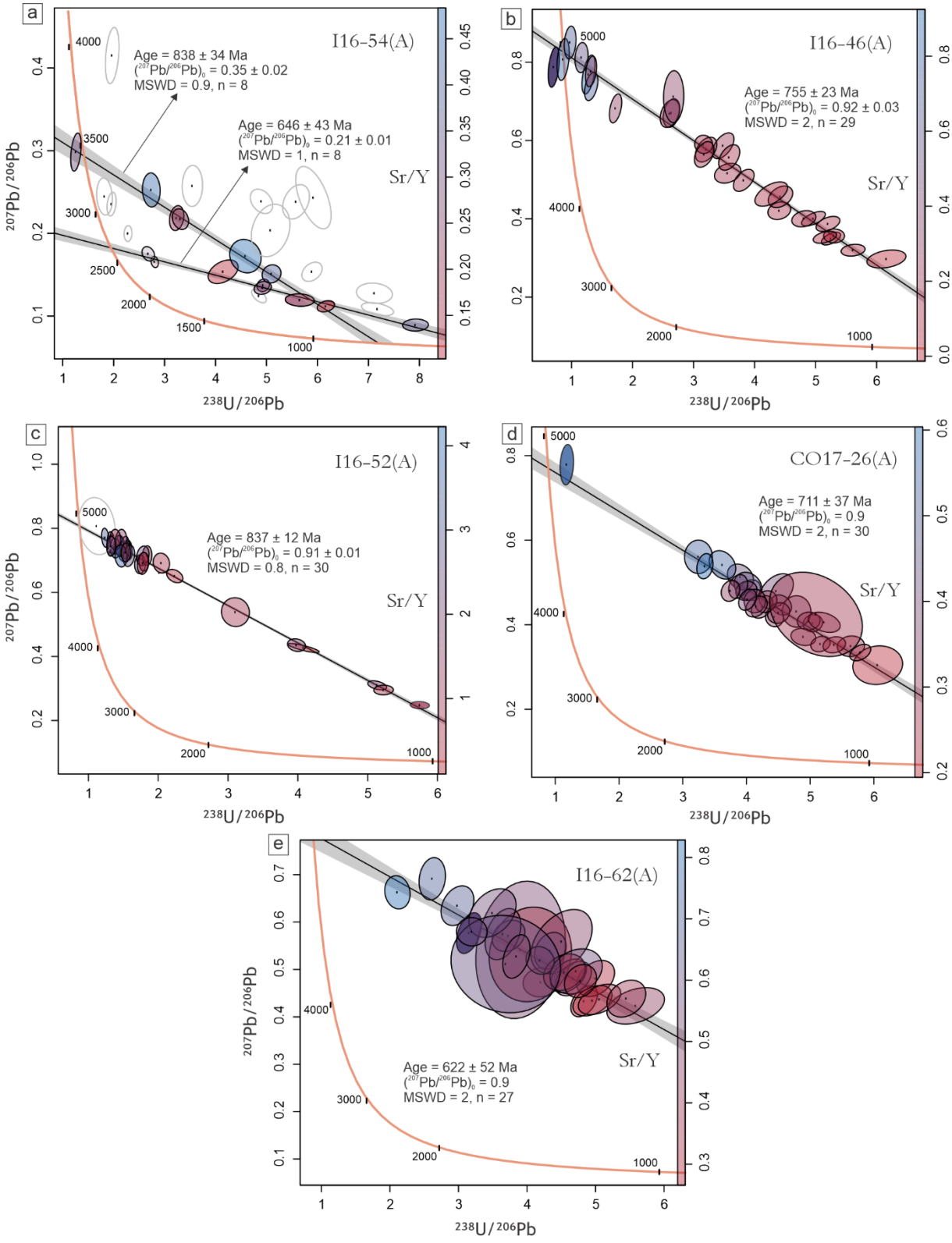


Figure 7: *Apatite U–Pb age data represented on Tera-Wasserburg plot. The data ellipses have been coloured using Sr/Y ratios to differentiate felsic/mafic characteristic of source material (Belousava et al., 2002). The sample names have been written in the bottom left and denoted with (A) to represent apatite age data. The hollow ellipses were not used int the calculation of the regression lines using IsoplotR (Vermeesch et al., 2018). (a),(b) represent apatites analysed from gneisses collected at the northern margin*

*of the Coorg Block. (c),(d),(e) represent the Neoproterozoic alkali and granitic plutons that intrude the suture zones surrounding the Coorg Block.*

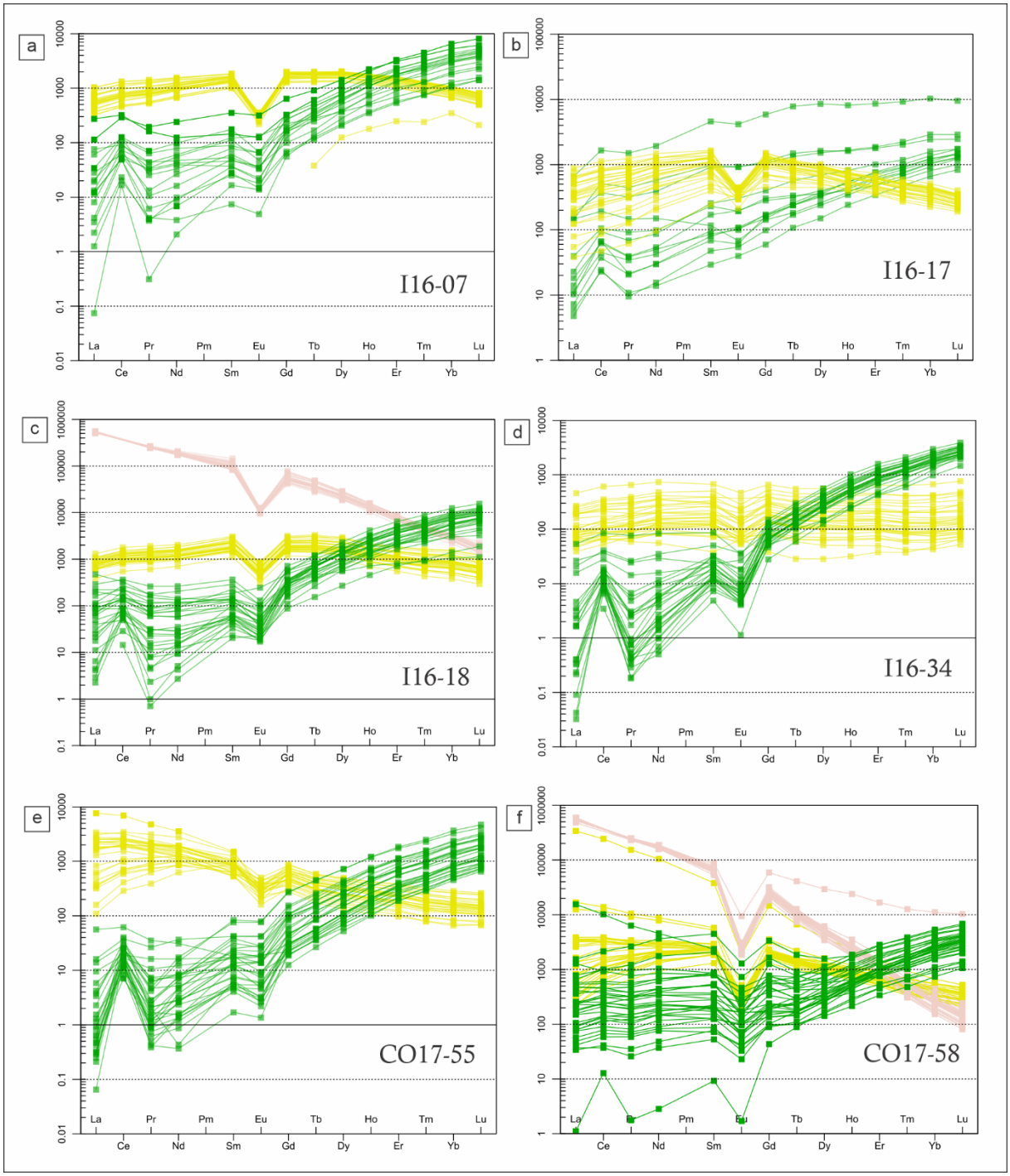


*Figure 8: The rare earth element (REE) spider plots for accessory minerals from each sample analysed in this study. The green curves represent zircon REE compositions, yellow curves represent the apatite REE composition and orange curves reflect the REE concentrations in Monazite grains. The REE concentrations have been normalised to chondritic values from Boynthon et al., 1984 using the R package GCDkit 6.0 (Janousek et al., 2006). The sample names are denoted in the bottom right of each plot. (a),(b),(c) are lithologies sampled in and around the Karwar Block. (d) has been sampled at the western margin of the Western Dharwar Craton. (e),(f) have been sampled northeast from the Mercara Shear Zone towards the Western Dharwar Craton.*

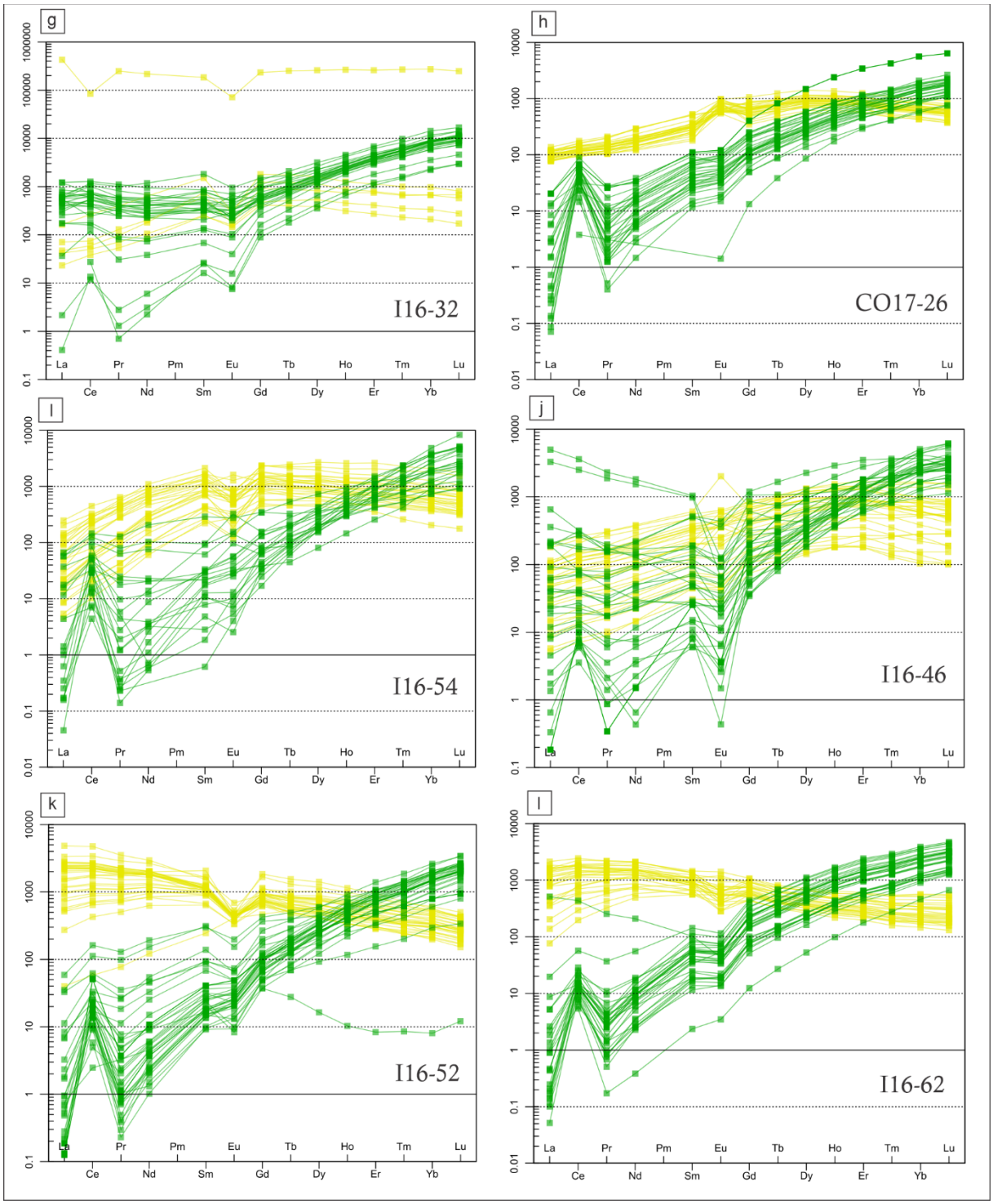


*Figure 8 (continued) (g) has been collected from a syenite in the vicinity of the Kumta Shear Zone. (i),(j) represent apatites analysed from gneisses collected at the northern margin of the Coorg Block. (k),(l),(h) represents the Neoproterozoic alkali and granitic plutons that intrude the suture zones surrounding the Coorg Block.*

# 5. Discussion:

## 5.1 Accessory Mineral Geochronology:

The U-Pb ages dated around the Karwar region show zircon U–Pb ages at 3000 ± 32 Ma in the northern Karwar region and 2971 ± 14 Ma in the southern Karwar region. The prevalence of ages around ca. 3.2 Ga within the Karwar region and nearby the recently proposed Kumta shear zone (Ishwar et al., 2013) suggest the presence of protoliths initially crystallizing around ca. 3.2 Ga and experiencing ancient Pb-loss at 3.0 Ga. This feature has been prominently observed from previous studies on the crustal evolution history of the Western Dharwar Craton (Jayananda et al., 2018 and Chapter 2 in this thesis) which supports the hypothesis put forth by Armistead et al. (2017) that the Karwar Block is an extension of the WDC to the north-west. Similar ages have been reported in a recent study (Li et al., 2020) from the Karwar Block with reported zircon U–Pb ages for amphibolite at ca. 3147 Ma and a porphyritic granite aged at ca. 2966 Ma, also reported by published monazite ages from the Karwar porphyritic granite around ca. 2.95 Ga (Rekha et al., 2013) which was interpreted to represent the age of anatectic amphibolite facies metamorphism in the region. One of the monazites dated in this study, I16-18, is from a sample collected from the periphery of the granitic domain within the Karwar which revealed an upper intercept age of 2962 ± 17 Ma which coincides with the previously reported monazite ages for the Karwar and Chauri blastoporphyritic granitoids (Rekha et al., 2013). The U–Pb ages from the zircons and monazites from the biotite-rich granitic gneiss, I16-18, reveal that the crystallization of the accessory phases was contemporaneous from the short cooling period as evident from the apatite U–Pb age at ca. 2781 ± 71 Ma which is closer to the reported zircon and monazite age for this sample.

Previous works have explored crystallization and cooling ages near the Karwar to correlate the Kumta shear zone with Betsimisaraka shear zone in Madagascar (Ishwar Kumar et al., 2016; Rekha et al., 2014) and to trace the archean to proterozoic evolution of the Dharwar Craton (Li et al., 2020). In this study, we have chosen the apatite grains to represent the cooling ages for temperatures between 375–550 $^{0}$C from the Karwar block as attempted in previous studies (Cochrane et al., 2014). Ishwar Kumar et al. (2013) have proposed the phengite and biotite K–Ar cooling ages at ca. 1326 Ma and 1385 Ma to represent a cooling age from the P-T conditions of a quartz phengite schist from the Kumta shear zone reaching up to to 18 kbar pressure at 550 ºC and K–Ar cooling age for the surrounding TTGs at ca 1746 and 1796 Ma. Li et al. (2020) have used the Rb–Sr dating for biotite and plagioclase within the Karwar region to construct isochrons at ca. 3050 ± 130 Ma for the amphibolite, ca. 2973 ± 38 Ma for hornblende-gneiss and ca. 2706 ± 28 Ma for a trondhjemite. The apatite cooling ages reported in this study for the Karwar region represent the magmatic protoliths and are closer to their zircon crystallization ages inferring faster cooling rates or near-surface protolith emplacement; and agree with

the Rb–Sr ages reported from the Karwar region (Li et al., 2020). The Karwar block is presumably a north-west extension of the Dharwar Craton with cooling ages closer to the crystallization age in the Mesoarchean. The younger cooling ages reported by Ishwar et al. (2013) and the textural monazite U-Pb ages younger than ca. 2.9 Ga previously reported by Rekha et al., (2013, 2014) relate to the deformation of the sedimentary units overlying the Karwar region such as the Goa schist belt which was compared to the Chitradurga group of greenstone belts overlying the Dharwar Craton. The syenite sample (I16-32) dated to the west of the proposed Kumta shear zone yielded a low amount of apatite fraction which were highly reverse discordant data which can be explained by metasomatic activity related to the alteration of monazites into fluorapatite near the schistose localities near the N-W edge of the Dharwar Craton (Rekha et al., 2013b).

The granodioritic gneiss sampled near the Udupi town on the west coast of the Dharwar Craton revealed zircon U–Pb age constrained to mean $^{207}Pb/^{206}Pb$ age at ca. 3266 ± 5 Ma with younger zircons forming a discordia line with upper intercept age at 3206 ± 10 Ma. The apatite U–Pb lower intercept age in the Tera-Wasserburg plot at 3169 ± 44 Ma suggest the protolith had crystallized at ca. 3266 Ma and experienced probable Pb-loss at ca. 3.2 Ga with faster cooling rates (less than 50 Ma in this case). This correlates with the crustal accretion episode in the Western Dharwar Craton between ca. 3.35 — 3.2 Ga (Jayananda et al., 2015, 2018, 2020) which was also reported from the zircon U–Pb ages from the TTG gneisses from WDC from Chapter 2 in this thesis.

The granitoid gneisses collected at the western margin of the WDC in the vicinity of the Mercara Shear Zone reveal zircon $^{207}Pb/^{206}Pb$ ages between ca. 3476 — 3112 Ma for the sample closer to the Mercara Shear Zone (CO17-55) and between ca. 3412 — 2897 Ma for the sample (CO17-58) that was further away from the MSZ towards the WDC which could be explained as metapelites recrystallizing while being incorporated into the transitional zone across the MSZ. The ages for CO17-55 agree with previously published ages along the MSZ (Amaldev et al., 2016) explained as magmatic suite constrained between ca. 3.2 — 3.1 Ga, with inherited zircons until ca. 3.5 Ga with a convergent margin between the Coorg Block and the Dharwar Craton around ca. 3.0 Ga from a high-grade metamorphic event using metamorphic overgrowths on zircon rims. The ages reported in this region also correlate with episodes of TTG accretion in the WDC around ca. 3.35—3.28 Ga and ca. 3.23 — 3.2 Ga (Jayananda et al., 2015; data reported in Chapter 2 to the west of WDC) leading to the ambiguity if the Coorg Block represents an older extension of the WDC similar to the Karwar Block. However, the apatite U–Pb ages for the samples CO17-55 and CO17-58, at ca. 2414 ± 74 Ma and 2382 ± 62 Ma respectively, suggest the reactivation of the Mesoarchean suture and supports the previously proposed correlation of the MSZ with the ca. 2.4 Ga Betsimisaraka Suture Zone (Ishwar-Kumar et al., 2013; Rekha et al., 2014). The monazites previously reported from the MSZ (Rekha et al., 2014) with textural dating reveal ca. 2.9 Ga

cores and ca. 2.5 Ga rims which further supports the reactivation of the suture around ca. 2.5 Ga, slightly older than the apatite ages reported in this study. A likely scenario for this reactivation could be caused by the formation of a Neoarchean island arc at the boundary of the Coorg Block and Nilgiri Block (Santosh et al., 2013) which also coincides with widespread ca. 2.5 Ga metamorphic event experienced across the southern part of Dharwar Craton (Peucat et al., 2013).

The samples collected from a granodioritic gneiss (I16-46) and a TTG melanosome (I16-54), from the interior boundary of the Coorg Block, reveal $^{207}Pb/^{206}Pb$ ages between ca. 3299 — 3087 Ma and ca. 3357 — 3082 Ma respectively, which correlate with the crustal growth episodes in the Coorg Block discussed in Amaldev et al. (2016). The apatite U–Pb ages from the granodioritic gneiss are at 755 ± 23 Ma and the TTG melanosome contained two populations of apatite constrained with distinct discordia lines with intercepts at 838 ± 34 Ma and 646 ± 43 Ma. The apatites from these samples indicate a thermal event which can be correlated to the Syenite magmatism around ca. 0.8 Ga (Santosh et al., 2014) towards the north of the Coorg Block and widespread alkali magmatism towards the south of Dharwar Craton and further Neoproterozoic thermal event arising from the crustal accretion and magmatic events within and beyond the network of shear zones and suture zones that separate the Dharwar Craton from the Southern Granulite Terrane.

The Neoproterozoic volcanics analyzed in this study have been collected around the Coorg Block from the Angadimogar alkaline pluton (Santosh et al., 2014) in the vicinity of Kasargod town (I16-52) and granite near the Mercara town (CO17-26) and to the south of the Coorg Block adjacent to the Peralimala alkaline pluton (Santosh et al., 2014) (I16-62). The Neoproterozoic volcanics display a spread in zircon U–Pb ages along the Concordia diagram from approximately ca. 850 — 660 Ma. The zircon U–Pb ages have been interpreted to have crystallized using mean $^{207}Pb/^{206}Pb$ ages to minimise the spread in the data ellipses. The zircon U–Pb crystallization ages are 842 ± 20 Ma for I16-52 with few inherited zircons between ca. 3.2 — 3.1 Ga, 812 ± 29 Ma for CO17-26 with an inherited zircon at $^{207}Pb/^{206}Pb$ age of 3235 Ma and 856 ± 20 Ma for I16-62. The apatite U–Pb age for the syenite to the north of Coorg Block, closer to the zircon U–Pb age, is 837 ± 12 Ma and could be responsible for the apatite U–Pb age from the TTG melanosome (I16-54) within the interior of the Coorg Block. The apatite U-Pb ages for the granite near Mercara town (CO17-26) has been constrained at 711 ± 37 Ma and the sample I16-62 has been constrained at 622 ± 52 Ma. These apatite U–Pb ages correlate with the zircon U–Pb ages reported from the Neoproterozoic arc magmatism in the southern Madurai block (Santosh et al., 2017) inferring the spatial extent of the thermal events caused on the lower crust of the Dharwar Craton and the Coorg Block.

## *5.2 Accessory Mineral REE composition:*

The rare earth element (REE) and trace element composition from the accessory phases have been previously used to infer the depth of crystallization and melt characteristic of the source protolith from zircon REE compositions (Grimes et al., 2015, McKenzie et al., 2018). Apatite REE and trace element compositions have been used to categorise detrital apatites (Belousava et al., 2002), fingerprint metasomatic processes that could have affected the protoliths during crystallization/metamorphism (Harlov 2015) and categorize the apatite crystallization between magmatic early cooling and late-stage hydrothermal activity (S. Krneta et al., 2016). In this study, we have used the REE compositions from the accessory phases to supplement the U–Pb age data to infer the depth of crystallization and role of fluids during the closure temperature of these accessory phases within the tectonic settings. The REE compositions have been plotted as spider plots for the accessory phases analysed from each sample in figures 8 and 9 to infer the relative abundances of REE within the accessory phases and understand plausible REE differentiation/mobilisation during initial crystallization or later metasomatic/hydrothermal activity.

The ratios of $[Gd/Yb]_N$ have been used as a proxy for the ratio of middle rare earth element (MREE) against the heavy rare earth elements (HREE) from the zircons to infer the depth of crystallization from the source magma (McKenzie et al., 2018; Chapter 2,3,4 in this thesis) with higher MREE/HREE ratios inferring deeper crystallization within the stability field of minerals, that have an affinity to sequester middle- to heavy rare earth elements, such as garnet and amphibole. The zircons display variance in light rare earth elements (LREE) compositions likely due to the variability in discordance and growth of other accessory phases such as apatite and monazite. In apatites, the degree of LREE depletion, here represented as decreasing LREE/MREE ratios, can signify the extent of alteration caused due to hydrothermal/metasomatic activity (S. Krneta et al., 2017) and competition with LREE enriched minerals including allanite, epidote and feldspar (K-feldspar) (Wen et al., 2008). The apatites displaying typical granitoid REE patterns (M. Chu et al., 2009) signify the cooling/reactivation age is primarily from thermal re-activation beyond the closure temperature of the apatite, i.e between 375 — 550 °C (Cochrane et al., 2014).

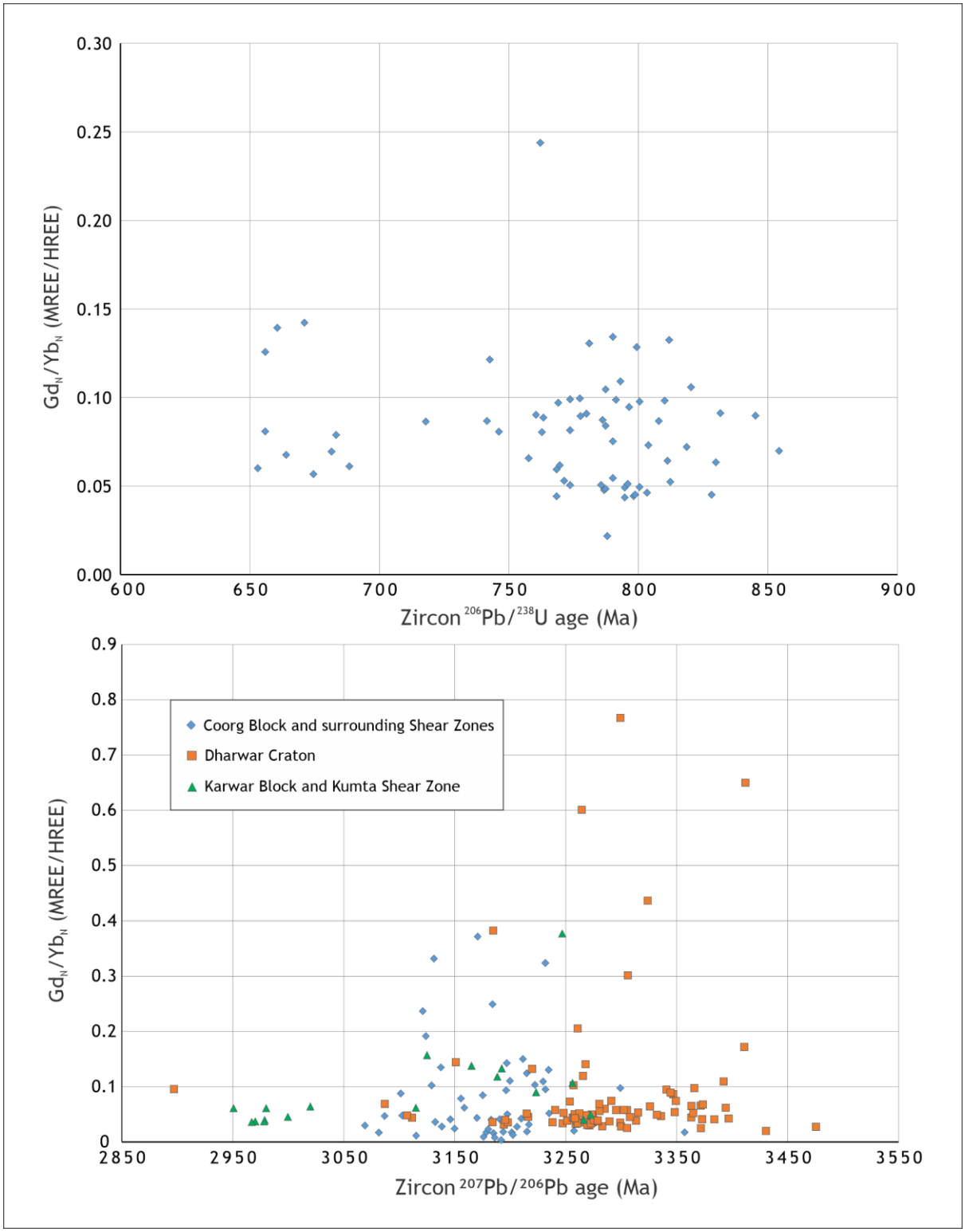


*Figure 9: The zircon REE ratios (normalized) here plotted as $[Gd/Yb]_N$ values to represent the MREE/HREE ratios categorized based on location (see legend). The ratios from Mesoarchean aged zircons have been plotted against $^{207}Pb/^{206}Pb$ ages and for the ratios from the Neoproterozoic zircons have been plotted against $^{206}Pb/^{238}U$ ages.*

The samples from the Karwar region show an increasing trend in the $[Gd/Yb]_N$ ratios from the zircons analysed from ca. 3.3 — 3.1 Ga as shown in figure 9, signifying the increasing depth of

crystallization/melting of the source magma until ca. 3.1 Ga which was also reported in Chapter 2 from the granitoids within the Dharwar Craton. The apatite cooling ages closer to the zircon U–Pb ages display typical granitoid apatite REE patterns with $[La/Sm]_N$ ratios closer to 1, shown in figure 10, inferring slight alteration in samples I16-07 and I16-17. The $[La/Sm]_N$ ratios in the apatites from sample I16-18 are lower due to the growth of LREE rich phases like monazite during metamorphism (Harlov 2015). The zircons display $[Gd/Yb]_N$ ratios < 0.1 around ca. 3.0 Ga inferring zircon crystallization at lower pressure resulting from possible near-surface protolith emplacement. The Syenite near the Kumta shear zone, I16-32, displays zircon REE patterns with elevated LREE concentrations which could be resulting from discordance or metasomatic activity.

The samples I16-34 and CO17-55 display typical granitoid zircon and apatite REE patterns (M. Chu et al., 2009; Zirner et al., 2015). The sample CO17-58 displays LREE enrichment in the zircon REE patterns with little to no Cerium anomaly, possibly due to the competition with the growth of monazite, and higher $[Gd/Yb]_N$ ratios relative to I16-34 and CO17-55 interpreted here as increased depth of crystallization likely caused due to the crustal accretion between the Coorg Block and the Dharwar Craton (Amaldev et al., 2016, Chapter 3 in this thesis) along with contemporaneous crustal thickening within the Dharwar around ca. 3.2 — 3.1 Ga (discussed in Chapter 2) leading to the crystallization of monazites. The apatites from I16-34 and CO17-55 display typical granitoid REE composition while the apatites from sample CO17-58 display lower $[La/Sm]_N$ values resulting from hydrothermal activity related to later thermal reactivation since the apatite U–Pb age is significantly younger than the monazite U–Pb age to infer that the LREE depletion in these apatites is the growth of monazite.

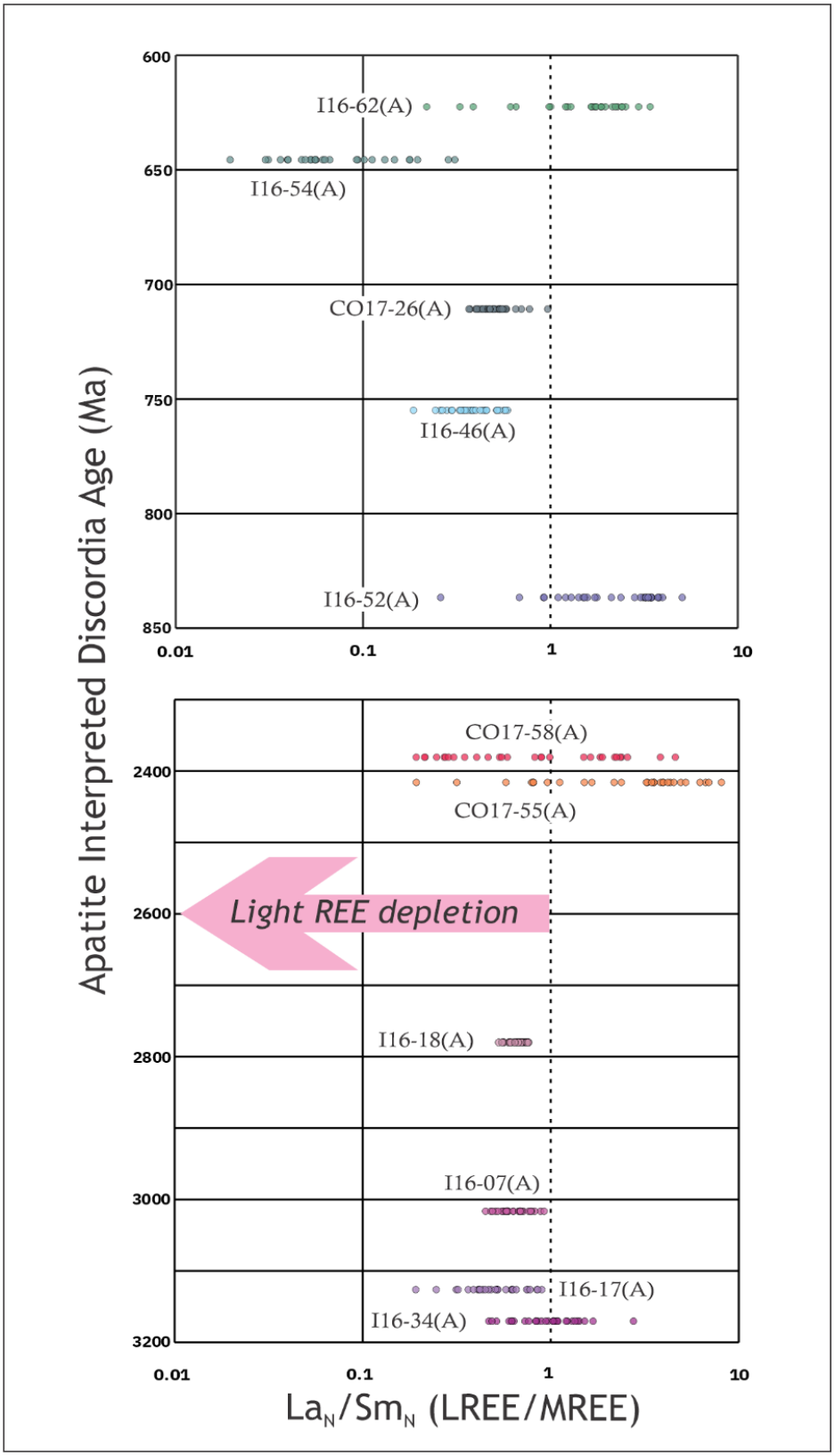


*Figure 10: The apatite REE compositions normalized against chondritic values (Boynthon et al.,1984) have been plotted using $[La/Sm]_N$ ratios to represent LREE/MREE ratios to infer thermal/hydrothermal reactivation/cooling of the apatites. The lower intercept ages from the apatite U–Pb plots have been used on the y-axis.*

The samples I16-46 and I16-54 near the boundary of the Coorg Block reveal variability in the LREE compositions of the zircon REE patterns, however, display $[Gd/Yb]_N$ ratios similar to other granitoids analysed in this study (and also Chapter 2). The apatites in both samples display LREE depletion shown by the low $[La/Sm]_N$ values, shown in figure 11, likely caused by a later hydrothermal alteration (Zirner et al., 2015; S.Krneta et al., 2017) in the Neoproterozoic.

The Neoproterozoic granitic and alkali plutons, CO17-26, I16-52 and I16-62 display typical granitoid pluton $[Gd/Yb]_N$ values, < 0.2 in this study, similar to the Closepet Granite and other magmatic plutons detailed in chapter 2. The apatites from the granite (CO17-26) display LREE depletion likely caused by the same long-lived hydrothermal alteration experienced by the sample I16-46. The apatites in the alkali plutons I16-52 and I16-62 show typical granitoid apatite REE patterns inferring that the emplacement of the Cryogenian Syenite (~840 Ma) to the north of Coorg Block, I16-52, was followed by rapid exhumation and the cooling age of the southern alkali pluton, I16-62 was caused likely due to thermal reactivation during late Cryogenian.

## *5.3 Tectonic Implications:*

The coupled zircon and apatite U–Pb ages from the same protolith have been used in this study to fingerprint the duration between the initial magmatic crystallization and later apatite cooling or thermal/hydrothermal reactivation ages, and the REE compositions from these accessory phases supplement with the depth of source melting and role of fluids in later thermal events. The zircon ages reported in this study represent the crystallization ages of the basement granitoids within the Karwar Block and the Dharwar Craton along with basement gneisses across the Coorg Block and surrounding Neoproterozoic intrusive granitic and alkali plutons. The monazite ages detailed in this study from the Karwar Block and Coorg Block represent monazites crystallizing at ca. 3.0 Ga which correlates with metamorphic monazites crystallizing during the accretion between Coorg Block and WDC at ca. 3045 Ma. However, Rekha et al. (2014) explain that the Karwar Block and Coorg Block have distinct lithologies where the Karwar Block is dominated by blastoporphyritic granitoids which are typical for the WDC; the Coorg Block is dominated by granulite-facies metamorphic lithologies proposing that the Karwar Block is a northwestern extension of the WDC which was also suggested by Armistead et al. (2017). The basement rocks in the Karwar region have experienced the last thermal reactivation event around ca. 2.9 Ga from the monazites that have presumably grown during a metamorphic event. The cooling ages detailed in Ishwar-Kumar et al.(2016) and Rekha et al.(2013), younger than ca. 2.9 Ga are defined by structural deformation of overlying detrital units that deposited over the basement granitoids and the temperatures during these processes were unable to thermally alter the apatite ages within the basement granitoids.

The samples detailed in the vicinity of the Mercara Shear Zone towards the Dharwar Craton, CO17-55 and CO17-58 show apatite cooling ages around ca. 2.4 Ga, younger than the youngest zircon $^{207}Pb/^{206}Pb$ ages. The higher $[Gd/Yb]_N$ values from the zircons from CO17-58 infer deeper crystallization which correlates with the timing of collision style accretion between the Coorg Block and the Dharwar Craton also evident from the Monazite age at ca. 3045 Ma. The deeper buried lithology is interpreted to have been reactivated during the late Neoarchean collision between the Coorg Block and Nilgiri Block (Santosh et al., 2013a) and widespread metamorphic event at ca. 2.5 Ga reported to the south of the Dharwar Craton (Peucat et al., 2013).

The apatites from gneisses from the boundary of the Coorg Block (I16-54 and I16-46) seem to have been affected by thermal aureole caused by adjacent Neoproterozoic granitic and alkali plutons and reveal apatite U–Pb ages younger than the plutons' crystallization age since the closure temperature for apatite U–Pb system is lower than that of zircon U–Pb (Cochrane et al., 2014). The initial crystallization age of the Neoproterozoic plutons have been constrained here using average zircon $^{207}Pb/^{206}Pb$ ages in the Cryogenian, around ca. 840 Ma, which coincides with the widespread Cryogenian magmatism reported to the south of the Dharwar Craton (Santosh et al., 2013b, 2014; Plavsa et al., 2012; Collins et al., 2014) and the northern margin of the Southern Granulite Terrane explained to be associated with transcrustal rifting along paleo-suture zones (Santosh et al., 2014). However, the spread in $^{206}Pb/^{238}U$ zircon ages is identical in all three plutons surrounding the Coorg Block, from ca. 850 – 650 Ma but they reveal different apatite U–Pb ages at ca. 837 Ma, 711 Ma, 622 Ma across the Mercara Shear Zone — Moyar Shear Zone from NorthWest — SouthEast of the Coorg Block. This is interpreted as the temporally receding thermal aureole of the widespread Cryogenian magmatism in the southeast direction until the Bhavani Shear Zone south of Nilgiri Block with metamorphic ages around ca. 550 Ma (Samuel et al., 2014 and references therein). The subduction of the Southern Granulite Terrain plate (the crustal domains south of Palghat Cauvery Shear Zone) under the Nilgiri Block could have been the cause for the Neoproterozoic volcanics across the suture zones surrounding the Coorg Block which in turn affected the cooling ages of the lithologies at the boundary of the Coorg Block. Hence, we conclude that the combination of zircon, apatite and monazite U–Pb ages can provide vital information about cooling history and the spatial extent of metamorphic and magmatic events across continental boundaries and suture zones surrounding them.

## 5 Conclusion:

1) In the northwestern margin of the Dharwar, within the Karwar Block, the basement granitoids experienced their last thermal event around ca. 3.0 Ga witnessed by metamorphic events which could have crystallized monazite within the melt. The basement rocks appear unaffected by

younger deformation events that have been previously reported to be associated with the overlying detrital units and proposed Kumta Shear Zone suggesting the Karwar Block could be a northwestern extension of the Dharwar Craton.

2) The lithologies to the east of the Coorg Block — Dharwar Craton crustal collision zone (Mercara Shear Zone) infer deep crust/high-pressure crystallization from higher MREE/HREE ratios of the zircons and is supported by the metamorphic crystallization of monazite aged at ca. 3.05 Ga and the cooling ages from apatite U–Pb dating reveal reactivation/exhumation during the Neoarchean associated with the crustal accretion towards the south of Dharwar Craton and Coorg Block around ca. 2.5 Ga associated with metamorphism.
3) The Mesoarchean gneisses towards the northern boundary of the Coorg Block have experienced resetting of the apatite U–Pb ages affected by the widespread Cryogenian volcanism within the suture zones surrounding the Coorg Block. The apatites appear to be affected by hydrothermal alteration from lower LREE/MREE ratios; the fluids have been interpreted to have derived from the Neoproterozoic subduction of the crust beneath the Nilgiri Block.
4) The Cryogenian granite and alkali plutons reveal a gradient in the apatite U–Pb cooling ages which signify the difference in the rate of cooling as moving closer towards the Moyar–Bhavani Shear Zone and the melange of suture and shear zones occurring to the south of the Coorg Block and the Dharwar Craton. A similar gradient effect could be responsible for the variance in lower intercept ages across the discordant zircons detailed in previous meta-igneous zircon studies across the Dharwar Craton (see Chapter 2).

# 6 Acknowledgement:

We acknowledge the support of Dr Sarah Gilbert for support at Adelaide Microscopy, the University of Adelaide, who has been instrumental in the acquisition of the zircon, apatite and monazite U–Pb and REE data using LA—ICPMS. We acknowledge the assistance from the University of Adelaide PhD students Angus L. Nixon and Alexander D. Simpson for assistance during apatite U–Pb data reduction and Mitchell J. Bockmann for discussion regarding the Coorg Block. Venkata Pavan Katuru is supported during his PhD by a scholarship provided by the University of Adelaide.

# 7 Appendix

The zircon U–Pb data has been provided in Appendix 5.1. The zircon REE concentrations in ppm are provided in Appendix 5.2. The Apatite U–Pb data has been provided in Appendix 5.3. The

Apatite REE compositions have been provided in Appendix 5.4. The Monazite U–Pb data has been provided in Appendix 5.5. The Monazite REE concentrations in ppm are provided in Appendix 5.6.

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# 6

# Key outcomes and Conclusions of the Thesis

Through this multidisciplinary PhD research, we achieved significant progress towards understanding the crustal and isotopic evolution of the Dharwar Craton in India and surrounding geological terranes along with it. The primary aims of this research were:

1. To create a robust crustal evolution model of the Dharwar Craton based on meta-igneous zircon record of the basement granitoids that include previously published meta-igneous Nd-Hf data to create a magmatic Hf map of the Dharwar Craton.
2. To append the existing detrital zircon record of the Dharwar Craton and understand the crustal evolution of the source region. To attempt to improve the spatial and stratigraphic correlation between the various greenstone belts.
3. To study the detrital record of the Paleoproterozoic Kaladgi-Badami basin and test the "Greater Dharwar Craton" theory proposing the Kaladgi-Badami basin as the potential missing link between the Itremo group across Madagascar and the Cuddapah Basin in India.
4. Understand the timing and spatial extent of the last thermal event experienced across the Dharwar Craton and neighbouring crustal domains and correlate it with contemporaneous tectonic events to reveal the thermal record of the Dharwar Craton.

**1) Crustal evolution model of the Dharwar Craton from meta-igneous lithologies:**

In Chapter 2, we have presented a large dataset comprising of new zircon U–Pb and Lu–Hf data from which we have concluded that the Dharwar Craton has evolved through various phases including juvenile accretion of TTG suites around ca. 3.4—3.2 Ga with crustal components extracted up to ca. 3.8 Ga in the Western Dharwar Craton. Continuous crustal reworking continued contemporaneously in the WDC and CDC until ca. 3.0 Ga. The CDC experienced further recycling until ca. 2.55 Ga attributed to the bimodal volcanism accreting the transitional type TTGs around ca. 2.7—2.6 Ga followed by juvenile magmatism in the EDC at ca. 2.58 — 2.52 Ga. We showed that combining the εHf(t) data from this study when combined with published εHf(t) data from zircon bearing lithologies and εNd(t) data from greenstone belts and associated granitoids form a complete picture filling the gaps in the magmatic zircon record in the εHf(t) data alone. The combined εHf(t) and εNd(t) data in this study reveal the influence of juvenile mafic magmas around ca. 2.7—2.6 Ga initiating reworking of the pre-existing crust to produce transitional type TTGs. The timing of crustal thickening was inferred using zircon REE compositions expressed as LREE/HREE and MREE/HREE ratios plotted against crystallization age. We have also identified that the Ramagiri Greenstone Belt (RGB) acts as a boundary between the reworked transitional type

TTGs across CDC and the Neoarchean juvenile lithologies associated with EDC. Hence we propose the Ramagiri—Penakacherla Greenstone Belt to act as an isotopic boundary between the CDC and EDC in the northern part of the Dharwar Craton similar to the Kadiri—Kolar greenstone belt in the south. We have also tested the Nunavutia hypothesis and compared the εHf(t)+ εNd(t) data of the Dharwar Craton with εHf(t) data taken from a global dataset. We report that the younger CDC and EDC correlate with the Archean cratons in North America (Rae + Sask), Australia (Yilgarn + Gawler), Antarctica, West African cratons and partially correlate with the Siberian craton. The older Mesoarchean components in WDC and CDC correlate with North America, Siberia and North China cratons and we have deemed the Nunavutia hypothesis inconclusive due to lack of enough data points from the Dharwar Craton around the period of proposed existence of Nunavutia, between ca. 2.54 —2.45 Ga used for the correlation.

**2) Detrital record of the Mesoarchean and lower Neoarchean meta-quartzites**

In Chapter 3, we show that the quartzites analysed in this study reveal maximum depositional ages between Meso- to Neoarchean ages. The ages reported in the detrital record of these sequences coincide with major crustal accretion events reported across the Dharwar Craton (also discussed in Chapter 2). We have compared the εHf(t) data from the detrital sequences in Western Dharwar Craton with published detrital εHf(t) data categorised into greenstone belt within the western, central or eastern block of Dharwar Craton along with published magmatic εHf(t) data and the results from Chapter 2 to correlate the source regions to the detrital units. We show that the older Sargur Group had detrital zircons with similar εHf(t) values from the adjacent Coorg Block which is possible if the Sargur Group had formed after the Mesoarchean amalgamation of the Coorg Block against the western margin of the Dharwar Craton. Another likely scenario for the presence of Eoarchean precursors in εHf(t) data of the Sargur Group could be related to the presence of Eoarchean precursors within the published εHf(t) data from the EDC greenstone belts and identical sources could have provided detrital material to the lower Sargur Group. From the MREE/HREE ratios from the detrital zircons in Holenarsipur we infer that the increase in MREE/HREE ratios of the detrital zircons with time is associated with a high-pressure signature interpreted here as localised subduction like tectonic processes dominating near the Holenarsipur Greenstone Belt in the Sargur Group. The K.R.Pete Schist Belt has detrital εHf(t) data identical to the published εHf(t) data from detrital sequences and meta-igneous lithologies across WDC.

**3) Proterozoic intracratonic sedimentary basin**

In Chapter 4, we present new detrital zircon age data from the Paleoproterozoic Kaladgi-Badami (KB) basin. We have constrained the deposition of the Kaladgi-Badami basin occurred between ca. 2.3—1.86 Ga likely from weakening of the crust, at the northern margin of the Dharwar Craton, from dyke swarm activity. We compared the sedimentary record across the Kaladgi-Badami against the sedimentary record of Paleoproterozoic basins across southern India and Madagascar using multi-dimensional scaling (MDS) to test the "Greater Dharwar Craton" hypothesis which proposed the KB basin to be the missing link between the Cuddapah basin. Combining the results from the MDS and published paleo-flow directions we have concluded that the sedimentary record of the KB basin is most similar to the Papaghni group within the Cuddapah Basin and share similar sources and not related to the Itremo group contradicting the Greater Dharwar Craton hypothesis. This study provides with the post-tectonic processes that were prevalent at the continental margins in the Paleoproterozoic after the assembly of the Dharwar Craton.

**4) Thermal record of the Dharwar Craton**

In Chapter 5 we present new U–Pb age data from zircons, apatite and monazites from lithologies along the western margin of the Dharwar Craton. From the apatite U–Pb ages near the Karwar Block, we support the proposal that the Karwar Block is a north western extension of the Dharwar Craton. The Mesoarchean lithologies to the east of Mercara Shear Zone experienced metamorphism around ca. 3.05 Ga from monazite ages, and the exhumation history from apatite U–Pb ages reveal reactivation from widespread metamorphism due to Neoarchean amalgamation to the south of Dharwar Craton and Coorg Block. The Mesoarchean gneisses near the Mercara Shear Zone at the northern boundary of Coorg Block were affected by the intrusive Neoproterozoic alkali and granitic plutons experiencing hydrothermal alteration evident from LREE depletion in the apatite REE patterns. The Neoproterozoic volcanics along the suture zones reveal a gradient in their apatite cooling ages signifying the influence of Neoproterozoic subduction to the northern margin of the Bhavani–Palghat–Cauvery Shear Zone.

### 5) Implications for the crustal and isotopic evolution of the Dharwar Craton

Overall, the research produced in this PhD strongly support:

1. The Western Dharwar Craton and Central Dharwar Craton have experienced continuous contemporaneous crustal growth and recycling until ca. 3.0 Ga and the Central Dharwar Craton continued to further evolve till ca. 2.55 Ga from interaction with Neoarchean juvenile mafic magmatism till accretion of juvenile magmas from the Eastern Dharwar Craton. The Ramagiri—Penakacherla greenstone belt acts as the boundary between the Central Dharwar Craton and the Eastern Dharwar Craton.
2. The Coorg Block has accreted to the western margin of the Dharwar Craton during the Mesoarchean causing metamorphic assemblages and high-pressure signatures in the REE compositions of the zircons from this collision zone, and identified from the detrital record of the Sargur Group Greenstone belts.
3. The northern margin of the Dharwar Craton was weakened by dyke swarm activity leading to the formation of the Paleoproterozoic intra-cratonic Kaladgi-Badami basin, constrained between ca. 2.3—1.86 Ga, and share similar sedimentary environment to the Papaghni Group in the Cuddapah Basin in India. From the cooling history/thermal record of the western margin of the Dharwar Craton, the Karwar Block is likely to be an extension of the Dharwar Craton to the North-West. The Neoarchean micro-block amalgamation along with widespread metamorphism at ca. 2.5 Ga towards the south of the Dharwar Craton and Coorg Block have reactivated the southern and south-western margins of the Dharwar Craton. The gneisses near the Mercara Shear Zone to the northern margin of Coorg Block reveal hydrothermally altered apatite ages closer to the Neoproterozoic volcanics that intrude the margins of the Coorg Block. The apatite U–Pb cooling ages from the Neoproterozoic alkali and granitic plutons reveal longer cooling periods towards the South-East along the Mercara Shear Zone possibly due to the subduction processes near the Palghat–Cauvery Shear Zone.

# 7

# Appendices

## Appendix 2.1 Granitoids of the Dharwar Craton: U–Pb zircon data

| Comment | $^{207}Pb/^{235}U$ | 2σ | $^{206}Pb/^{238}U$ | 2σ | Error Correlation (ρ) | $^{207}Pb/^{235}U$ Age (Ma) | 2σ | $^{206}Pb/^{238}U$ Age (Ma) | 2σ | $^{207}Pb/^{206}Pb$ Age (Ma) | Age 2σ | U/Th ratio | Th/U | Concordance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-101-351.d | 10.51 | 0.29 | 0.453 | 0.011 | 0.59493 | 2481 | 25 | 2406 | 49 | 2543 | 39 | 4.22 | 0.237 | 94.61 |
| PD18-101-352.d | 10.49 | 0.27 | 0.4629 | 0.011 | 0.56518 | 2477 | 24 | 2457 | 47 | 2499 | 36 | 3.76 | 0.266 | 98.32 |
| PD18-101-353.d | 5.95 | 0.49 | 0.278 | 0.01 | 0.68156 | 1967 | 33 | 1580 | 50 | 2400 | 45 | 1.71 | 0.585 | 65.83 |
| PD18-101-354.d | 12.24 | 0.37 | 0.5097 | 0.012 | 0.59553 | 2624 | 29 | 2654 | 53 | 2578 | 36 | 1.15 | 0.870 | 102.95 |
| PD18-101-355.d | 8.54 | 0.25 | 0.379 | 0.0091 | 0.64754 | 2289 | 27 | 2071 | 43 | 2484 | 39 | 2.01 | 0.498 | 83.37 |
| PD18-101-356.d | 5.957 | 0.16 | 0.2865 | 0.0068 | 0.71816 | 1968 | 22 | 1624 | 34 | 2343 | 32 | 2.759 | 0.362 | 69.31 |
| PD18-101-357.d | 9.81 | 0.41 | 0.427 | 0.016 | 0.64609 | 2413 | 44 | 2290 | 74 | 2516 | 41 | 2.854 | 0.350 | 91.02 |
| PD18-101-358.d | 6.74 | 0.2 | 0.319 | 0.0095 | 0.70791 | 2076 | 27 | 1784 | 46 | 2371 | 34 | 2.019 | 0.495 | 75.24 |
| PD18-101-359.d | 11.12 | 0.53 | 0.484 | 0.02 | 0.49672 | 2530 | 57 | 2542 | 93 | 2540 | 37 | 3.97 | 0.252 | 100.08 |
| PD18-101-360.d | 4.76 | 0.21 | 0.2438 | 0.0088 | 0.91859 | 1776 | 35 | 1405 | 45 | 2220 | 35 | 0.452 | 2.212 | 63.29 |
| PD18-101-362.d | 6.7 | 0.23 | 0.3277 | 0.0095 | 0.62443 | 2068 | 33 | 1826 | 47 | 2348 | 38 | 2.096 | 0.477 | 77.77 |
| PD18-101-363.d | 3.365 | 0.11 | 0.1976 | 0.0057 | 0.85662 | 1496 | 26 | 1161 | 31 | 2007 | 37 | 0.653 | 1.531 | 57.85 |
| PD18-101-364.d | 5.61 | 0.13 | 0.2729 | 0.0069 | 0.65402 | 1923 | 21 | 1554 | 35 | 2335 | 36 | 2.489 | 0.402 | 66.55 |
| PD18-101-365.d | 5.95 | 0.23 | 0.2938 | 0.011 | 0.91956 | 1966 | 38 | 1659 | 58 | 2282 | 33 | 1.459 | 0.685 | 72.70 |
| PD18-101-373.d | 10.7 | 0.26 | 0.4559 | 0.011 | 0.73715 | 2496 | 22 | 2420 | 48 | 2553 | 32 | 1.846 | 0.542 | 94.79 |
| PD18-101-374.d | 11.33 | 0.32 | 0.4943 | 0.011 | 0.54712 | 2552 | 25 | 2588 | 50 | 2514 | 40 | 2.171 | 0.461 | 102.94 |
| PD18-101-375.d | 11.17 | 0.28 | 0.481 | 0.012 | 0.64554 | 2536 | 24 | 2529 | 53 | 2538 | 34 | 3.865 | 0.259 | 99.65 |
| PD18-101-377.d | 9.49 | 0.28 | 0.4139 | 0.011 | 0.60144 | 2386 | 29 | 2232 | 53 | 2507 | 35 | 3.2 | 0.313 | 89.03 |
| PD18-101-378.d | 9.35 | 0.42 | 0.413 | 0.016 | 0.78556 | 2370 | 50 | 2228 | 76 | 2480 | 37 | 2.32 | 0.431 | 89.84 |
| PD18-101-379.d | 10.34 | 0.36 | 0.458 | 0.015 | 0.64091 | 2463 | 36 | 2428 | 69 | 2500 | 38 | 1.04 | 0.962 | 97.12 |
| PD18-101-380.d | 11.41 | 0.48 | 0.491 | 0.019 | 0.86835 | 2553 | 44 | 2593 | 88 | 2546 | 38 | 3.58 | 0.279 | 101.85 |
| PD18-101-381.d | 5.83 | 0.26 | 0.2838 | 0.0097 | 0.4965 | 1949 | 34 | 1609 | 48 | 2306 | 39 | 2.23 | 0.448 | 69.77 |
| PD18-101-382.d | 12.65 | 0.3 | 0.5343 | 0.012 | 0.55799 | 2654 | 23 | 2758 | 48 | 2574 | 33 | 0.923 | 1.083 | 107.15 |
| PD18-101-383.d | 6.16 | 0.18 | 0.29 | 0.0077 | 0.70801 | 1994 | 29 | 1638 | 39 | 2409 | 39 | 2.14 | 0.467 | 68.00 |
| PD18-101-384.d | 7.67 | 0.18 | 0.3541 | 0.0074 | 0.47724 | 2192 | 22 | 1954 | 37 | 2408 | 34 | 2.823 | 0.354 | 81.15 |
| PD18-101-385.d | 10.98 | 0.27 | 0.4708 | 0.011 | 0.65809 | 2519 | 23 | 2486 | 46 | 2552 | 33 | 3.56 | 0.281 | 97.41 |
| PD18-101-386.d | 7.48 | 0.27 | 0.3501 | 0.011 | 0.67002 | 2169 | 31 | 1934 | 52 | 2385 | 35 | 1.74 | 0.575 | 81.09 |
| PD18-101-387.d | 9.9 | 0.37 | 0.43 | 0.015 | 0.78759 | 2424 | 42 | 2302 | 71 | 2503 | 33 | 2.93 | 0.341 | 91.97 |
| | | | | | | | | | | | | | | |
| PD18-104-395.d | 17.13 | 0.72 | 0.468 | 0.017 | 0.64962 | 2940 | 41 | 2472 | 77 | 3277 | 33 | 2.29 | 0.437 | 75.43 |
| PD18-104-397.d | 5.53 | 0.37 | 0.1525 | 0.01 | 0.92194 | 1900 | 81 | 914 | 59 | 3236 | 32 | 7.89 | 0.127 | 28.24 |
| PD18-104-398.d | 15.22 | 1.1 | 0.407 | 0.028 | 0.40219 | 2823 | 130 | 2198 | 150 | 3283 | 37 | 9.9 | 0.101 | 66.95 |
| PD18-104-399.d | 9.55 | 0.57 | 0.262 | 0.015 | 0.47466 | 2390 | 57 | 1500 | 77 | 3272 | 34 | 3.01 | 0.332 | 45.84 |
| PD18-104-400.d | 7.3 | 0.34 | 0.2187 | 0.01 | 0.76414 | 2144 | 45 | 1273 | 55 | 3128 | 39 | 2.23 | 0.448 | 40.70 |
| PD18-104-401.d | 14.13 | 1 | 0.38 | 0.026 | 0.65966 | 2755 | 81 | 2075 | 130 | 3276 | 34 | 1.363 | 0.734 | 63.34 |
| PD18-104-402.d | 8.91 | 0.77 | 0.252 | 0.02 | 0.7777 | 2325 | 68 | 1449 | 100 | 3231 | 37 | 4.29 | 0.233 | 44.85 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-104-403.d | 23.94 | 0.99 | 0.649 | 0.026 | 0.49156 | 3263 | 48 | 3222 | 110 | 3297 | 35 | 3.83 | 0.261 | 97.73 |
| PD18-104-404.d | 10.09 | 0.34 | 0.3089 | 0.011 | 0.82388 | 2445 | 34 | 1733 | 55 | 3101 | 33 | 2.895 | 0.345 | 55.89 |
| PD18-104-406.d | 16.81 | 0.71 | 0.491 | 0.02 | 0.87267 | 2923 | 53 | 2573 | 95 | 3157 | 33 | 3.62 | 0.276 | 81.50 |
| PD18-104-407.d | 12.7 | 0.85 | 0.354 | 0.025 | 0.44131 | 2653 | 110 | 1950 | 130 | 3229 | 36 | 4.88 | 0.205 | 60.39 |
| PD18-104-408.d | 10.8 | 0.44 | 0.296 | 0.012 | 0.67117 | 2502 | 46 | 1670 | 62 | 3255 | 32 | 7.35 | 0.136 | 51.31 |
| PD18-104-411.d | 8.91 | 0.6 | 0.2566 | 0.018 | 0.65397 | 2327 | 66 | 1472 | 96 | 3170 | 35 | 3.94 | 0.254 | 46.44 |
| PD18-104-419.d | 17 | 0.62 | 0.468 | 0.014 | 0.72512 | 2930 | 32 | 2472 | 62 | 3275 | 34 | 4.91 | 0.204 | 75.48 |
| PD18-104-420.d | 1.47 | 0.25 | 0.0446 | 0.0074 | 0.92229 | 913 | 66 | 281 | 44 | 3144 | 30 | 13.48 | 0.074 | 8.94 |
| PD18-104-421.d | 9.48 | 0.65 | 0.258 | 0.017 | 0.70711 | 2383 | 84 | 1479 | 92 | 3260 | 34 | 9.9 | 0.101 | 45.37 |
| PD18-104-423.d | 7.14 | 0.33 | 0.2212 | 0.0079 | 0.45752 | 2128 | 41 | 1288 | 41 | 3053 | 37 | 3.27 | 0.306 | 42.19 |
| PD18-104-424.d | 12.17 | 0.77 | 0.3328 | 0.021 | 0.54082 | 2616 | 85 | 1851 | 110 | 3252 | 32 | 3.06 | 0.327 | 56.92 |
| PD18-104-425.d | 25.68 | 1.5 | 0.673 | 0.037 | 0.83713 | 3331 | 74 | 3316 | 160 | 3342 | 33 | 0.718 | 1.393 | 99.22 |
| PD18-104-426.d | 19.86 | 1.1 | 0.539 | 0.029 | 0.78782 | 3083 | 78 | 2776 | 130 | 3276 | 30 | 3.33 | 0.300 | 84.74 |
| PD18-104-427.d | 22.23 | 1.3 | 0.599 | 0.034 | 0.83972 | 3188 | 75 | 3020 | 150 | 3306 | 31 | 3.69 | 0.271 | 91.35 |
| PD18-104-428.d | 22.51 | 0.72 | 0.608 | 0.019 | 0.70383 | 3202 | 33 | 3059 | 77 | 3303 | 32 | 0.76 | 1.316 | 92.61 |
| PD18-104-429.d | 18.15 | 0.97 | 0.496 | 0.025 | 0.65247 | 2992 | 69 | 2592 | 110 | 3290 | 40 | 3.93 | 0.254 | 78.78 |
| PD18-104-430.d | 11.66 | 0.43 | 0.3455 | 0.012 | 0.80464 | 2579 | 34 | 1912 | 56 | 3132 | 31 | 2.47 | 0.405 | 61.05 |
| PD18-104-431.d | 16.52 | 0.69 | 0.473 | 0.019 | 0.57698 | 2905 | 47 | 2494 | 86 | 3207 | 37 | 3.82 | 0.262 | 77.77 |
| PD18-104-432.d | 11.86 | 0.62 | 0.348 | 0.017 | 0.39096 | 2588 | 68 | 1920 | 87 | 3135 | 36 | 1.66 | 0.602 | 61.24 |
| PD18-104-434.d | 8.52 | 1 | 0.2512 | 0.026 | 0.75559 | 2282 | 98 | 1443 | 130 | 3154 | 39 | 4.86 | 0.206 | 45.75 |
| PD18-104-442.d | 13.64 | 1.1 | 0.371 | 0.03 | 0.75851 | 2722 | 97 | 2029 | 150 | 3313 | 41 | 8.27 | 0.121 | 61.24 |
| PD18-104-443.d | 8.63 | 0.5 | 0.228 | 0.013 | 0.85305 | 2288 | 63 | 1320 | 68 | 3307 | 37 | 5.1 | 0.196 | 39.92 |
| PD18-104-444.d | 7.21 | 0.5 | 0.1949 | 0.013 | 0.6079 | 2134 | 86 | 1147 | 73 | 3268 | 36 | 5.7 | 0.175 | 35.10 |
| PD18-104-445.d | 5.48 | 0.3 | 0.1636 | 0.0087 | 0.82372 | 1903 | 45 | 976 | 48 | 3129 | 33 | 5.67 | 0.176 | 31.19 |
| PD18-104-447.d | 23.04 | 2.1 | 0.622 | 0.056 | 0.32294 | 3225 | 180 | 3115 | 270 | 3310 | 36 | 4.02 | 0.249 | 94.11 |
| | | | | | | | | | | | | | | |
| PD18-105-449.d | 1.867 | 0.067 | 0.1356 | 0.0037 | 0.50275 | 1067 | 25 | 819 | 21 | 1622 | 56 | 1.411 | 0.709 | 50.49 |
| PD18-105-450.d | 2.59 | 0.086 | 0.1589 | 0.0045 | 0.46737 | 1296 | 24 | 950 | 25 | 1937 | 44 | 1.312 | 0.762 | 49.04 |
| PD18-105-451.d | 5.91 | 0.48 | 0.2677 | 0.017 | 0.72134 | 1961 | 61 | 1539 | 79 | 2416 | 40 | 2.46 | 0.407 | 63.70 |
| PD18-105-452.d | 4.82 | 0.16 | 0.2355 | 0.006 | 0.62524 | 1786 | 31 | 1363 | 32 | 2306 | 45 | 0.681 | 1.468 | 59.11 |
| PD18-105-453.d | 11.33 | 0.35 | 0.4685 | 0.013 | 0.38576 | 2549 | 32 | 2476 | 60 | 2624 | 33 | 1.405 | 0.712 | 94.36 |
| PD18-105-454.d | 6.46 | 0.29 | 0.2573 | 0.012 | 0.79774 | 2037 | 46 | 1475 | 61 | 2642 | 34 | 1.334 | 0.750 | 55.83 |
| PD18-105-455.d | 1.602 | 0.056 | 0.0992 | 0.0033 | 0.68053 | 969 | 23 | 610 | 19 | 1897 | 46 | 3.56 | 0.281 | 32.16 |
| PD18-105-456.d | 4.84 | 0.2 | 0.207 | 0.0074 | 0.27352 | 1790 | 33 | 1212 | 39 | 2535 | 40 | 1.951 | 0.513 | 47.81 |
| PD18-105-457.d | 1.841 | 0.053 | 0.1382 | 0.0035 | 0.66454 | 1059 | 20 | 834 | 20 | 1562 | 44 | 1.125 | 0.889 | 53.39 |
| PD18-105-459.d | 9.61 | 0.25 | 0.4135 | 0.0096 | 0.23141 | 2397 | 24 | 2230 | 44 | 2526 | 38 | 1.365 | 0.733 | 88.28 |
| PD18-105-460.d | 10.24 | 0.25 | 0.4388 | 0.0099 | 0.68608 | 2461 | 23 | 2344 | 44 | 2550 | 33 | 1.418 | 0.705 | 91.92 |
| PD18-105-461.d | 2.336 | 0.074 | 0.1407 | 0.0036 | 0.50716 | 1224 | 21 | 848 | 20 | 1954 | 48 | 1.07 | 0.935 | 43.40 |
| PD18-105-469.d | 8.7 | 0.39 | 0.3638 | 0.015 | 0.61177 | 2306 | 42 | 2000 | 71 | 2561 | 32 | 1.892 | 0.529 | 78.09 |
| PD18-105-470.d | 1.277 | 0.068 | 0.0771 | 0.0042 | 0.50546 | 834 | 32 | 479 | 25 | 1924 | 46 | 2.47 | 0.405 | 24.90 |
| PD18-105-471.d | 1.279 | 0.083 | 0.0807 | 0.0046 | 0.60436 | 835 | 33 | 500 | 27 | 1859 | 43 | 2.84 | 0.352 | 26.90 |
| PD18-105-472.d | 5.864 | 0.23 | 0.2715 | 0.0094 | 0.58445 | 1955 | 40 | 1548 | 49 | 2400 | 34 | 1.321 | 0.757 | 64.50 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-105-473.d | 4.12 | 0.12 | 0.2053 | 0.0053 | 0.80953 | 1655 | 25 | 1203 | 29 | 2288 | 42 | 1.049 | 0.953 | 52.58 |
| PD18-105-474.d | 4.077 | 0.11 | 0.2046 | 0.0046 | 0.61537 | 1648 | 22 | 1199 | 24 | 2281 | 35 | 1.271 | 0.787 | 52.56 |
| PD18-105-475.d | 7.88 | 0.3 | 0.301 | 0.012 | 0.55091 | 2215 | 39 | 1695 | 60 | 2743 | 41 | 1.36 | 0.735 | 61.79 |
| PD18-105-476.d | 6.67 | 0.23 | 0.2962 | 0.0096 | 0.72111 | 2066 | 35 | 1671 | 49 | 2486 | 34 | 1.689 | 0.592 | 67.22 |
| PD18-105-477.d | 3.479 | 0.1 | 0.1847 | 0.0045 | 0.26135 | 1520 | 24 | 1092 | 25 | 2162 | 43 | 1.125 | 0.889 | 50.51 |
| PD18-105-478.d | 4.1 | 0.14 | 0.2131 | 0.0055 | 0.57901 | 1652 | 28 | 1245 | 30 | 2189 | 44 | 0.963 | 1.038 | 56.88 |
| PD18-105-479.d | 9.34 | 0.3 | 0.3493 | 0.0096 | 0.67212 | 2368 | 30 | 1929 | 46 | 2755 | 39 | 1.154 | 0.867 | 70.02 |
| PD18-105-480.d | 3.513 | 0.39 | 0.184 | 0.015 | 0.77662 | 1529 | 63 | 1089 | 78 | 2206 | 43 | 1.137 | 0.880 | 49.37 |
| PD18-105-481.d | 3.984 | 0.17 | 0.2047 | 0.0062 | 0.4536 | 1630 | 32 | 1200 | 33 | 2233 | 47 | 2.54 | 0.394 | 53.74 |
| PD18-105-482.d | 6.48 | 0.37 | 0.293 | 0.016 | 0.56638 | 2040 | 64 | 1655 | 87 | 2456 | 38 | 1.444 | 0.693 | 67.39 |
| PD18-105-483.d | 6.65 | 0.37 | 0.275 | 0.015 | 0.60232 | 2063 | 64 | 1565 | 79 | 2601 | 36 | 1.658 | 0.603 | 60.17 |
| PD18-105-493.d | 3.694 | 0.14 | 0.1808 | 0.0066 | 0.70295 | 1570 | 36 | 1071 | 37 | 2305 | 31 | 1.427 | 0.701 | 46.46 |
| PD18-105-494.d | 9.14 | 0.23 | 0.3923 | 0.0083 | 0.714 | 2351 | 23 | 2132 | 38 | 2551 | 33 | 1.018 | 0.982 | 83.58 |
| PD18-105-495.d | 3.91 | 0.19 | 0.1667 | 0.0072 | 0.7245 | 1613 | 34 | 993 | 39 | 2541 | 35 | 2.123 | 0.471 | 39.08 |
| PD18-105-496.d | 2.94 | 0.21 | 0.1426 | 0.0065 | 0.69826 | 1391 | 44 | 859 | 36 | 2323 | 46 | 1.262 | 0.792 | 36.98 |
| PD18-105-497.d | 12.24 | 0.3 | 0.5096 | 0.012 | 0.771 | 2622 | 23 | 2654 | 51 | 2583 | 29 | 0.995 | 1.005 | 102.75 |
| PD18-105-498.d | 5.36 | 0.14 | 0.2384 | 0.005 | 0.58023 | 1877 | 22 | 1378 | 26 | 2475 | 34 | 2.461 | 0.406 | 55.68 |
| PD18-105-499.d | 9.45 | 0.24 | 0.3843 | 0.008 | 0.24451 | 2381 | 23 | 2095 | 37 | 2621 | 39 | 1.242 | 0.805 | 79.93 |
| PD18-105-500.d | 1.85 | 0.053 | 0.1306 | 0.003 | 0.4534 | 1065 | 20 | 791 | 17 | 1680 | 42 | 2.52 | 0.397 | 47.08 |
| PD18-105-501.d | 7.15 | 0.21 | 0.318 | 0.0089 | 0.72618 | 2128 | 28 | 1781 | 43 | 2492 | 38 | 1.644 | 0.608 | 71.47 |
| PD18-105-503.d | 11.18 | 0.32 | 0.446 | 0.012 | 0.70268 | 2536 | 27 | 2376 | 55 | 2689 | 34 | 1.016 | 0.984 | 88.36 |
| | | | | | | | | | | | | | | |
| PD18-108-70.d | 9.37 | 0.17 | 0.2104 | 0.0045 | 0.58914 | 2373 | 17 | 1231 | 24 | 3561 | 48 | 2.365 | 0.423 | 34.57 |
| PD18-108-72.d | 8.28 | 0.19 | 0.1976 | 0.005 | 0.59089 | 2260 | 20 | 1162 | 27 | 3478 | 47 | 2.45 | 0.408 | 33.41 |
| PD18-108-73.d | 18.75 | 0.85 | 0.45 | 0.023 | 0.62555 | 3028 | 56 | 2393 | 110 | 3485 | 51 | 3.11 | 0.322 | 68.67 |
| PD18-108-75.d | 16.68 | 0.43 | 0.47 | 0.013 | 0.63175 | 2920 | 25 | 2479 | 58 | 3216 | 51 | 4.24 | 0.236 | 77.08 |
| PD18-108-76.d | 20.2 | 0.39 | 0.551 | 0.014 | 0.47503 | 3098 | 19 | 2828 | 56 | 3266 | 50 | 2.29 | 0.437 | 86.59 |
| PD18-108-77.d | 21.74 | 0.7 | 0.636 | 0.023 | 0.50431 | 3171 | 36 | 3169 | 95 | 3169 | 53 | 10.68 | 0.094 | 100.00 |
| PD18-108-78.d | 11.04 | 0.29 | 0.2785 | 0.0068 | 0.62809 | 2524 | 26 | 1583 | 35 | 3390 | 47 | 1.776 | 0.563 | 46.70 |
| PD18-108-79.d | 17.93 | 0.45 | 0.505 | 0.015 | 0.45806 | 2984 | 26 | 2635 | 65 | 3220 | 49 | 1.544 | 0.648 | 81.83 |
| PD18-108-80.d | 22.56 | 0.74 | 0.644 | 0.023 | 0.73558 | 3205 | 28 | 3203 | 86 | 3207 | 51 | 1.87 | 0.535 | 99.88 |
| PD18-108-81.d | 10.41 | 0.36 | 0.345 | 0.0098 | 0.56539 | 2474 | 35 | 1910 | 47 | 2967 | 50 | 3.233 | 0.309 | 64.37 |
| PD18-108-82.d | 6.03 | 3.1 | 0.1262 | 0.058 | 0.75552 | 1978 | 160 | 766 | 240 | 3691 | 62 | 5.73 | 0.175 | 20.75 |
| PD18-108-83.d | 20.44 | 0.83 | 0.596 | 0.023 | 0.75057 | 3109 | 45 | 3009 | 94 | 3285 | 49 | 2.81 | 0.356 | 91.60 |
| PD18-108-84.d | 12.58 | 0.32 | 0.3052 | 0.0091 | 0.4559 | 2647 | 25 | 1716 | 43 | 3452 | 44 | 5.19 | 0.193 | 49.71 |
| PD18-108-92.d | 7.73 | 0.22 | 0.1689 | 0.0043 | 0.28665 | 2199 | 24 | 1006 | 24 | 3615 | 70 | 8.24 | 0.121 | 27.83 |
| PD18-108-93.d | 8.09 | 0.27 | 0.2402 | 0.0086 | 0.64855 | 2240 | 31 | 1387 | 44 | 3123 | 49 | 2.945 | 0.340 | 44.41 |
| PD18-108-94.d | 12.24 | 0.2 | 0.3643 | 0.0075 | 0.52745 | 2621 | 16 | 2002 | 35 | 3136 | 47 | 3.619 | 0.276 | 63.84 |
| PD18-108-96.d | 18.73 | 0.43 | 0.531 | 0.013 | 0.69112 | 3026 | 23 | 2743 | 57 | 3205 | 50 | 1.54 | 0.649 | 85.59 |
| PD18-108-98.d | 10.79 | 0.22 | 0.341 | 0.0083 | 0.56126 | 2503 | 18 | 1889 | 39 | 3033 | 46 | 1.6 | 0.625 | 62.28 |
| PD18-108-99.d | 20.01 | 0.55 | 0.553 | 0.019 | 0.74894 | 3089 | 29 | 2835 | 81 | 3256 | 49 | 2.055 | 0.487 | 87.07 |
| PD18-108-100.d | 9.31 | 0.3 | 0.3002 | 0.01 | 0.61023 | 2366 | 33 | 1691 | 53 | 3002 | 49 | 2.46 | 0.407 | 56.33 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-108-101.d | 10.94 | 0.25 | 0.3474 | 0.0094 | 0.67613 | 2516 | 22 | 1921 | 46 | 3019 | 49 | 2.989 | 0.335 | 63.63 |
| PD18-108-102.d | 11.7 | 0.3 | 0.274 | 0.0074 | 0.65686 | 2579 | 26 | 1560 | 38 | 3511 | 50 | 2.09 | 0.478 | 44.43 |
| PD18-108-103.d | 14.81 | 0.3 | 0.3832 | 0.0089 | 0.68863 | 2801 | 19 | 2089 | 41 | 3337 | 50 | 4.17 | 0.240 | 62.60 |
| PD18-108-104.d | 15.46 | 0.88 | 0.412 | 0.02 | 0.66044 | 2842 | 73 | 2222 | 100 | 3298 | 53 | 13.19 | 0.076 | 67.37 |
| PD18-108-105.d | 15.39 | 0.34 | 0.4471 | 0.011 | 0.74816 | 2837 | 22 | 2381 | 49 | 3171 | 51 | 1.508 | 0.663 | 75.09 |
| PD18-108-106.d | 22.88 | 0.41 | 0.648 | 0.015 | 0.58871 | 3220 | 18 | 3220 | 60 | 3228 | 49 | 10.38 | 0.096 | 99.75 |
| PD18-108-114.d | 8 | 0.27 | 0.2088 | 0.0045 | 0.40775 | 2226 | 32 | 1222 | 24 | 3336 | 63 | 2.244 | 0.446 | 36.63 |
| PD18-108-115.d | 9.35 | 0.23 | 0.2319 | 0.0057 | 0.42481 | 2372 | 21 | 1344 | 29 | 3415 | 51 | 1.789 | 0.559 | 39.36 |
| PD18-108-116.d | 9.18 | 0.18 | 0.2645 | 0.007 | 0.63226 | 2355 | 18 | 1513 | 36 | 3185 | 47 | 1.965 | 0.509 | 47.50 |
| PD18-108-117.d | 13.98 | 0.59 | 0.3607 | 0.012 | 0.80416 | 2747 | 50 | 1985 | 59 | 3358 | 56 | 3.29 | 0.304 | 59.11 |
| PD18-108-118.d | 15.64 | 0.45 | 0.471 | 0.013 | 0.82664 | 2853 | 31 | 2488 | 58 | 3109 | 49 | 3.59 | 0.279 | 80.03 |
| | | | | | | | | | | | | | | |
| PD18-110-119.d | 3.012 | 0.073 | 0.1485 | 0.0041 | 0.69339 | 1410 | 20 | 892 | 23 | 2318 | 51 | 2.209 | 0.453 | 38.48 |
| PD18-110-121.d | 13.87 | 0.73 | 0.437 | 0.023 | 0.88813 | 2739 | 60 | 2338 | 110 | 3051 | 44 | 1.517 | 0.659 | 76.63 |
| PD18-110-122.d | 7.35 | 0.18 | 0.2663 | 0.0063 | 0.40461 | 2154 | 21 | 1521 | 32 | 2831 | 57 | 4.69 | 0.213 | 53.73 |
| PD18-110-123.d | 10.81 | 0.46 | 0.3269 | 0.011 | 0.49925 | 2505 | 49 | 1823 | 55 | 3116 | 59 | 3.19 | 0.313 | 58.50 |
| PD18-110-124.d | 17.72 | 0.31 | 0.523 | 0.01 | 0.56715 | 2974 | 17 | 2711 | 44 | 3151 | 46 | 3.38 | 0.296 | 86.04 |
| PD18-110-126.d | 5.74 | 0.17 | 0.2039 | 0.0078 | 0.62195 | 1936 | 27 | 1196 | 43 | 2851 | 54 | 4.73 | 0.211 | 41.95 |
| PD18-110-127.d | 9.55 | 0.23 | 0.3112 | 0.0087 | 0.64598 | 2390 | 21 | 1746 | 42 | 2972 | 48 | 20.4 | 0.049 | 58.75 |
| PD18-110-133.d | 14.78 | 0.55 | 0.447 | 0.017 | 0.56281 | 2804 | 39 | 2381 | 79 | 3103 | 51 | 4.32 | 0.231 | 76.73 |
| PD18-110-137.d | 10.35 | 0.35 | 0.3404 | 0.01 | 0.7913 | 2463 | 35 | 1887 | 50 | 2981 | 54 | 3.14 | 0.318 | 63.30 |
| PD18-110-138.d | 21.83 | 0.49 | 0.626 | 0.016 | 0.58214 | 3173 | 22 | 3132 | 69 | 3197 | 46 | 3.9 | 0.256 | 97.97 |
| PD18-110-139.d | 6.69 | 0.31 | 0.254 | 0.0098 | 0.88154 | 2063 | 38 | 1457 | 51 | 2733 | 54 | 1.63 | 0.613 | 53.31 |
| PD18-110-140.d | 4.693 | 0.099 | 0.1851 | 0.0047 | 0.66905 | 1764 | 18 | 1094 | 25 | 2670 | 52 | 4.49 | 0.223 | 40.97 |
| PD18-110-141.d | 14.33 | 1.3 | 0.377 | 0.025 | 0.88285 | 2765 | 73 | 2060 | 110 | 3313 | 53 | 3.9 | 0.256 | 62.18 |
| PD18-110-142.d | 11.77 | 0.4 | 0.3532 | 0.012 | 0.71107 | 2585 | 36 | 1948 | 58 | 3117 | 50 | 2.738 | 0.365 | 62.50 |
| PD18-110-143.d | 11.51 | 0.5 | 0.3681 | 0.017 | 0.76173 | 2563 | 49 | 2019 | 84 | 3024 | 47 | 3.77 | 0.265 | 66.77 |
| PD18-110-144.d | 13.24 | 0.48 | 0.4049 | 0.016 | 0.61843 | 2699 | 34 | 2190 | 73 | 3091 | 50 | 3.76 | 0.266 | 70.85 |
| PD18-110-145.d | 7.95 | 0.22 | 0.2927 | 0.0084 | 0.67139 | 2228 | 25 | 1653 | 42 | 2808 | 55 | 2.471 | 0.405 | 58.87 |
| PD18-110-146.d | 7.37 | 0.41 | 0.261 | 0.012 | 0.68333 | 2153 | 63 | 1494 | 69 | 2861 | 63 | 3.95 | 0.253 | 52.22 |
| PD18-110-147.d | 9.69 | 0.41 | 0.331 | 0.014 | 0.78127 | 2413 | 34 | 1840 | 66 | 2920 | 50 | 4.22 | 0.237 | 63.01 |
| PD18-110-148.d | 6.52 | 0.14 | 0.2319 | 0.006 | 0.71069 | 2047 | 19 | 1343 | 32 | 2857 | 52 | 1.434 | 0.697 | 47.01 |
| PD18-110-149.d | 6.64 | 0.31 | 0.2534 | 0.011 | 0.71202 | 2060 | 47 | 1454 | 53 | 2726 | 59 | 7.5 | 0.133 | 53.34 |
| PD18-110-150.d | 7.83 | 0.25 | 0.2574 | 0.0087 | 0.74441 | 2213 | 29 | 1475 | 44 | 2961 | 54 | 2.9 | 0.345 | 49.81 |
| PD18-110-158.d | 2.475 | 0.089 | 0.0962 | 0.0029 | 0.13946 | 1262 | 24 | 592 | 17 | 2699 | 59 | 3.227 | 0.310 | 21.93 |
| PD18-110-159.d | 9.26 | 0.19 | 0.3102 | 0.0085 | 0.75844 | 2362 | 19 | 1740 | 42 | 2933 | 50 | 3.84 | 0.260 | 59.32 |
| PD18-110-160.d | 17.57 | 0.41 | 0.541 | 0.014 | 0.65292 | 2964 | 23 | 2787 | 61 | 3089 | 49 | 1.76 | 0.568 | 90.22 |
| PD18-110-161.d | 17.9 | 0.39 | 0.5249 | 0.012 | 0.68774 | 2982 | 21 | 2718 | 53 | 3160 | 47 | 2.4 | 0.417 | 86.01 |
| PD18-110-162.d | 22.92 | 0.52 | 0.644 | 0.015 | 0.47628 | 3221 | 24 | 3203 | 61 | 3215 | 50 | 2.147 | 0.466 | 99.63 |
| PD18-110-163.d | 3.5 | 0.18 | 0.1166 | 0.0061 | 0.59588 | 1525 | 43 | 711 | 35 | 3074 | 47 | 5.33 | 0.188 | 23.13 |
| PD18-110-164.d | 7.85 | 0.25 | 0.2605 | 0.0084 | 0.77434 | 2213 | 32 | 1492 | 44 | 2951 | 49 | 4.73 | 0.211 | 50.56 |
| PD18-110-165.d | 18.89 | 0.5 | 0.588 | 0.017 | 0.6793 | 3031 | 28 | 2978 | 70 | 3049 | 48 | 3.96 | 0.253 | 97.67 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-110-166.d | 7.02 | 0.19 | 0.2106 | 0.0057 | 0.23715 | 2113 | 26 | 1232 | 30 | 3112 | 52 | 5.2 | 0.192 | 39.59 |
| | | | | | | | | | | | | | | |
| PD18-111-167.d | 2.65 | 0.24 | 0.1223 | 0.0074 | 0.83482 | 1310 | 53 | 743 | 42 | 2401 | 65 | 1.465 | 0.683 | 30.95 |
| PD18-111-168.d | 18.61 | 0.41 | 0.537 | 0.014 | 0.57763 | 3019 | 22 | 2768 | 58 | 3197 | 49 | 1.892 | 0.529 | 86.58 |
| PD18-111-169.d | 15.53 | 0.36 | 0.4556 | 0.012 | 0.68615 | 2849 | 22 | 2418 | 54 | 3164 | 49 | 2.3 | 0.435 | 76.42 |
| PD18-111-170.d | 13.71 | 0.46 | 0.424 | 0.012 | 0.6989 | 2726 | 36 | 2275 | 57 | 3074 | 50 | 4.24 | 0.236 | 74.01 |
| PD18-111-171.d | 18.97 | 0.54 | 0.539 | 0.016 | 0.6882 | 3036 | 29 | 2773 | 70 | 3207 | 52 | 1.745 | 0.573 | 86.47 |
| PD18-111-172.d | 25.51 | 0.53 | 0.699 | 0.017 | 0.78182 | 3325 | 20 | 3414 | 65 | 3250 | 48 | 1.709 | 0.585 | 105.05 |
| PD18-111-180.d | 21.13 | 0.62 | 0.622 | 0.018 | 0.60514 | 3142 | 31 | 3115 | 74 | 3281 | 50 | 2.72 | 0.368 | 94.94 |
| PD18-111-181.d | 8.94 | 0.27 | 0.2954 | 0.0085 | 0.62401 | 2328 | 29 | 1667 | 43 | 2971 | 54 | 2.87 | 0.348 | 56.11 |
| PD18-111-182.d | 21.63 | 0.43 | 0.62 | 0.015 | 0.57036 | 3165 | 20 | 3106 | 56 | 3200 | 49 | 4.72 | 0.212 | 97.06 |
| PD18-111-184.d | 11.4 | 0.29 | 0.3546 | 0.0094 | 0.79468 | 2552 | 23 | 1955 | 44 | 3060 | 50 | 3.97 | 0.252 | 63.89 |
| PD18-111-185.d | 28.88 | 0.7 | 0.82 | 0.022 | 0.62459 | 3446 | 25 | 3855 | 78 | 3212 | 50 | 2.98 | 0.336 | 120.02 |
| PD18-111-186.d | 23.38 | 0.94 | 0.664 | 0.026 | 0.68161 | 3239 | 44 | 3280 | 100 | 3209 | 50 | 3.039 | 0.329 | 102.21 |
| PD18-111-187.d | 9.28 | 0.2 | 0.3083 | 0.0071 | 0.76611 | 2362 | 21 | 1731 | 35 | 2959 | 49 | 1.836 | 0.545 | 58.50 |
| PD18-111-188.d | 21.16 | 1.3 | 0.616 | 0.035 | 0.74947 | 3142 | 83 | 3090 | 160 | 3177 | 54 | 3.37 | 0.297 | 97.26 |
| PD18-111-189.d | 23.18 | 0.47 | 0.659 | 0.015 | 0.5197 | 3233 | 21 | 3260 | 56 | 3206 | 49 | 4.02 | 0.249 | 101.68 |
| PD18-111-190.d | 23.3 | 1.1 | 0.655 | 0.027 | 0.79058 | 3233 | 54 | 3242 | 110 | 3219 | 50 | 3.46 | 0.289 | 100.71 |
| PD18-111-191.d | 20.87 | 0.55 | 0.586 | 0.016 | 0.70732 | 3130 | 27 | 2970 | 66 | 3221 | 48 | 3.82 | 0.262 | 92.21 |
| PD18-111-192.d | 18.72 | 0.36 | 0.561 | 0.013 | 0.69135 | 3026 | 19 | 2870 | 55 | 3138 | 47 | 2.046 | 0.489 | 91.46 |
| PD18-111-193.d | 18.18 | 0.5 | 0.551 | 0.017 | 0.7565 | 2995 | 27 | 2827 | 71 | 3107 | 51 | 4.05 | 0.247 | 90.99 |
| PD18-111-194.d | 13.1 | 0.41 | 0.408 | 0.013 | 0.83908 | 2692 | 27 | 2206 | 57 | 3054 | 50 | 2.58 | 0.388 | 72.23 |
| PD18-111-202.d | 12.49 | 0.54 | 0.392 | 0.014 | 0.80868 | 2639 | 36 | 2129 | 64 | 3067 | 50 | 2.07 | 0.483 | 69.42 |
| PD18-111-203.d | 12.95 | 0.46 | 0.426 | 0.016 | 0.78759 | 2671 | 33 | 2282 | 73 | 3102 | 51 | 2.783 | 0.359 | 73.57 |
| PD18-111-204.d | 23.29 | 0.47 | 0.651 | 0.016 | 0.75894 | 3237 | 19 | 3228 | 61 | 3236 | 49 | 3.017 | 0.331 | 99.75 |
| PD18-111-205.d | 21.77 | 0.45 | 0.622 | 0.016 | 0.87215 | 3171 | 20 | 3114 | 63 | 3210 | 49 | 2.851 | 0.351 | 97.01 |
| PD18-111-206.d | 20.15 | 0.66 | 0.581 | 0.019 | 0.43501 | 3097 | 38 | 2952 | 80 | 3181 | 50 | 4.08 | 0.245 | 92.80 |
| PD18-111-207.d | 8.81 | 0.39 | 0.2937 | 0.01 | 0.73512 | 2314 | 52 | 1659 | 52 | 2947 | 61 | 1.322 | 0.756 | 56.29 |
| PD18-111-208.d | 18.48 | 0.35 | 0.5445 | 0.012 | 0.54427 | 3013 | 19 | 2800 | 51 | 3153 | 51 | 2.27 | 0.441 | 88.80 |
| | | | | | | | | | | | | | | |
| PD18-116 - 1.d | 19.61 | 0.37 | 0.5685 | 0.0094 | 0.79352 | 3071 | 19 | 2900 | 39 | 3174 | 14 | 0.512 | 1.953 | 91.37 |
| PD18-116 - 2.d | 15.58 | 1.2 | 0.467 | 0.032 | 0.66382 | 2850 | 120 | 2470 | 160 | 3114 | 47 | 2.9 | 0.345 | 79.32 |
| PD18-116 - 3.d | 16.64 | 0.78 | 0.5136 | 0.021 | 0.62001 | 2914 | 59 | 2671 | 98 | 3082 | 24 | 0.61 | 1.639 | 86.66 |
| PD18-116 - 4.d | 18.61 | 0.75 | 0.5422 | 0.02 | 0.5807 | 3020 | 48 | 2799 | 87 | 3169 | 20 | 0.985 | 1.015 | 88.32 |
| PD18-116 - 5.d | 19.74 | 0.35 | 0.564 | 0.011 | 0.85151 | 3076 | 17 | 2881 | 44 | 3199 | 21 | 3.11 | 0.322 | 90.06 |
| PD18-116 - 6.d | 17.24 | 0.18 | 0.516 | 0.0054 | 0.40215 | 2947 | 10 | 2681 | 23 | 3123 | 17 | 2.87 | 0.348 | 85.85 |
| PD18-116 - 7.d | 16.79 | 0.36 | 0.5011 | 0.0089 | 0.60229 | 2924 | 21 | 2616 | 38 | 3127 | 26 | 3.04 | 0.329 | 83.66 |
| PD18-116 - 8.d | 6.28 | 0.11 | 0.2464 | 0.0046 | 0.8311 | 2013 | 16 | 1419 | 24 | 2687 | 19 | 2.3 | 0.435 | 52.81 |
| PD18-116 - 9.d | 20.9 | 0.32 | 0.605 | 0.008 | 0.67812 | 3132 | 15 | 3047 | 32 | 3182 | 18 | 2.38 | 0.420 | 95.76 |
| PD18-116 - 10.d | 15.42 | 0.32 | 0.4568 | 0.0083 | 0.83596 | 2838 | 20 | 2424 | 37 | 3134 | 19 | 3.036 | 0.329 | 77.35 |
| PD18-116 - 11.d | 10.86 | 0.2 | 0.3506 | 0.0055 | 0.71159 | 2510 | 18 | 1937 | 26 | 3006 | 16 | 6.52 | 0.153 | 64.44 |
| PD18-116 - 12.d | 18.57 | 0.24 | 0.5401 | 0.0068 | 0.37811 | 3019 | 13 | 2783 | 28 | 3171 | 20 | 2.602 | 0.384 | 87.76 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-116 - 13.d | 13.04 | 0.44 | 0.3948 | 0.011 | 0.65354 | 2682 | 30 | 2145 | 49 | 3102 | 22 | 4.152 | 0.241 | 69.15 |
| PD18-116 - 14.d | 11.11 | 0.43 | 0.3584 | 0.011 | 0.7894 | 2532 | 31 | 1974 | 49 | 3002 | 22 | 3.05 | 0.328 | 65.76 |
| PD18-116 - 15.d | 23.14 | 0.44 | 0.655 | 0.011 | 0.60663 | 3230 | 19 | 3244 | 43 | 3209 | 26 | 0.659 | 1.517 | 101.09 |
| PD18-116 - 16.d | 15.73 | 0.65 | 0.4742 | 0.017 | 0.48945 | 2858 | 48 | 2501 | 77 | 3117 | 24 | 2.742 | 0.365 | 80.24 |
| PD18-116 - 17.d | 19.81 | 0.52 | 0.594 | 0.016 | 0.61717 | 3082 | 28 | 3005 | 72 | 3125 | 17 | 0.811 | 1.233 | 96.16 |
| PD18-116 - 18.d | 15.28 | 0.51 | 0.4593 | 0.014 | 0.7129 | 2831 | 37 | 2436 | 64 | 3120 | 19 | 3.01 | 0.332 | 78.08 |
| PD18-116 - 19.d | 14.07 | 0.19 | 0.442 | 0.0047 | 0.43436 | 2753 | 12 | 2359 | 21 | 3048 | 19 | 1.42 | 0.704 | 77.40 |
| PD18-116 - 20.d | 21.47 | 0.31 | 0.6165 | 0.0086 | 0.53819 | 3159 | 15 | 3095 | 35 | 3186 | 16 | 0.775 | 1.290 | 97.14 |
| PD18-116 - 21.d | 11.42 | 1 | 0.3676 | 0.017 | 0.88507 | 2557 | 66 | 2018 | 73 | 3005 | 52 | 0.746 | 1.340 | 67.15 |
| PD18-116 - 22.d | 18.57 | 0.61 | 0.535 | 0.019 | 0.5643 | 3018 | 38 | 2759 | 83 | 3199 | 16 | 0.689 | 1.451 | 86.25 |
| PD18-116 - 23.d | 21.21 | 0.39 | 0.609 | 0.009 | 0.822 | 3146 | 18 | 3065 | 36 | 3190 | 16 | 2.809 | 0.356 | 96.08 |
| PD18-116 - 24.d | 15.76 | 0.18 | 0.4796 | 0.0046 | 0.26143 | 2861 | 11 | 2525 | 20 | 3099 | 20 | 4.81 | 0.208 | 81.48 |
| PD18-116 - 25.d | 20.2 | 0.66 | 0.58 | 0.017 | 0.89453 | 3099 | 37 | 2947 | 70 | 3188 | 19 | 1.25 | 0.800 | 92.44 |
| PD18-116 - 26.d | 20.89 | 0.87 | 0.6031 | 0.023 | 0.70279 | 3132 | 51 | 3042 | 99 | 3182 | 16 | 1.423 | 0.703 | 95.60 |
| PD18-116 - 27.d | 9.13 | 0.36 | 0.2919 | 0.009 | 0.92746 | 2351 | 32 | 1651 | 44 | 3011 | 18 | 2.8 | 0.357 | 54.83 |
| PD18-116 - 28.d | 21.62 | 1.2 | 0.6193 | 0.034 | 0.5381 | 3166 | 80 | 3106 | 150 | 3198 | 20 | 1.263 | 0.792 | 97.12 |
| PD18-116 - 29.d | 21.12 | 0.58 | 0.61 | 0.013 | 0.4745 | 3137 | 27 | 3066 | 53 | 3170 | 45 | 0.865 | 1.156 | 96.72 |
| PD18-116 - 30.d | 9.35 | 0.67 | 0.2966 | 0.017 | 0.7902 | 2371 | 50 | 1673 | 80 | 3034 | 22 | 2.41 | 0.415 | 55.14 |
| PD18-116 - 31.d | 20.57 | 0.28 | 0.6014 | 0.007 | 0.59152 | 3117 | 13 | 3035 | 29 | 3164 | 15 | 1.478 | 0.677 | 95.92 |
| PD18-116 - 32.d | 10.23 | 0.42 | 0.3212 | 0.012 | 0.70744 | 2454 | 48 | 1795 | 61 | 3051 | 22 | 0.728 | 1.374 | 58.83 |
| PD18-116 - 33.d | 13.2 | 0.38 | 0.4462 | 0.013 | 0.42276 | 2693 | 28 | 2377 | 59 | 3162 | 22 | 0.9 | 1.111 | 75.17 |
| PD18-116 - 34.d | 22.88 | 0.27 | 0.6435 | 0.0063 | 0.45162 | 3221 | 12 | 3202 | 25 | 3221 | 18 | 1.7 | 0.588 | 99.41 |
| PD18-116 - 35.d | 19.12 | 0.25 | 0.5555 | 0.0068 | 0.53474 | 3047 | 13 | 2847 | 28 | 3174 | 17 | 0.532 | 1.880 | 89.70 |
| PD18-116 - 36.d | 8.25 | 0.29 | 0.2549 | 0.009 | 0.54606 | 2258 | 39 | 1463 | 48 | 3086 | 17 | 2.399 | 0.417 | 47.41 |
| PD18-116 - 37.d | 17.84 | 0.3 | 0.5382 | 0.0084 | 0.17903 | 2980 | 17 | 2775 | 36 | 3118 | 17 | 1.754 | 0.570 | 89.00 |
| PD18-116 - 38.d | 13.35 | 0.55 | 0.4 | 0.015 | 0.9079 | 2702 | 47 | 2167 | 72 | 3121 | 18 | 1.279 | 0.782 | 69.43 |
| PD18-116 - 39.d | 11.32 | 0.27 | 0.365 | 0.0073 | 0.73212 | 2549 | 25 | 2006 | 35 | 3003 | 14 | 1.299 | 0.770 | 66.80 |
| PD18-116 - 40.d | 6.348 | 0.086 | 0.2541 | 0.003 | 0.61018 | 2024 | 12 | 1459 | 15 | 2649 | 20 | 1.331 | 0.751 | 55.08 |
| | | | | | | | | | | | | | | |
| PD18-118 - 1.d | 25.26 | 0.72 | 0.677 | 0.016 | 0.2893 | 3312 | 28 | 3337 | 67 | 3300 | 48 | 0.836 | 1.196 | 101.12 |
| PD18-118 - 2.d | 25.29 | 0.88 | 0.664 | 0.017 | 0.38855 | 3309 | 34 | 3278 | 67 | 3324 | 53 | 0.873 | 1.145 | 98.62 |
| PD18-118 - 3.d | 24.72 | 0.52 | 0.662 | 0.015 | 0.46365 | 3294 | 20 | 3270 | 60 | 3304 | 36 | 1.29 | 0.775 | 98.97 |
| PD18-118 - 4.d | 24.89 | 0.66 | 0.682 | 0.013 | 0.36273 | 3298 | 26 | 3347 | 51 | 3262 | 42 | 1.13 | 0.885 | 102.61 |
| PD18-118 - 5.d | 24.99 | 0.87 | 0.666 | 0.022 | 0.72579 | 3305 | 35 | 3297 | 89 | 3310 | 43 | 3.27 | 0.306 | 99.61 |
| PD18-118 - 6.d | 26.9 | 1 | 0.71 | 0.018 | 0.61614 | 3369 | 35 | 3452 | 68 | 3319 | 51 | 2.48 | 0.403 | 104.01 |
| PD18-118 - 7.d | 24.29 | 0.8 | 0.648 | 0.015 | 0.44881 | 3271 | 33 | 3214 | 58 | 3310 | 46 | 0.804 | 1.244 | 97.10 |
| PD18-118 - 8.d | 24.84 | 0.81 | 0.683 | 0.019 | 0.42715 | 3293 | 31 | 3348 | 71 | 3255 | 52 | 0.782 | 1.279 | 102.86 |
| PD18-118 - 9.d | 25.09 | 0.71 | 0.682 | 0.018 | 0.3125 | 3305 | 28 | 3347 | 71 | 3276 | 52 | 0.852 | 1.174 | 102.17 |
| PD18-118 - 10.d | 24.46 | 0.73 | 0.664 | 0.018 | 0.29911 | 3279 | 29 | 3276 | 68 | 3276 | 51 | 0.763 | 1.311 | 100.00 |
| PD18-118 - 11.d | 25.9 | 0.91 | 0.649 | 0.023 | 0.6572 | 3330 | 31 | 3217 | 90 | 3417 | 81 | 2.13 | 0.469 | 94.15 |
| PD18-118 - 13.d | 24.8 | 0.84 | 0.7 | 0.018 | 0.61966 | 3296 | 33 | 3436 | 69 | 3209 | 46 | 1.58 | 0.633 | 107.07 |
| PD18-118 - 14.d | 23.54 | 0.68 | 0.645 | 0.018 | 0.36986 | 3242 | 29 | 3201 | 70 | 3264 | 53 | 1.806 | 0.554 | 98.07 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-118 - 15.d | 24.84 | 0.75 | 0.688 | 0.023 | 0.18994 | 3293 | 29 | 3366 | 89 | 3235 | 61 | 1.124 | 0.890 | 104.05 |
| PD18-118 - 16.d | 24.43 | 0.76 | 0.667 | 0.016 | 0.24201 | 3282 | 32 | 3289 | 61 | 3272 | 55 | 1.123 | 0.890 | 100.52 |
| PD18-118 - 17.d | 24.13 | 0.86 | 0.651 | 0.018 | 0.44352 | 3263 | 35 | 3224 | 68 | 3276 | 59 | 1.69 | 0.592 | 98.41 |
| PD18-118 - 18.d | 24.16 | 0.84 | 0.647 | 0.017 | 0.4793 | 3270 | 34 | 3211 | 66 | 3303 | 51 | 1.178 | 0.849 | 97.21 |
| PD18-118 - 19.d | 24.9 | 1.1 | 0.677 | 0.024 | 0.2422 | 3295 | 43 | 3323 | 90 | 3276 | 77 | 1.241 | 0.806 | 101.43 |
| PD18-118 - 20.d | 24.49 | 0.7 | 0.655 | 0.014 | 0.41984 | 3281 | 29 | 3254 | 56 | 3294 | 48 | 0.745 | 1.342 | 98.79 |
| PD18-118 - 21.d | 25.12 | 0.79 | 0.686 | 0.019 | 0.34114 | 3308 | 33 | 3358 | 73 | 3276 | 61 | 0.991 | 1.009 | 102.50 |
| PD18-118 - 22.d | 22.27 | 0.93 | 0.605 | 0.028 | 0.3593 | 3185 | 44 | 3045 | 120 | 3274 | 59 | 1.07 | 0.935 | 93.01 |
| PD18-118 - 23.d | 23.4 | 0.83 | 0.655 | 0.018 | 0.30688 | 3234 | 35 | 3239 | 71 | 3229 | 61 | 1.403 | 0.713 | 100.31 |
| PD18-118 - 24.d | 23.43 | 0.77 | 0.634 | 0.017 | 0.29023 | 3236 | 33 | 3160 | 68 | 3273 | 60 | 2.58 | 0.388 | 96.55 |
| PD18-118 - 25.d | 27.78 | 0.88 | 0.73 | 0.022 | 0.35065 | 3403 | 32 | 3526 | 82 | 3329 | 56 | 0.879 | 1.138 | 105.92 |
| PD18-118 - 26.d | 23.18 | 0.8 | 0.624 | 0.017 | 0.17883 | 3224 | 34 | 3119 | 69 | 3287 | 64 | 0.893 | 1.120 | 94.89 |
| PD18-118 - 27.d | 23.97 | 0.91 | 0.656 | 0.019 | 0.42813 | 3253 | 38 | 3245 | 75 | 3256 | 63 | 1.093 | 0.915 | 99.66 |
| PD18-118 - 28.d | 15.78 | 0.23 | 0.5034 | 0.0066 | 0.32968 | 2862 | 14 | 2627 | 27 | 3236 | 27 | 0.85 | 1.176 | 81.18 |
| PD18-118 - 29.d | 13.1 | 0.32 | 0.4508 | 0.0079 | 0.57694 | 2684 | 22 | 2398 | 35 | 3233 | 24 | 2.84 | 0.352 | 74.17 |
| PD18-118 - 30.d | 24.63 | 0.89 | 0.673 | 0.022 | 0.55633 | 3281 | 37 | 3305 | 84 | 3266 | 61 | 2.2 | 0.455 | 101.19 |
| PD18-118 - 31.d | 27.1 | 1 | 0.705 | 0.017 | 0.4055 | 3384 | 36 | 3434 | 64 | 3328 | 56 | 1.073 | 0.932 | 103.19 |
| PD18-118 - 32.d | 23.06 | 0.65 | 0.642 | 0.014 | 0.25257 | 3223 | 28 | 3193 | 54 | 3237 | 48 | 3.09 | 0.324 | 98.64 |
| PD18-118 - 33.d | 24.88 | 0.65 | 0.677 | 0.015 | 0.33229 | 3298 | 25 | 3328 | 59 | 3276 | 45 | 0.9 | 1.111 | 101.59 |
| PD18-118 - 34.d | 25.53 | 1 | 0.689 | 0.024 | 0.25239 | 3315 | 40 | 3368 | 92 | 3282 | 73 | 1.049 | 0.953 | 102.62 |
| PD18-118 - 35.d | 25.11 | 1 | 0.678 | 0.024 | 0.35004 | 3306 | 37 | 3323 | 91 | 3287 | 66 | 0.9 | 1.111 | 101.10 |
| PD18-118 - 36.d | 22.4 | 0.38 | 0.6615 | 0.0095 | 0.58821 | 3199 | 17 | 3271 | 37 | 3158 | 27 | 18 | 0.056 | 103.58 |
| PD18-118 - 37.d | 24.9 | 0.82 | 0.684 | 0.015 | 0.4348 | 3300 | 32 | 3353 | 57 | 3279 | 46 | 0.954 | 1.048 | 102.26 |
| PD18-118 - 38.d | 25.76 | 0.97 | 0.695 | 0.021 | 0.31213 | 3330 | 37 | 3391 | 79 | 3283 | 72 | 0.924 | 1.082 | 103.29 |
| | | | | | | | | | | | | | | |
| PD18-120 - 1.d | 4.087 | 0.25 | 0.21 | 0.0064 | 0.90437 | 1650 | 43 | 1228 | 34 | 2466 | 38 | 8.44 | 0.118 | 49.80 |
| PD18-120 - 2.d | 14.56 | 0.24 | 0.4632 | 0.0068 | 0.70572 | 2787 | 15 | 2453 | 29 | 3028 | 11 | 5.24 | 0.191 | 81.01 |
| PD18-120 - 3.d | 23.01 | 0.15 | 0.6701 | 0.0046 | 0.67028 | 3227 | 6.2 | 3306 | 18 | 3172 | 8.3 | 3.17 | 0.315 | 104.22 |
| PD18-120 - 4.d | 8.15 | 0.41 | 0.2982 | 0.0085 | 0.87786 | 2247 | 38 | 1682 | 41 | 2797 | 39 | 4.444 | 0.225 | 60.14 |
| PD18-120 - 5.d | 22.76 | 0.25 | 0.6701 | 0.0069 | 0.60496 | 3216 | 11 | 3306 | 27 | 3160 | 13 | 1.476 | 0.678 | 104.62 |
| PD18-120 - 6.d | 5.34 | 0.2 | 0.224 | 0.0055 | 0.85151 | 1875 | 32 | 1303 | 29 | 2587 | 28 | 6.71 | 0.149 | 50.37 |
| PD18-120 - 7.d | 21.99 | 0.33 | 0.654 | 0.0099 | 0.85371 | 3182 | 14 | 3242 | 38 | 3134 | 9.3 | 23.3 | 0.043 | 103.45 |
| PD18-120 - 8.d | 11.96 | 0.56 | 0.409 | 0.016 | 0.6958 | 2600 | 65 | 2208 | 80 | 3083 | 30 | 16.9 | 0.059 | 71.62 |
| PD18-120 - 10.d | 14.28 | 0.33 | 0.4634 | 0.0096 | 0.80423 | 2768 | 20 | 2454 | 42 | 3012 | 9.8 | 6.07 | 0.165 | 81.47 |
| PD18-120 - 11.d | 25.34 | 0.43 | 0.745 | 0.013 | 0.94065 | 3320 | 18 | 3587 | 50 | 3162 | 7.7 | 7.45 | 0.134 | 113.44 |
| PD18-120 - 12.d | 21.68 | 0.48 | 0.634 | 0.012 | 0.85298 | 3169 | 23 | 3165 | 45 | 3164.6 | 8.2 | 9.04 | 0.111 | 100.01 |
| PD18-120 - 14.d | 19.39 | 0.36 | 0.577 | 0.01 | 0.82157 | 3061 | 17 | 2936 | 42 | 3149 | 11 | 3.03 | 0.330 | 93.24 |
| PD18-120 - 15.d | 22.24 | 0.21 | 0.6585 | 0.0075 | 0.72324 | 3194 | 9.2 | 3261 | 29 | 3149 | 10 | 15.4 | 0.065 | 103.56 |
| PD18-120 - 16.d | 21.45 | 0.52 | 0.6277 | 0.014 | 0.86073 | 3158 | 27 | 3140 | 59 | 3163 | 10 | 2.29 | 0.437 | 99.27 |
| PD18-120 - 17.d | 19.86 | 0.26 | 0.6063 | 0.0084 | 0.91712 | 3084 | 12 | 3054 | 34 | 3099 | 12 | 3.029 | 0.330 | 98.55 |
| PD18-120 - 18.d | 7.515 | 0.13 | 0.2826 | 0.0047 | 0.64658 | 2174 | 15 | 1604 | 23 | 2756 | 12 | 5.87 | 0.170 | 58.20 |
| PD18-120 - 19.d | 16.18 | 0.45 | 0.499 | 0.013 | 0.98139 | 2884 | 28 | 2641 | 59 | 3088 | 7 | 11.16 | 0.090 | 85.52 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-120 - 20.d | 22.75 | 0.2 | 0.6718 | 0.0064 | 0.68741 | 3216 | 8.5 | 3312 | 25 | 3155 | 13 | 3.12 | 0.321 | 104.98 |
| PD18-120 - 21.d | 15.28 | 0.22 | 0.4716 | 0.0073 | 0.57499 | 2832.4 | 13 | 2490 | 31 | 3075 | 12 | 5.72 | 0.175 | 80.98 |
| PD18-120 - 22.d | 10.45 | 0.28 | 0.3426 | 0.0094 | 0.86206 | 2475 | 25 | 1899 | 44 | 2984 | 11 | 2.548 | 0.392 | 63.64 |
| PD18-120 - 23.d | 20.96 | 0.25 | 0.6222 | 0.0061 | 0.83809 | 3135 | 12 | 3118 | 24 | 3144 | 11 | 4.1 | 0.244 | 99.17 |
| PD18-120 - 24.d | 18.3 | 0.26 | 0.5638 | 0.0079 | 0.78022 | 3005 | 14 | 2882 | 33 | 3084 | 10 | 5.35 | 0.187 | 93.45 |
| PD18-120 - 25.d | 10.36 | 0.39 | 0.3775 | 0.011 | 0.74861 | 2466 | 36 | 2064 | 52 | 2822 | 19 | 6.264 | 0.160 | 73.14 |
| PD18-120 - 26.d | 24.78 | 0.25 | 0.7251 | 0.0077 | 0.87715 | 3299 | 9.9 | 3514 | 29 | 3170 | 7.9 | 6.25 | 0.160 | 110.85 |
| PD18-120 - 27.d | 20.1 | 0.42 | 0.5931 | 0.012 | 0.74318 | 3095.9 | 22 | 3002 | 48 | 3149 | 7.9 | 3.669 | 0.273 | 95.33 |
| PD18-120 - 28.d | 18.95 | 0.25 | 0.6141 | 0.0075 | 0.47158 | 3038 | 13 | 3085 | 30 | 3004 | 19 | 10.91 | 0.092 | 102.70 |
| PD18-120 - 29.d | 22.03 | 0.2 | 0.6471 | 0.0056 | 0.50487 | 3184 | 8.6 | 3217 | 22 | 3169 | 14 | 13.53 | 0.074 | 101.51 |
| PD18-120 - 30.d | 18.63 | 0.72 | 0.5714 | 0.019 | 0.70635 | 3022 | 45 | 2913 | 83 | 3101 | 18 | 3.134 | 0.319 | 93.94 |
| PD18-120 - 31.d | 8.119 | 0.084 | 0.3069 | 0.0029 | 0.69604 | 2244 | 9.4 | 1725 | 14 | 2756 | 11 | 9.3 | 0.108 | 62.59 |
| PD18-120 - 32.d | 15.23 | 0.53 | 0.4914 | 0.015 | 0.92686 | 2827 | 34 | 2576 | 64 | 3011 | 16 | 12.5 | 0.080 | 85.55 |
| PD18-120 - 33.d | 5.303 | 0.22 | 0.232 | 0.006 | 0.92286 | 1868 | 31 | 1345 | 31 | 2512 | 26 | 10.1 | 0.099 | 53.54 |
| PD18-120 - 34.d | 16.17 | 0.24 | 0.5209 | 0.0074 | 0.75738 | 2886 | 14 | 2702 | 32 | 3015 | 14 | 10.5 | 0.095 | 89.62 |
| PD18-120 - 35.d | 16.96 | 0.61 | 0.576 | 0.02 | 0.97162 | 2929 | 33 | 2929 | 79 | 2924 | 9.2 | 7.62 | 0.131 | 100.17 |
| PD18-120 - 36.d | 21.95 | 0.16 | 0.651 | 0.0048 | 0.55544 | 3181.2 | 7.2 | 3232 | 19 | 3148 | 10 | 4.78 | 0.209 | 102.67 |
| | | | | | | | | | | | | | | |
| PD18-126 - 1.d | 10.09 | 0.18 | 0.3131 | 0.0059 | -0.06419 | 2441 | 16 | 1755 | 29 | 3075 | 45 | 2.182 | 0.458 | 57.07 |
| PD18-126 - 2.d | 7.4 | 0.16 | 0.2678 | 0.0051 | 0.85489 | 2158 | 19 | 1529 | 26 | 2824 | 18 | 3.473 | 0.288 | 54.14 |
| PD18-126 - 3.d | 15.59 | 0.36 | 0.399 | 0.011 | -0.2533 | 2848 | 22 | 2162 | 50 | 3378 | 62 | 37 | 0.027 | 64.00 |
| PD18-126 - 4.d | 15.38 | 0.4 | 0.3956 | 0.0085 | -0.08856 | 2834 | 24 | 2146 | 40 | 3375 | 57 | 0.562 | 1.779 | 63.59 |
| PD18-126 - 5.d | 18.91 | 0.31 | 0.6208 | 0.008 | 0.84247 | 3038 | 15 | 3112 | 32 | 2983 | 14 | 1.431 | 0.699 | 104.32 |
| PD18-126 - 6.d | 4.13 | 0.16 | 0.2067 | 0.0062 | 0.94167 | 1652 | 32 | 1210 | 33 | 2274 | 26 | 2.249 | 0.445 | 53.21 |
| PD18-126 - 7.d | 12.7 | 0.32 | 0.4308 | 0.0085 | 0.50325 | 2656 | 27 | 2309 | 39 | 2938 | 20 | 1.873 | 0.534 | 78.59 |
| PD18-126 - 8.d | 10.29 | 0.21 | 0.3324 | 0.0049 | 0.79172 | 2459 | 20 | 1849 | 24 | 3011 | 27 | 1.717 | 0.582 | 61.41 |
| PD18-126 - 9.d | 15.93 | 0.2 | 0.5091 | 0.0051 | 0.75731 | 2872 | 12 | 2652 | 22 | 3027 | 15 | 1.463 | 0.684 | 87.61 |
| PD18-126 - 10.d | 13.21 | 0.24 | 0.3856 | 0.01 | 0.69398 | 2693 | 18 | 2101 | 49 | 3171 | 30 | 2.247 | 0.445 | 66.26 |
| PD18-126 - 11.d | 18.08 | 1.1 | 0.5746 | 0.029 | 0.47154 | 2993 | 84 | 2926 | 130 | 3046 | 38 | 1.61 | 0.621 | 96.06 |
| PD18-126 - 12.d | 8.88 | 0.16 | 0.3402 | 0.0049 | 0.72457 | 2324 | 16 | 1887 | 24 | 2731 | 16 | 0.2392 | 4.181 | 69.10 |
| PD18-126 - 13.d | 14.13 | 0.35 | 0.4777 | 0.0097 | 0.8882 | 2757 | 22 | 2516 | 41 | 2933 | 16 | 0.898 | 1.114 | 85.78 |
| PD18-126 - 14.d | 14.62 | 0.36 | 0.4893 | 0.008 | 0.92858 | 2789 | 24 | 2567 | 35 | 2949 | 22 | 2.627 | 0.381 | 87.05 |
| PD18-126 - 15.d | 10.04 | 0.29 | 0.3681 | 0.0082 | 0.58133 | 2438.3 | 31 | 2020 | 40 | 2811 | 24 | 1.738 | 0.575 | 71.86 |
| PD18-126 - 16.d | 8.65 | 0.31 | 0.2615 | 0.0092 | 0.76247 | 2300 | 34 | 1497 | 45 | 3124 | 49 | 0.3074 | 3.253 | 47.92 |
| PD18-126 - 17.d | 7.08 | 0.18 | 0.2872 | 0.0054 | 0.88562 | 2118 | 24 | 1627 | 27 | 2635 | 20 | 1.486 | 0.673 | 61.75 |
| PD18-126 - 19.d | 19.8 | 0.89 | 0.618 | 0.024 | 0.9144 | 3077 | 53 | 3100 | 100 | 3066 | 23 | 0.873 | 1.145 | 101.11 |
| PD18-126 - 20.d | 12.09 | 0.66 | 0.441 | 0.02 | 0.7555 | 2610 | 70 | 2352 | 93 | 2812 | 42 | 0.594 | 1.684 | 83.64 |
| PD18-126 - 21.d | 13.86 | 0.29 | 0.4604 | 0.0066 | 0.68413 | 2739 | 21 | 2441 | 29 | 2970 | 20 | 4.53 | 0.221 | 82.19 |
| PD18-126 - 22.d | 9.7 | 0.23 | 0.3596 | 0.0072 | 0.25592 | 2406 | 23 | 1980 | 35 | 2784 | 24 | 1.056 | 0.947 | 71.12 |
| PD18-126 - 23.d | 9.18 | 0.31 | 0.3006 | 0.0052 | 0.50706 | 2365 | 34 | 1693 | 26 | 3013 | 43 | 2.32 | 0.431 | 56.19 |
| PD18-126 - 24.d | 9.61 | 0.19 | 0.357 | 0.0067 | 0.56592 | 2397 | 19 | 1973 | 32 | 2775 | 18 | 1.507 | 0.664 | 71.10 |
| PD18-126 - 25.d | 4.06 | 0.1 | 0.2596 | 0.004 | 0.40497 | 1644 | 20 | 1487 | 20 | 1857 | 34 | 1.807 | 0.553 | 80.08 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-126 - 27.d | 11.01 | 0.23 | 0.3695 | 0.0071 | 0.77147 | 2521 | 20 | 2026 | 34 | 2950 | 19 | 1.276 | 0.784 | 68.68 |
| PD18-126 - 28.d | 15.02 | 0.2 | 0.4839 | 0.0072 | 0.643 | 2815 | 14 | 2543 | 32 | 3018 | 21 | 1.426 | 0.701 | 84.26 |
| PD18-126 - 31.d | 7 | 0.16 | 0.2815 | 0.0051 | 0.74388 | 2110 | 23 | 1598 | 26 | 2659 | 20 | 1.935 | 0.517 | 60.10 |
| PD18-126 - 32.d | 11.15 | 0.2 | 0.4003 | 0.006 | 0.69708 | 2535 | 17 | 2170 | 28 | 2839 | 14 | 1.142 | 0.876 | 76.44 |
| PD18-126 - 33.d | 18.71 | 1 | 0.593 | 0.029 | 0.41404 | 3026 | 77 | 3002 | 130 | 3050 | 35 | 1.063 | 0.941 | 98.43 |
| PD18-126 - 34.d | 10.32 | 0.15 | 0.3548 | 0.0043 | 0.76388 | 2463 | 13 | 1957 | 21 | 2908 | 13 | 4.094 | 0.244 | 67.30 |
| PD18-126 - 35.d | 18.66 | 0.99 | 0.5767 | 0.023 | 0.87826 | 3024 | 74 | 2935 | 100 | 3083 | 45 | 4.61 | 0.217 | 95.20 |
| PD18-126 - 36.d | 13.81 | 0.87 | 0.4569 | 0.023 | 0.81359 | 2735 | 92 | 2425 | 110 | 2981 | 56 | 2.03 | 0.493 | 81.35 |
| PD18-126 - 37.d | 16.34 | 0.52 | 0.5288 | 0.015 | 0.59112 | 2896 | 36 | 2736 | 65 | 3017 | 17 | 1.269 | 0.788 | 90.69 |
| PD18-126 - 38.d | 10.63 | 0.22 | 0.3412 | 0.0075 | 0.40406 | 2491 | 21 | 1892 | 37 | 3032 | 20 | 1.075 | 0.930 | 62.40 |
| | | | | | | | | | | | | | | |
| PD18-01-8.d | 1.93 | 0.12 | 0.0627 | 0.0048 | 0.86489 | 1090 | 38 | 392 | 28 | 3042 | 25 | 1.567 | 0.638 | 12.89 |
| PD18-01-10.d | 7.58 | 0.22 | 0.3284 | 0.01 | 0.67528 | 2179 | 28 | 1830 | 48 | 2514 | 25 | 1.104 | 0.906 | 72.79 |
| PD18-01-11.d | 6.22 | 0.21 | 0.1469 | 0.0095 | 0.5477 | 2006 | 27 | 882 | 53 | 3525 | 63 | 2.192 | 0.456 | 25.02 |
| PD18-01-12.d | 4.008 | 0.11 | 0.1486 | 0.0051 | 0.62283 | 1634 | 22 | 893 | 28 | 2780 | 31 | 2.271 | 0.440 | 32.12 |
| PD18-01-13.d | 6.8 | 0.27 | 0.2996 | 0.013 | 0.6779 | 2082 | 33 | 1688 | 62 | 2535 | 23 | 2.29 | 0.437 | 66.59 |
| PD18-01-14.d | 9.69 | 0.56 | 0.395 | 0.024 | 0.77463 | 2408 | 67 | 2143 | 120 | 2623 | 27 | 2.88 | 0.347 | 81.70 |
| PD18-01-15.d | 5.88 | 0.22 | 0.2546 | 0.0087 | 0.64779 | 1955 | 38 | 1461 | 46 | 2522 | 31 | 1.899 | 0.527 | 57.93 |
| PD18-01-16.d | 11.9 | 0.31 | 0.4696 | 0.013 | 0.70919 | 2595 | 24 | 2480 | 58 | 2685 | 21 | 1.466 | 0.682 | 92.36 |
| PD18-01-17.d | 4.674 | 0.13 | 0.1518 | 0.0047 | 0.59609 | 1761 | 24 | 910 | 27 | 2997 | 25 | 3.38 | 0.296 | 30.36 |
| PD18-01-18.d | 3.9 | 0.1 | 0.0727 | 0.002 | 0.70371 | 1613 | 21 | 452.1 | 12 | 3862 | 18 | 2.312 | 0.433 | 11.71 |
| PD18-01-19.d | 5.584 | 0.15 | 0.1426 | 0.0059 | 0.28474 | 1915 | 23 | 858 | 32 | 3387 | 62 | 2.96 | 0.338 | 25.33 |
| PD18-01-20.d | 6.1 | 0.18 | 0.1658 | 0.005 | 0.71284 | 1993 | 27 | 993 | 28 | 3281 | 23 | 3.13 | 0.319 | 30.27 |
| PD18-01-21.d | 13.43 | 0.4 | 0.466 | 0.015 | 0.81083 | 2709 | 29 | 2463 | 67 | 2886 | 19 | 0.179 | 5.587 | 85.34 |
| PD18-01-22.d | 11.25 | 0.31 | 0.4696 | 0.012 | 0.60829 | 2542 | 25 | 2480 | 54 | 2589 | 24 | 1.336 | 0.749 | 95.79 |
| PD18-01-23.d | 3.447 | 0.1 | 0.0642 | 0.0061 | 0.55475 | 1514 | 23 | 401 | 36 | 3862 | 76 | 1.51 | 0.662 | 10.38 |
| PD18-01-24.d | 2.398 | 0.18 | 0.0779 | 0.0042 | 0.45565 | 1244 | 42 | 484 | 25 | 3005 | 69 | 2.29 | 0.437 | 16.11 |
| PD18-01-25.d | 9.11 | 0.3 | 0.3884 | 0.012 | 0.56153 | 2353 | 33 | 2115 | 59 | 2578 | 28 | 1.99 | 0.503 | 82.04 |
| PD18-01-26.d | 12.43 | 0.32 | 0.4933 | 0.013 | 0.50706 | 2636 | 24 | 2583 | 58 | 2675 | 24 | 2.27 | 0.441 | 96.56 |
| PD18-01-34.d | 4.96 | 0.32 | 0.1509 | 0.0054 | 0.68473 | 1811 | 43 | 906 | 30 | 3100 | 49 | 2.71 | 0.369 | 29.23 |
| PD18-01-35.d | 3.145 | 0.082 | 0.1009 | 0.0029 | 0.60503 | 1442 | 20 | 620 | 17 | 3057 | 26 | 4.493 | 0.223 | 20.28 |
| PD18-01-36.d | 1.488 | 0.46 | 0.0906 | 0.012 | 0.86577 | 923 | 110 | 559 | 68 | 1929 | 110 | 0.81 | 1.235 | 28.98 |
| PD18-01-37.d | 4.555 | 0.24 | 0.0996 | 0.0048 | 0.57027 | 1740 | 38 | 612 | 28 | 3608 | 28 | 2.99 | 0.334 | 16.96 |
| PD18-01-38.d | 4.3 | 0.66 | 0.2167 | 0.023 | 0.80461 | 1698 | 83 | 1264 | 110 | 2323 | 45 | 1.36 | 0.735 | 54.41 |
| PD18-01-39.d | 9.47 | 0.31 | 0.3601 | 0.01 | 0.65721 | 2382 | 28 | 1981 | 47 | 2746 | 30 | 1.317 | 0.759 | 72.14 |
| PD18-01-40.d | 12.18 | 0.48 | 0.461 | 0.017 | 0.61398 | 2615 | 38 | 2442 | 80 | 2748 | 37 | 1.217 | 0.822 | 88.86 |
| PD18-01-41.d | 7.15 | 0.28 | 0.3294 | 0.013 | 0.81199 | 2127 | 36 | 1834 | 61 | 2417 | 23 | 2.445 | 0.409 | 75.88 |
| PD18-01-42.d | 6.29 | 0.26 | 0.2037 | 0.015 | 0.63483 | 2015 | 41 | 1195 | 85 | 2997 | 130 | 3.43 | 0.292 | 39.87 |
| PD18-01-43.d | 4.45 | 0.32 | 0.1736 | 0.012 | 0.65966 | 1719 | 48 | 1031 | 63 | 2698 | 24 | 3.216 | 0.311 | 38.21 |
| PD18-01-44.d | 6.29 | 0.28 | 0.2895 | 0.011 | 0.67457 | 2015 | 34 | 1638 | 51 | 2430 | 24 | 1.867 | 0.536 | 67.41 |
| PD18-01-45.d | 10.14 | 0.27 | 0.4344 | 0.012 | 0.55249 | 2446 | 24 | 2325 | 53 | 2551 | 22 | 1.982 | 0.505 | 91.14 |
| PD18-01-46.d | 9.91 | 0.29 | 0.3998 | 0.013 | 0.61324 | 2425 | 27 | 2167 | 61 | 2649 | 24 | 1.77 | 0.565 | 81.80 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-01-47.d | 12.16 | 0.38 | 0.5 | 0.016 | 0.87606 | 2619 | 29 | 2612 | 73 | 2628 | 19 | 2.33 | 0.429 | 99.39 |
| | | | | | | | | | | | | | | |
| PD18-27-101.d | 3.118 | 0.12 | 0.1728 | 0.0058 | 0.72604 | 1436 | 29 | 1027 | 31 | 2100 | 22 | 9.26 | 0.108 | 48.90 |
| PD18-27-102.d | 3.2 | 0.19 | 0.176 | 0.0081 | 0.78182 | 1463 | 49 | 1045 | 45 | 2132 | 40 | 4.64 | 0.216 | 49.02 |
| PD18-27-103.d | 2.72 | 0.17 | 0.1348 | 0.0086 | 0.60415 | 1329 | 54 | 815 | 50 | 2295 | 33 | 0.404 | 2.475 | 35.51 |
| PD18-27-104.d | 1.329 | 0.041 | 0.091 | 0.0026 | 0.42944 | 857.9 | 19 | 561.3 | 15 | 1719 | 25 | 2.78 | 0.360 | 32.65 |
| PD18-27-105.d | 1.777 | 0.076 | 0.1132 | 0.004 | 0.66193 | 1036 | 31 | 691 | 24 | 1894 | 33 | 13.2 | 0.076 | 36.48 |
| PD18-27-106.d | 9.49 | 0.22 | 0.3899 | 0.0094 | 0.74476 | 2386 | 22 | 2122 | 44 | 2613 | 11 | 20.2 | 0.050 | 81.21 |
| PD18-27-107.d | 2.038 | 0.06 | 0.1265 | 0.0035 | 0.68985 | 1127 | 21 | 767.6 | 20 | 1901 | 22 | 5.77 | 0.173 | 40.38 |
| PD18-27-108.d | 1.874 | 0.089 | 0.1096 | 0.0049 | 0.72323 | 1071 | 38 | 670 | 29 | 2011 | 28 | 1.454 | 0.688 | 33.32 |
| PD18-27-109.d | 3.882 | 0.12 | 0.1448 | 0.0043 | 0.60712 | 1609 | 28 | 872 | 25 | 2766 | 26 | 3.404 | 0.294 | 31.53 |
| PD18-27-110.d | 3.208 | 0.13 | 0.1759 | 0.0056 | 0.66079 | 1458 | 35 | 1044 | 31 | 2115 | 32 | 8.72 | 0.115 | 49.36 |
| PD18-27-111.d | 3.86 | 0.21 | 0.1418 | 0.0061 | 0.94273 | 1605 | 43 | 855 | 35 | 2801 | 26 | 4.84 | 0.207 | 30.52 |
| PD18-27-112.d | 2.79 | 0.12 | 0.1655 | 0.0053 | 0.59016 | 1346 | 31 | 987 | 29 | 1966 | 49 | 11.75 | 0.085 | 50.20 |
| PD18-27-113.d | 13.69 | 0.36 | 0.5268 | 0.014 | 0.89314 | 2726 | 25 | 2733 | 57 | 2717 | 13 | 4.36 | 0.229 | 100.59 |
| PD18-27-114.d | 1.924 | 0.1 | 0.127 | 0.0056 | 0.5182 | 1089 | 42 | 771 | 33 | 1787 | 40 | 11.5 | 0.087 | 43.14 |
| PD18-27-115.d | 1.06 | 0.11 | 0.0622 | 0.0047 | 0.74333 | 733 | 44 | 389 | 28 | 1997 | 40 | 32.1 | 0.031 | 19.48 |
| PD18-27-124.d | 2.921 | 0.11 | 0.1622 | 0.0049 | 0.77637 | 1386 | 29 | 969 | 27 | 2094 | 31 | 4.63 | 0.216 | 46.28 |
| PD18-27-125.d | 8.77 | 0.3 | 0.3186 | 0.0099 | 0.73961 | 2313 | 34 | 1782 | 49 | 2822 | 20 | 6.62 | 0.151 | 63.15 |
| PD18-27-126.d | 1.501 | 0.097 | 0.0837 | 0.0047 | 0.94488 | 930 | 50 | 518 | 28 | 2080 | 57 | 6.69 | 0.149 | 24.90 |
| PD18-27-127.d | 0.717 | 0.024 | 0.0517 | 0.0015 | 0.81194 | 548 | 14 | 325.1 | 9.9 | 1665 | 25 | 4.43 | 0.226 | 19.53 |
| PD18-27-128.d | 3.24 | 0.15 | 0.1759 | 0.0077 | 0.61034 | 1465 | 44 | 1044 | 41 | 2136 | 41 | 8.91 | 0.112 | 48.88 |
| PD18-27-129.d | 1.58 | 0.12 | 0.0967 | 0.0056 | 0.88688 | 962 | 45 | 595 | 32 | 1921 | 40 | 3.2 | 0.313 | 30.97 |
| PD18-27-130.d | 1.598 | 0.089 | 0.0989 | 0.0053 | 0.82205 | 968 | 31 | 608 | 31 | 1908 | 29 | 14.1 | 0.071 | 31.87 |
| PD18-27-131.d | 2.678 | 0.1 | 0.1546 | 0.0045 | 0.68826 | 1321 | 31 | 926 | 25 | 2033 | 48 | 25.1 | 0.040 | 45.55 |
| PD18-27-132.d | 2.45 | 0.11 | 0.1442 | 0.0064 | 0.43718 | 1249 | 36 | 867 | 34 | 1992 | 62 | 7.92 | 0.126 | 43.52 |
| PD18-27-133.d | 1.6 | 0.059 | 0.0988 | 0.0026 | 0.54284 | 969 | 24 | 607 | 15 | 1912 | 48 | 26.87 | 0.037 | 31.75 |
| PD18-27-134.d | 10.99 | 0.34 | 0.4313 | 0.013 | 0.72904 | 2521 | 32 | 2311 | 60 | 2691 | 16 | 2.53 | 0.395 | 85.88 |
| PD18-27-135.d | 8.98 | 1 | 0.3702 | 0.035 | 0.83289 | 2334 | 78 | 2030 | 160 | 2602 | 21 | 3.67 | 0.272 | 78.02 |
| PD18-27-136.d | 1.43 | 0.054 | 0.0787 | 0.0023 | 0.7447 | 901 | 24 | 488.5 | 14 | 2125 | 36 | 1.399 | 0.715 | 22.99 |
| PD18-27-137.d | 4.055 | 0.1 | 0.1822 | 0.0049 | 0.76088 | 1644 | 21 | 1079 | 26 | 2471 | 17 | 56.3 | 0.018 | 43.67 |
| PD18-27-138.d | 2.194 | 0.14 | 0.136 | 0.0059 | 0.60458 | 1178 | 40 | 822 | 33 | 1912 | 44 | 10.1 | 0.099 | 42.99 |
| | | | | | | | | | | | | | | |
| PD18-34-147.d | 13.01 | 0.43 | 0.4122 | 0.012 | 0.77311 | 2678 | 34 | 2224 | 56 | 3044 | 23 | 5.73 | 0.175 | 73.06 |
| PD18-34-148.d | 25.22 | 0.85 | 0.651 | 0.019 | 0.75327 | 3315 | 38 | 3231 | 86 | 3358 | 32 | 1.116 | 0.896 | 96.22 |
| PD18-34-149.d | 10.46 | 0.58 | 0.3114 | 0.016 | 0.82483 | 2474 | 67 | 1746 | 83 | 3131 | 22 | 3.19 | 0.313 | 55.76 |
| PD18-34-150.d | 2.506 | 0.1 | 0.132 | 0.0054 | 0.74202 | 1272 | 32 | 799 | 29 | 2205 | 21 | 3.73 | 0.268 | 36.24 |
| PD18-34-151.d | 0.775 | 0.076 | 0.0513 | 0.003 | 0.87782 | 582 | 36 | 322.7 | 18 | 1776 | 51 | 10.24 | 0.098 | 18.17 |
| PD18-34-152.d | 5.67 | 0.53 | 0.2141 | 0.013 | 0.7672 | 1926 | 59 | 1251 | 65 | 2763 | 38 | 2.74 | 0.365 | 45.28 |
| PD18-34-153.d | 2.066 | 0.078 | 0.1161 | 0.0038 | 0.74063 | 1137 | 23 | 708 | 22 | 2073 | 25 | 2.368 | 0.422 | 34.15 |
| PD18-34-154.d | 2.661 | 0.065 | 0.1508 | 0.0036 | 0.56426 | 1317 | 18 | 905.6 | 20 | 2068 | 22 | 17.49 | 0.057 | 43.79 |
| PD18-34-155.d | 0.863 | 0.054 | 0.0615 | 0.0031 | 0.89859 | 630 | 27 | 385 | 19 | 1687 | 34 | 4.11 | 0.243 | 22.82 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-34-156.d | 0.538 | 0.022 | 0.04787 | 0.0013 | 0.81669 | 436.5 | 14 | 301.4 | 7.9 | 1230 | 36 | 1.031 | 0.970 | 24.50 |
| PD18-34-157.d | 4.12 | 0.22 | 0.171 | 0.0069 | 0.75752 | 1660 | 36 | 1017 | 37 | 2607 | 27 | 2.48 | 0.403 | 39.01 |
| PD18-34-158.d | 13.56 | 0.32 | 0.3764 | 0.009 | 0.70743 | 2719.2 | 22 | 2059 | 42 | 3248 | 11 | 0.6143 | 1.628 | 63.39 |
| PD18-34-159.d | 1.903 | 0.22 | 0.1166 | 0.0083 | 0.67926 | 1088 | 66 | 711 | 48 | 1965 | 55 | 1.325 | 0.755 | 36.18 |
| PD18-34-160.d | 2.279 | 0.063 | 0.1104 | 0.0032 | 0.47938 | 1205 | 19 | 675 | 19 | 2340 | 35 | 2.636 | 0.379 | 28.85 |
| PD18-34-161.d | 10.57 | 0.3 | 0.3628 | 0.011 | 0.62498 | 2483 | 26 | 1994 | 50 | 2909 | 25 | 1.827 | 0.547 | 68.55 |
| PD18-34-169.d | 1.739 | 0.66 | 0.0807 | 0.019 | 0.97126 | 1019 | 120 | 500 | 100 | 2444 | 62 | 2.47 | 0.405 | 20.46 |
| PD18-34-170.d | 19.56 | 0.6 | 0.611 | 0.019 | 0.65114 | 3069 | 32 | 3072 | 77 | 3062 | 15 | 1.21 | 0.826 | 100.33 |
| PD18-34-171.d | 6.83 | 0.27 | 0.2827 | 0.012 | 0.92612 | 2088 | 31 | 1604 | 58 | 2600 | 13 | 1.268 | 0.789 | 61.69 |
| PD18-34-172.d | 2.001 | 0.056 | 0.104 | 0.0028 | 0.66593 | 1115 | 20 | 637.8 | 16 | 2253 | 20 | 1.967 | 0.508 | 28.31 |
| PD18-34-173.d | 7.78 | 0.25 | 0.2827 | 0.0085 | 0.78816 | 2203 | 30 | 1604 | 43 | 2818 | 20 | 2.38 | 0.420 | 56.92 |
| PD18-34-174.d | 2.11 | 0.11 | 0.0952 | 0.0042 | 0.89222 | 1150 | 32 | 586 | 25 | 2462 | 21 | 3.17 | 0.315 | 23.80 |
| PD18-34-175.d | 0.994 | 0.13 | 0.058 | 0.0046 | 0.77297 | 700 | 53 | 363.5 | 28 | 2052 | 57 | 7.79 | 0.128 | 17.71 |
| PD18-34-176.d | 6.8 | 0.18 | 0.2703 | 0.0068 | 0.75134 | 2084 | 24 | 1542 | 35 | 2667 | 20 | 1.306 | 0.766 | 57.82 |
| PD18-34-177.d | 9.43 | 0.63 | 0.325 | 0.017 | 0.78368 | 2379 | 94 | 1814 | 91 | 2900 | 64 | 3.02 | 0.331 | 62.55 |
| PD18-34-178.d | 0.354 | 0.018 | 0.034 | 0.0015 | 0.70645 | 307.5 | 13 | 215.5 | 9 | 1109 | 48 | 5.29 | 0.189 | 19.43 |
| PD18-34-179.d | 4.49 | 0.19 | 0.1939 | 0.0071 | 0.89493 | 1725 | 39 | 1142 | 38 | 2520 | 25 | 2.15 | 0.465 | 45.32 |
| PD18-34-180.d | 7.34 | 0.31 | 0.2729 | 0.0089 | 0.69424 | 2153 | 40 | 1555 | 46 | 2780 | 29 | 11.4 | 0.088 | 55.94 |
| PD18-34-181.d | 10.35 | 0.29 | 0.3156 | 0.0084 | 0.72351 | 2465 | 25 | 1768 | 41 | 3101 | 19 | 2.381 | 0.420 | 57.01 |
| PD18-34-182.d | 17.17 | 0.74 | 0.56 | 0.024 | 0.74286 | 2942 | 48 | 2863 | 110 | 2995 | 24 | 0.7 | 1.429 | 95.59 |
| PD18-34-183.d | 18.45 | 0.48 | 0.599 | 0.016 | 0.46831 | 3015 | 24 | 3023 | 65 | 2996 | 23 | 0.955 | 1.047 | 100.90 |
| PD18-34-191.d | 12.75 | 27 | 0.376 | 0.31 | 0.8809 | 2655 | 240 | 2055 | 490 | 3156 | 120 | 3.65 | 0.274 | 65.11 |
| PD18-34-192.d | 16.9 | 0.44 | 0.576 | 0.016 | 0.70137 | 2928 | 25 | 2931 | 67 | 2925 | 21 | 1.227 | 0.815 | 100.21 |
| PD18-34-193.d | 13.67 | 0.49 | 0.416 | 0.013 | 0.84261 | 2724 | 33 | 2241 | 63 | 3104 | 20 | 1.079 | 0.927 | 72.20 |
| | | | | | | | | | | | | | | |
| PD18-37-194.d | 6.83 | 0.53 | 0.303 | 0.02 | 0.56651 | 2087 | 110 | 1705 | 110 | 2478 | 67 | 1.46 | 0.685 | 68.81 |
| PD18-37-195.d | 8.78 | 0.36 | 0.3856 | 0.015 | 0.53889 | 2313 | 40 | 2101 | 71 | 2523 | 22 | 0.811 | 1.233 | 83.27 |
| PD18-37-196.d | 10.44 | 0.38 | 0.4544 | 0.015 | 0.81629 | 2473 | 38 | 2414 | 70 | 2524 | 19 | 0.738 | 1.355 | 95.64 |
| PD18-37-197.d | 10.01 | 0.39 | 0.429 | 0.017 | 0.68626 | 2432 | 41 | 2299 | 80 | 2546 | 26 | 1.92 | 0.521 | 90.30 |
| PD18-37-198.d | 5.29 | 0.18 | 0.2454 | 0.0074 | 0.74404 | 1864 | 30 | 1414 | 39 | 2405 | 28 | 0.753 | 1.328 | 58.79 |
| PD18-37-199.d | 10.75 | 0.3 | 0.4616 | 0.012 | 0.84524 | 2499 | 26 | 2445 | 54 | 2536 | 24 | 1.362 | 0.734 | 96.41 |
| PD18-37-200.d | 10.05 | 0.36 | 0.4378 | 0.015 | 0.44142 | 2438 | 37 | 2340 | 68 | 2525 | 22 | 0.723 | 1.383 | 92.67 |
| PD18-37-201.d | 9.59 | 0.47 | 0.422 | 0.02 | 0.76475 | 2393 | 62 | 2269 | 98 | 2489 | 25 | 1.556 | 0.643 | 91.16 |
| PD18-37-202.d | 6.379 | 0.16 | 0.2713 | 0.0068 | 0.86855 | 2029 | 22 | 1547 | 35 | 2593 | 24 | 2.62 | 0.382 | 59.66 |
| PD18-37-203.d | 10.92 | 0.56 | 0.458 | 0.022 | 0.62366 | 2514 | 61 | 2430 | 100 | 2573 | 24 | 0.765 | 1.307 | 94.44 |
| PD18-37-204.d | 7.54 | 0.3 | 0.3342 | 0.012 | 0.51835 | 2175 | 41 | 1858 | 61 | 2477 | 27 | 1.294 | 0.773 | 75.01 |
| PD18-37-205.d | 14.11 | 0.44 | 0.5367 | 0.015 | 0.49118 | 2756 | 27 | 2769 | 61 | 2747 | 20 | 0.679 | 1.473 | 100.80 |
| PD18-37-213.d | 1.536 | 0.057 | 0.0951 | 0.003 | 0.74055 | 943 | 24 | 585 | 18 | 1896 | 34 | 0.5393 | 1.854 | 30.85 |
| PD18-37-214.d | 8.81 | 0.31 | 0.3769 | 0.013 | 0.59042 | 2316 | 36 | 2061 | 61 | 2539 | 28 | 3.18 | 0.314 | 81.17 |
| PD18-37-215.d | 10.87 | 0.29 | 0.4618 | 0.013 | 0.60452 | 2511 | 25 | 2446 | 56 | 2564 | 25 | 0.655 | 1.527 | 95.40 |
| PD18-37-216.d | 9.51 | 0.43 | 0.4133 | 0.018 | 0.61303 | 2386 | 49 | 2229 | 87 | 2515 | 22 | 6.2 | 0.161 | 88.63 |
| PD18-37-217.d | 10.07 | 0.3 | 0.4455 | 0.014 | 0.45968 | 2439 | 30 | 2374 | 65 | 2527 | 27 | 0.7077 | 1.413 | 93.95 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-37-218.d | 9.78 | 0.57 | 0.3724 | 0.018 | 0.81799 | 2413 | 52 | 2039 | 82 | 2726 | 32 | 0.954 | 1.048 | 74.80 |
| PD18-37-219.d | 10.75 | 0.3 | 0.4607 | 0.013 | 0.55711 | 2505 | 27 | 2452 | 58 | 2533 | 27 | 1.082 | 0.924 | 96.80 |
| PD18-37-220.d | 12.92 | 0.46 | 0.3781 | 0.014 | 0.80142 | 2671 | 37 | 2066 | 65 | 3164 | 19 | 1.196 | 0.836 | 65.30 |
| PD18-37-221.d | 5.54 | 0.36 | 0.2725 | 0.014 | 0.66728 | 1904 | 46 | 1553 | 69 | 2304 | 29 | 2.06 | 0.485 | 67.40 |
| PD18-37-222.d | 3.803 | 0.44 | 0.1737 | 0.019 | 0.4568 | 1592 | 69 | 1032 | 96 | 2430 | 29 | 1.856 | 0.539 | 42.47 |
| PD18-37-223.d | 1.55 | 0.42 | 0.099 | 0.016 | 0.37697 | 940 | 100 | 608 | 87 | 1806 | 92 | 8.34 | 0.120 | 33.67 |
| PD18-37-224.d | 7.43 | 0.27 | 0.3207 | 0.013 | 0.74617 | 2162 | 30 | 1792 | 61 | 2526 | 21 | 0.794 | 1.259 | 70.94 |
| PD18-37-225.d | 5.61 | 0.24 | 0.2671 | 0.0094 | 0.82105 | 1916 | 33 | 1525 | 47 | 2363 | 21 | 0.587 | 1.704 | 64.54 |
| PD18-37-226.d | 8.83 | 0.33 | 0.3995 | 0.015 | 0.43125 | 2318 | 39 | 2165 | 71 | 2488 | 32 | 0.87 | 1.149 | 87.02 |
| PD18-37-227.d | 10.31 | 0.3 | 0.434 | 0.013 | 0.81622 | 2461 | 27 | 2322 | 60 | 2612 | 17 | 0.589 | 1.698 | 88.90 |
| PD18-37-235.d | 3.173 | 0.23 | 0.1746 | 0.01 | 0.50139 | 1450 | 58 | 1037 | 55 | 2153 | 41 | 1.314 | 0.761 | 48.17 |
| PD18-37-236.d | 11.48 | 0.38 | 0.486 | 0.015 | 0.79501 | 2558 | 32 | 2551 | 65 | 2584 | 23 | 0.909 | 1.100 | 98.72 |
| PD18-37-237.d | 9.52 | 0.47 | 0.4232 | 0.021 | 0.8817 | 2387 | 57 | 2274 | 99 | 2488 | 24 | 0.688 | 1.453 | 91.40 |
| | | | | | | | | | | | | | | |
| PD18-54-240.d | 4.1 | 0.33 | 0.1929 | 0.014 | 0.78252 | 1652 | 62 | 1136 | 77 | 2379 | 24 | 13.4 | 0.075 | 47.75 |
| PD18-54-241.d | 1.785 | 0.1 | 0.1099 | 0.0038 | 0.62321 | 1039 | 32 | 672 | 22 | 1915 | 46 | 18.9 | 0.053 | 35.09 |
| PD18-54-242.d | 11.17 | 0.34 | 0.464 | 0.014 | 0.35611 | 2536 | 32 | 2456 | 63 | 2596 | 16 | 69.8 | 0.014 | 94.61 |
| PD18-54-243.d | 2.214 | 0.065 | 0.1225 | 0.0037 | 0.71675 | 1184 | 20 | 745 | 21 | 2108 | 33 | 12.9 | 0.078 | 35.34 |
| PD18-54-244.d | 3.83 | 0.21 | 0.1848 | 0.0082 | 0.73643 | 1598 | 46 | 1093 | 45 | 2357 | 45 | 18.6 | 0.054 | 46.37 |
| PD18-54-245.d | 3.34 | 0.14 | 0.1665 | 0.0055 | 0.73611 | 1487 | 36 | 992 | 31 | 2278 | 36 | 59 | 0.017 | 43.55 |
| PD18-54-246.d | 1.179 | 0.041 | 0.0644 | 0.0025 | 0.67564 | 790 | 18 | 402 | 15 | 2116 | 24 | 136 | 0.007 | 19.00 |
| PD18-54-247.d | 3.312 | 0.18 | 0.172 | 0.0077 | 0.49021 | 1482 | 37 | 1023 | 41 | 2210 | 32 | 3.01 | 0.332 | 46.29 |
| PD18-54-248.d | 4.101 | 0.2 | 0.1976 | 0.0085 | 0.76705 | 1653 | 49 | 1162 | 47 | 2359 | 30 | 9.21 | 0.109 | 49.26 |
| PD18-54-249.d | 2.091 | 0.099 | 0.1147 | 0.0041 | 0.53999 | 1144 | 38 | 699 | 24 | 2128 | 47 | 30 | 0.033 | 32.85 |
| PD18-54-250.d | 2.355 | 0.16 | 0.1256 | 0.0054 | 0.71129 | 1227 | 43 | 762 | 30 | 2164 | 47 | 7.61 | 0.131 | 35.21 |
| PD18-54-251.d | 7.09 | 0.23 | 0.2907 | 0.0087 | 0.60374 | 2121 | 31 | 1645 | 44 | 2615 | 25 | 4.77 | 0.210 | 62.91 |
| PD18-54-252.d | 3.428 | 0.17 | 0.1762 | 0.0073 | 0.80908 | 1509 | 34 | 1046 | 40 | 2272 | 31 | 2.94 | 0.340 | 46.04 |
| PD18-54-260.d | 2.656 | 0.08 | 0.1378 | 0.0041 | 0.74749 | 1315 | 21 | 832 | 23 | 2257 | 21 | 12.9 | 0.078 | 36.86 |
| PD18-54-261.d | 2.402 | 0.07 | 0.1311 | 0.0036 | 0.77958 | 1242 | 22 | 794 | 22 | 2169 | 24 | 104 | 0.010 | 36.61 |
| PD18-54-262.d | 4.36 | 0.15 | 0.209 | 0.0061 | 0.69667 | 1703 | 26 | 1223 | 32 | 2391 | 25 | 26.4 | 0.038 | 51.15 |
| PD18-54-263.d | 2.915 | 0.12 | 0.1463 | 0.0049 | 0.31249 | 1385 | 29 | 880 | 27 | 2269 | 32 | 16.8 | 0.060 | 38.78 |
| PD18-54-264.d | 1.753 | 0.099 | 0.0866 | 0.006 | 0.78103 | 1027 | 32 | 535 | 35 | 2299 | 25 | 12 | 0.083 | 23.27 |
| PD18-54-265.d | 6.91 | 0.33 | 0.299 | 0.014 | 0.95403 | 2087 | 42 | 1682 | 68 | 2530 | 16 | 28.7 | 0.035 | 66.48 |
| PD18-54-266.d | 1.702 | 0.15 | 0.1055 | 0.006 | 0.80935 | 1009 | 45 | 647 | 34 | 1900 | 46 | 16.5 | 0.061 | 34.05 |
| PD18-54-267.d | 3.311 | 0.1 | 0.1743 | 0.0053 | 0.76407 | 1482 | 24 | 1035 | 29 | 2183 | 22 | 10.4 | 0.096 | 47.41 |
| PD18-54-268.d | 2.127 | 0.12 | 0.121 | 0.0058 | 0.53631 | 1156 | 35 | 736 | 33 | 2034 | 26 | 5.59 | 0.179 | 36.18 |
| PD18-54-269.d | 1.84 | 0.23 | 0.1139 | 0.0084 | 0.82595 | 1058 | 60 | 695 | 47 | 1900 | 56 | 29.8 | 0.034 | 36.58 |
| PD18-54-270.d | 1.745 | 0.14 | 0.0996 | 0.0057 | 0.68547 | 1024 | 41 | 612 | 33 | 2090 | 32 | 21.8 | 0.046 | 29.28 |
| PD18-54-271.d | 10.84 | 0.3 | 0.4484 | 0.012 | 0.77014 | 2511 | 27 | 2387 | 56 | 2646 | 18 | 2.539 | 0.394 | 90.21 |
| PD18-54-272.d | 3.729 | 0.12 | 0.1847 | 0.0052 | 0.63061 | 1576 | 27 | 1092 | 28 | 2294 | 26 | 5.04 | 0.198 | 47.60 |
| PD18-54-273.d | 2.424 | 0.21 | 0.1307 | 0.0077 | 0.81828 | 1247 | 48 | 791 | 42 | 2140 | 38 | 6.04 | 0.166 | 36.96 |
| PD18-54-274.d | 2.68 | 0.27 | 0.1541 | 0.01 | 0.78399 | 1321 | 49 | 924 | 52 | 2043 | 40 | 14.95 | 0.067 | 45.23 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-54-275.d | 2.22 | 0.093 | 0.1139 | 0.0044 | 0.78682 | 1186 | 32 | 695 | 25 | 2244 | 26 | 49.8 | 0.020 | 30.97 |
| PD18-54-276.d | 2.352 | 0.2 | 0.1061 | 0.0089 | 0.74577 | 1227 | 46 | 650 | 52 | 2468 | 30 | 3.56 | 0.281 | 26.34 |
| PD18-54-284.d | 3.654 | 0.31 | 0.1872 | 0.012 | 0.70713 | 1559 | 54 | 1106 | 59 | 2275 | 34 | 10.4 | 0.096 | 48.62 |
| PD18-54-285.d | 3.566 | 0.1 | 0.1768 | 0.005 | 0.71047 | 1541 | 24 | 1049 | 28 | 2307 | 20 | 6.47 | 0.155 | 45.47 |
| PD18-54-286.d | 9.84 | 0.26 | 0.3924 | 0.01 | 0.71016 | 2421 | 26 | 2133 | 49 | 2671 | 20 | 7.67 | 0.130 | 79.86 |
| PD18-54-287.d | 12 | 0.31 | 0.4892 | 0.012 | 0.66128 | 2603 | 24 | 2566 | 54 | 2628 | 19 | 4.64 | 0.216 | 97.64 |
| | | | | | | | | | | | | | | |
| PD18-47-288.d | 7.73 | 0.32 | 0.3114 | 0.011 | 0.64054 | 2197 | 43 | 1747 | 55 | 2644 | 28 | 1.938 | 0.516 | 66.07 |
| PD18-47-289.d | 7.24 | 0.53 | 0.316 | 0.014 | 0.70165 | 2139 | 56 | 1768 | 65 | 2550 | 44 | 2.83 | 0.353 | 69.33 |
| PD18-47-290.d | 7.05 | 0.3 | 0.3301 | 0.013 | 0.71115 | 2116 | 39 | 1837 | 62 | 2395 | 24 | 4.16 | 0.240 | 76.70 |
| PD18-47-291.d | 11.53 | 0.38 | 0.4261 | 0.011 | 0.24416 | 2565 | 29 | 2287 | 52 | 2792 | 49 | 1.3 | 0.769 | 81.91 |
| PD18-47-292.d | 11.74 | 0.36 | 0.4797 | 0.014 | 0.39115 | 2580 | 29 | 2524 | 57 | 2627 | 38 | 1.799 | 0.556 | 96.08 |
| PD18-47-293.d | 9.92 | 0.32 | 0.4366 | 0.013 | 0.85296 | 2426 | 32 | 2334 | 62 | 2503 | 22 | 3.37 | 0.297 | 93.25 |
| PD18-47-294.d | 7.06 | 0.26 | 0.3056 | 0.011 | 0.43563 | 2115 | 35 | 1718 | 57 | 2534 | 35 | 3.14 | 0.318 | 67.80 |
| PD18-47-295.d | 10.01 | 0.54 | 0.421 | 0.02 | 0.84376 | 2431 | 66 | 2262 | 99 | 2563 | 28 | 2 | 0.500 | 88.26 |
| PD18-47-296.d | 5.79 | 0.22 | 0.2787 | 0.0097 | 0.018339 | 1944 | 35 | 1584 | 49 | 2352 | 30 | 4.36 | 0.229 | 67.35 |
| PD18-47-297.d | 7.43 | 0.2 | 0.316 | 0.0085 | 0.86347 | 2163 | 24 | 1770 | 42 | 2558 | 21 | 1.846 | 0.542 | 69.19 |
| PD18-47-298.d | 8.06 | 0.44 | 0.3071 | 0.013 | 0.77446 | 2236 | 62 | 1725 | 68 | 2740 | 47 | 0.0872 | 11.468 | 62.96 |
| PD18-47-306.d | 10.83 | 0.34 | 0.463 | 0.016 | 0.67275 | 2506 | 30 | 2463 | 72 | 2548 | 29 | 1.376 | 0.727 | 96.66 |
| PD18-47-307.d | 7.94 | 0.36 | 0.351 | 0.015 | 0.57041 | 2221 | 53 | 1940 | 73 | 2481 | 24 | 2.54 | 0.394 | 78.19 |
| PD18-47-308.d | 5.221 | 0.14 | 0.2467 | 0.0067 | 0.75012 | 1854 | 24 | 1421 | 35 | 2371 | 22 | 3.93 | 0.254 | 59.93 |
| PD18-47-309.d | 5.33 | 0.37 | 0.2488 | 0.014 | 0.863 | 1878 | 47 | 1432 | 69 | 2404 | 27 | 5.41 | 0.185 | 59.57 |
| PD18-47-310.d | 8.92 | 0.31 | 0.3802 | 0.012 | 0.62859 | 2328 | 35 | 2076 | 58 | 2541 | 22 | 15.44 | 0.065 | 81.70 |
| PD18-47-311.d | 6.83 | 0.24 | 0.3083 | 0.0093 | 0.63919 | 2086 | 34 | 1732 | 46 | 2458 | 30 | 1.614 | 0.620 | 70.46 |
| PD18-47-312.d | 6.87 | 0.2 | 0.3014 | 0.0082 | 0.71738 | 2093 | 27 | 1698 | 41 | 2500 | 24 | 3.96 | 0.253 | 67.92 |
| PD18-47-313.d | 11.61 | 0.31 | 0.4778 | 0.012 | 0.7499 | 2571 | 25 | 2517 | 54 | 2611 | 21 | 2.4 | 0.417 | 96.40 |
| PD18-47-314.d | 6.87 | 0.25 | 0.2645 | 0.0097 | 0.86691 | 2098 | 36 | 1512 | 50 | 2717 | 16 | 135.6 | 0.007 | 55.65 |
| PD18-47-315.d | 11.9 | 0.33 | 0.4911 | 0.013 | 0.63129 | 2595 | 27 | 2574 | 56 | 2612 | 26 | 0.957 | 1.045 | 98.55 |
| PD18-47-316.d | 6.26 | 3.1 | 0.2854 | 0.054 | 0.88146 | 2005 | 180 | 1616 | 240 | 2438 | 110 | 3.38 | 0.296 | 66.28 |
| PD18-47-317.d | 4.72 | 1.4 | 0.2201 | 0.039 | 0.76711 | 1766 | 120 | 1281 | 170 | 2391 | 63 | 2.654 | 0.377 | 53.58 |
| PD18-47-318.d | 5.68 | 0.21 | 0.2661 | 0.0083 | 0.67318 | 1926 | 37 | 1520 | 43 | 2391 | 32 | 2.73 | 0.366 | 63.57 |
| PD18-47-319.d | 7.63 | 1.7 | 0.339 | 0.058 | 0.91196 | 2187 | 110 | 1878 | 230 | 2543 | 28 | 0.538 | 1.859 | 73.85 |
| | | | | | | | | | | | | | | |
| PD18-45-320.d | 7.11 | 0.35 | 0.306 | 0.014 | 0.76321 | 2124 | 55 | 1720 | 74 | 2575 | 31 | 1.294 | 0.773 | 66.80 |
| PD18-45-328.d | 9.21 | 0.39 | 0.3912 | 0.016 | 0.80785 | 2357 | 47 | 2128 | 79 | 2565 | 22 | 1.274 | 0.785 | 82.96 |
| PD18-45-329.d | 39 | 92 | 0.79 | 1 | 0.72584 | 3744 | 320 | 3750 | 1300 | 3742 | 88 | 1.223 | 0.818 | 100.21 |
| PD18-45-330.d | 5.058 | 0.15 | 0.2361 | 0.0068 | 0.85848 | 1828 | 26 | 1366 | 36 | 2410 | 19 | 0.89 | 1.124 | 56.68 |
| PD18-45-331.d | 1.391 | 0.14 | 0.073 | 0.0057 | 0.76788 | 883 | 47 | 454 | 33 | 2189 | 36 | 2.58 | 0.388 | 20.74 |
| PD18-45-332.d | 11.72 | 0.29 | 0.4714 | 0.012 | 0.61386 | 2581 | 22 | 2489 | 52 | 2645 | 17 | 0.643 | 1.555 | 94.10 |
| PD18-45-333.d | 11.25 | 0.55 | 0.462 | 0.022 | 0.61245 | 2543 | 63 | 2448 | 100 | 2625 | 26 | 2.424 | 0.413 | 93.26 |
| PD18-45-334.d | 12.17 | 0.42 | 0.484 | 0.016 | 0.32264 | 2617 | 37 | 2545 | 72 | 2662 | 25 | 1.211 | 0.826 | 95.60 |
| PD18-45-335.d | 9.25 | 0.27 | 0.386 | 0.012 | 0.70437 | 2361 | 29 | 2103 | 53 | 2584 | 23 | 1.242 | 0.805 | 81.39 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-45-336.d | 11.71 | 0.31 | 0.4727 | 0.012 | 0.60182 | 2580 | 26 | 2500 | 53 | 2637 | 20 | 1.49 | 0.671 | 94.80 |
| PD18-45-337.d | 10.22 | 0.46 | 0.4235 | 0.017 | 0.76885 | 2459 | 53 | 2275 | 80 | 2599 | 29 | 1.239 | 0.807 | 87.53 |
| PD18-45-338.d | 7.73 | 0.42 | 0.323 | 0.016 | 0.86962 | 2196 | 62 | 1805 | 80 | 2580 | 30 | 0.987 | 1.013 | 69.96 |
| PD18-45-339.d | 4.344 | 0.48 | 0.2001 | 0.018 | 0.78326 | 1701 | 65 | 1176 | 89 | 2430 | 31 | 1.098 | 0.911 | 48.40 |
| PD18-45-340.d | 10.76 | 0.47 | 0.4347 | 0.017 | 0.63745 | 2501 | 52 | 2326 | 80 | 2635 | 27 | 1.347 | 0.742 | 88.27 |
| PD18-45-341.d | 4.22 | 0.36 | 0.2052 | 0.015 | 0.47436 | 1677 | 62 | 1203 | 78 | 2369 | 36 | 1.134 | 0.882 | 50.78 |
| PD18-45-342.d | 11.29 | 0.31 | 0.4547 | 0.012 | 0.2167 | 2546 | 26 | 2415 | 55 | 2651 | 24 | 1.138 | 0.879 | 91.10 |
| PD18-45-350.d | 13.33 | 0.33 | 0.523 | 0.013 | 0.76447 | 2702 | 24 | 2711 | 57 | 2692 | 17 | 1.184 | 0.845 | 100.71 |
| PD18-45-351.d | 10.79 | 0.52 | 0.433 | 0.02 | 0.70078 | 2504 | 55 | 2318 | 95 | 2646 | 21 | 1.137 | 0.880 | 87.60 |
| PD18-45-352.d | 12.96 | 0.33 | 0.5201 | 0.014 | 0.56057 | 2676 | 25 | 2698 | 58 | 2653 | 20 | 1.525 | 0.656 | 101.70 |
| PD18-45-353.d | 9.25 | 0.68 | 0.382 | 0.025 | 0.853 | 2360 | 110 | 2082 | 130 | 2602 | 44 | 1.134 | 0.882 | 80.02 |
| PD18-45-354.d | 5.73 | 0.41 | 0.2516 | 0.016 | 0.59329 | 1934 | 48 | 1446 | 79 | 2505 | 23 | 1.318 | 0.759 | 57.72 |
| PD18-45-355.d | 2.039 | 0.43 | 0.096 | 0.018 | 0.75595 | 1127 | 89 | 591 | 95 | 2425 | 34 | 0.798 | 1.253 | 24.37 |
| PD18-45-356.d | 3.929 | 0.25 | 0.1657 | 0.01 | 0.54099 | 1618 | 69 | 987 | 59 | 2604 | 47 | 1.493 | 0.670 | 37.90 |
| PD18-45-357.d | 9.57 | 0.42 | 0.394 | 0.016 | 0.72357 | 2392 | 48 | 2140 | 78 | 2616 | 25 | 1.028 | 0.973 | 81.80 |
| PD18-45-358.d | 8.5 | 0.28 | 0.3569 | 0.011 | 0.52578 | 2285 | 28 | 1967 | 51 | 2574 | 17 | 1.096 | 0.912 | 76.42 |
| PD18-45-359.d | 7.31 | 0.71 | 0.311 | 0.026 | 0.80376 | 2146 | 93 | 1742 | 130 | 2548 | 32 | 1.41 | 0.709 | 68.37 |
| PD18-45-360.d | 4.64 | 0.43 | 0.2163 | 0.015 | 0.74251 | 1754 | 57 | 1262 | 75 | 2407 | 30 | 1.368 | 0.731 | 52.43 |
| PD18-45-361.d | 4.61 | 0.3 | 0.1823 | 0.0093 | 0.71306 | 1748 | 63 | 1078 | 52 | 2683 | 54 | 1.049 | 0.953 | 40.18 |
| PD18-45-362.d | 9.41 | 0.31 | 0.3827 | 0.012 | 0.72561 | 2378 | 33 | 2088 | 57 | 2626 | 23 | 2.048 | 0.488 | 79.51 |
| PD18-45-363.d | 13.51 | 0.37 | 0.505 | 0.015 | 0.78242 | 2714 | 27 | 2632 | 65 | 2768 | 22 | 0.963 | 1.038 | 95.09 |
| PD18-45-364.d | 2.65 | 0.22 | 0.1228 | 0.0099 | 0.81133 | 1311 | 67 | 746 | 57 | 2445 | 27 | 1.053 | 0.950 | 30.51 |
| PD18-45-365.d | 8.58 | 0.52 | 0.3612 | 0.019 | 0.40173 | 2293 | 72 | 1987 | 97 | 2631 | 29 | 1.73 | 0.578 | 75.52 |
| | | | | | | | | | | | | | | |
| PD18-44-373.d | 12.59 | 0.85 | 0.507 | 0.028 | 0.58026 | 2648 | 60 | 2639 | 140 | 2647 | 52 | 0.83 | 1.205 | 99.70 |
| PD18-44-374.d | 11.5 | 0.62 | 0.464 | 0.027 | 0.63474 | 2562 | 72 | 2453 | 130 | 2640 | 44 | 0.733 | 1.364 | 92.92 |
| PD18-44-375.d | 11.27 | 0.31 | 0.4285 | 0.013 | 0.42659 | 2543 | 25 | 2296 | 60 | 2738 | 28 | 1.172 | 0.853 | 83.86 |
| PD18-44-376.d | 12.06 | 0.35 | 0.4727 | 0.013 | 0.37887 | 2609 | 28 | 2493 | 58 | 2689 | 34 | 0.968 | 1.033 | 92.71 |
| PD18-44-377.d | 3.34 | 0.2 | 0.1618 | 0.0065 | 0.44399 | 1490 | 41 | 967 | 36 | 2312 | 44 | 1.134 | 0.882 | 41.83 |
| PD18-44-378.d | 2.982 | 0.087 | 0.1466 | 0.0043 | 0.89573 | 1392 | 23 | 881 | 24 | 2304 | 18 | 1.07 | 0.935 | 38.24 |
| PD18-44-379.d | 9.49 | 0.31 | 0.3396 | 0.0085 | 0.43245 | 2384 | 32 | 1884 | 41 | 2841 | 39 | 0.814 | 1.229 | 66.31 |
| PD18-44-380.d | 9.03 | 0.24 | 0.3478 | 0.01 | 0.39741 | 2340 | 25 | 1923 | 49 | 2725 | 26 | 1.368 | 0.731 | 70.57 |
| PD18-44-381.d | 7.25 | 0.27 | 0.24 | 0.014 | 0.80047 | 2139 | 36 | 1383 | 75 | 3026 | 63 | 0.877 | 1.140 | 45.70 |
| PD18-44-382.d | 12.31 | 0.32 | 0.4942 | 0.013 | 0.66245 | 2626 | 25 | 2588 | 56 | 2656 | 21 | 0.861 | 1.161 | 97.44 |
| PD18-44-383.d | 7.33 | 1.3 | 0.242 | 0.021 | 0.85466 | 2150 | 93 | 1394 | 99 | 2974 | 81 | 0.877 | 1.140 | 46.87 |
| PD18-44-384.d | 9.74 | 0.27 | 0.3861 | 0.012 | 0.34876 | 2413 | 25 | 2104 | 55 | 2674 | 22 | 3.327 | 0.301 | 78.68 |
| PD18-44-385.d | 9.41 | 0.28 | 0.3754 | 0.01 | 0.62019 | 2378 | 29 | 2054 | 48 | 2668 | 22 | 4.47 | 0.224 | 76.99 |
| PD18-44-386.d | 4.34 | 0.45 | 0.193 | 0.016 | 0.87977 | 1706 | 67 | 1137 | 82 | 2485 | 32 | 1.7 | 0.588 | 45.75 |
| PD18-44-387.d | 5.91 | 0.24 | 0.1822 | 0.0064 | 0.63886 | 1961 | 42 | 1078 | 36 | 3076 | 28 | 1.8 | 0.556 | 35.05 |
| PD18-44-388.d | 5.98 | 4.1 | 0.2546 | 0.044 | 0.55549 | 1971 | 200 | 1462 | 190 | 2563 | 170 | 1.982 | 0.505 | 57.04 |
| PD18-44-396.d | 10.67 | 0.54 | 0.384 | 0.022 | 0.74053 | 2491 | 57 | 2087 | 100 | 2813 | 30 | 1.138 | 0.879 | 74.19 |
| PD18-44-397.d | 11.3 | 0.35 | 0.3983 | 0.013 | 0.63681 | 2546 | 31 | 2160 | 61 | 2872 | 39 | 0.843 | 1.186 | 75.21 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-44-398.d | 8.62 | 0.36 | 0.3413 | 0.014 | 0.62869 | 2297 | 47 | 1892 | 71 | 2669 | 19 | 3.24 | 0.309 | 70.89 |
| PD18-44-399.d | 11.21 | 0.34 | 0.4111 | 0.014 | 0.48469 | 2538 | 29 | 2218 | 64 | 2805 | 33 | 1.372 | 0.729 | 79.07 |
| PD18-44-400.d | 2.228 | 3.4 | 0.0784 | 0.049 | 0.6765 | 1192 | 260 | 486 | 260 | 2893 | 130 | 2.15 | 0.465 | 16.80 |
| PD18-44-401.d | 7.26 | 0.4 | 0.2768 | 0.011 | 0.54738 | 2146 | 41 | 1575 | 54 | 2749 | 31 | 0.774 | 1.292 | 57.29 |
| PD18-44-402.d | 11.69 | 0.4 | 0.4638 | 0.012 | 0.50202 | 2578 | 31 | 2455 | 55 | 2668 | 35 | 0.814 | 1.229 | 92.02 |
| PD18-44-403.d | 7.68 | 0.21 | 0.2885 | 0.0078 | 0.44284 | 2193 | 25 | 1633 | 39 | 2767 | 30 | 3.425 | 0.292 | 59.02 |
| PD18-44-404.d | 7.82 | 0.3 | 0.2736 | 0.0078 | 0.45084 | 2207 | 32 | 1558 | 39 | 2883 | 43 | 2.225 | 0.449 | 54.04 |
| PD18-44-405.d | 9.78 | 0.38 | 0.368 | 0.015 | 0.53961 | 2412 | 35 | 2017 | 73 | 2760 | 52 | 1.04 | 0.962 | 73.08 |
| PD18-44-406.d | 7.59 | 0.94 | 0.2479 | 0.025 | 0.86265 | 2182 | 77 | 1427 | 120 | 3000 | 57 | 5.69 | 0.176 | 47.57 |
| PD18-44-407.d | 11.13 | 0.34 | 0.4285 | 0.011 | 0.42788 | 2531 | 28 | 2298 | 49 | 2719 | 32 | 1.124 | 0.890 | 84.52 |
| PD18-44-408.d | 5.23 | 0.27 | 0.1823 | 0.012 | 0.7368 | 1857 | 40 | 1079 | 64 | 2921 | 31 | 0.799 | 1.252 | 36.94 |
| PD18-44-409.d | 2.67 | 0.13 | 0.1465 | 0.0057 | 0.75181 | 1320 | 43 | 881 | 33 | 2128 | 45 | 1.369 | 0.730 | 41.40 |
| PD18-44-410.d | 6.15 | 1.2 | 0.261 | 0.017 | 0.6739 | 1994 | 100 | 1495 | 81 | 2548 | 110 | 1.75 | 0.571 | 58.67 |
| | | | | | | | | | | | | | | |
| PD18-39-425.d | 5.274 | 0.17 | 0.2001 | 0.0044 | 0.55299 | 1864 | 27 | 1175 | 24 | 2752 | 52 | 1.232 | 0.812 | 42.70 |
| PD18-39-426.d | 4.638 | 0.17 | 0.1704 | 0.0048 | 0.56854 | 1755 | 34 | 1014 | 27 | 2777 | 51 | 2.435 | 0.411 | 36.51 |
| PD18-39-427.d | 3.8 | 0.17 | 0.1648 | 0.0076 | 0.78222 | 1593 | 48 | 983 | 44 | 2668 | 52 | 2.411 | 0.415 | 36.84 |
| PD18-39-428.d | 6.49 | 0.24 | 0.2532 | 0.0068 | 0.34071 | 2043 | 33 | 1455 | 34 | 2709 | 54 | 1.265 | 0.791 | 53.71 |
| PD18-39-429.d | 9.29 | 0.4 | 0.3699 | 0.013 | 0.66411 | 2364 | 45 | 2028 | 62 | 2662 | 57 | 1.822 | 0.549 | 76.18 |
| PD18-39-430.d | 4.816 | 0.16 | 0.18 | 0.0039 | 0.61048 | 1786 | 28 | 1067 | 21 | 2777 | 52 | 1.274 | 0.785 | 38.42 |
| PD18-39-431.d | 3.547 | 0.13 | 0.1142 | 0.003 | 0.73217 | 1536 | 28 | 701 | 17 | 3009 | 53 | 0.826 | 1.211 | 23.30 |
| PD18-39-432.d | 10.54 | 0.36 | 0.4137 | 0.01 | 0.5452 | 2482 | 35 | 2231 | 47 | 2679 | 55 | 1.378 | 0.726 | 83.28 |
| PD18-39-433.d | 3.603 | 0.19 | 0.135 | 0.0052 | 0.59475 | 1549 | 38 | 816 | 29 | 2766 | 51 | 0.744 | 1.344 | 29.50 |
| PD18-39-434.d | 12.79 | 0.4 | 0.5064 | 0.0094 | 0.39865 | 2663 | 30 | 2640 | 40 | 2666 | 53 | 2.368 | 0.422 | 99.02 |
| PD18-39-435.d | 9.04 | 0.28 | 0.3554 | 0.0067 | 0.42562 | 2340 | 28 | 1959 | 32 | 2692 | 53 | 1.863 | 0.537 | 72.77 |
| PD18-39-436.d | 3.303 | 0.14 | 0.13 | 0.005 | 0.87701 | 1480 | 37 | 787 | 29 | 2678 | 52 | 1.436 | 0.696 | 29.39 |
| PD18-39-437.d | 6.85 | 0.23 | 0.2715 | 0.0059 | 0.68458 | 2090 | 30 | 1548 | 30 | 2668 | 53 | 1.205 | 0.830 | 58.02 |
| PD18-39-438.d | 9.28 | 0.43 | 0.361 | 0.015 | 0.74336 | 2362 | 50 | 1984 | 75 | 2695 | 54 | 1.676 | 0.597 | 73.62 |
| PD18-39-439.d | 7.82 | 0.41 | 0.3013 | 0.015 | 0.84156 | 2207 | 42 | 1696 | 71 | 2711 | 55 | 1.194 | 0.838 | 62.56 |
| PD18-39-448.d | 5.071 | 0.17 | 0.1743 | 0.0042 | 0.83012 | 1829 | 28 | 1035 | 23 | 2911 | 54 | 1.342 | 0.745 | 35.55 |
| PD18-39-449.d | 11.79 | 0.41 | 0.4286 | 0.0097 | 0.42873 | 2585 | 34 | 2298 | 45 | 2817 | 53 | 1.551 | 0.645 | 81.58 |
| PD18-39-450.d | 4.718 | 0.16 | 0.1966 | 0.0044 | 0.74998 | 1769 | 28 | 1156 | 24 | 2595 | 53 | 2.229 | 0.449 | 44.55 |
| PD18-39-451.d | 2.214 | 0.14 | 0.0731 | 0.0048 | 0.57878 | 1184 | 40 | 455 | 28 | 2963 | 51 | 1.145 | 0.873 | 15.36 |
| PD18-39-452.d | 5.37 | 0.2 | 0.2125 | 0.0064 | 0.71701 | 1877 | 37 | 1242 | 35 | 2666 | 52 | 3.072 | 0.326 | 46.59 |
| PD18-39-453.d | 6.71 | 0.33 | 0.2718 | 0.01 | 0.63527 | 2074 | 44 | 1550 | 53 | 2664 | 53 | 0.847 | 1.181 | 58.18 |
| PD18-39-454.d | 4.571 | 0.22 | 0.1864 | 0.0064 | 0.6861 | 1743 | 35 | 1102 | 34 | 2642 | 52 | 1.425 | 0.702 | 41.71 |
| PD18-39-455.d | 6.256 | 0.19 | 0.2227 | 0.004 | 0.57961 | 2011 | 27 | 1296 | 21 | 2844 | 51 | 1.178 | 0.849 | 45.57 |
| PD18-39-456.d | 2.838 | 0.14 | 0.0943 | 0.0048 | 0.59397 | 1365 | 42 | 581 | 29 | 2953 | 51 | 0.4 | 2.500 | 19.67 |
| PD18-39-457.d | 4.853 | 0.15 | 0.1847 | 0.0038 | 0.71907 | 1793 | 26 | 1092 | 21 | 2744 | 54 | 2.33 | 0.429 | 39.80 |
| PD18-39-458.d | 5.92 | 0.21 | 0.2329 | 0.0059 | 0.23164 | 1962 | 33 | 1349 | 31 | 2698 | 53 | 1.53 | 0.654 | 50.00 |
| PD18-39-459.d | 8.58 | 0.3 | 0.351 | 0.0075 | 0.54535 | 2293 | 31 | 1939 | 36 | 2636 | 55 | 1.558 | 0.642 | 73.56 |
| PD18-39-460.d | 7.4 | 0.28 | 0.2918 | 0.011 | 0.41275 | 2160 | 38 | 1650 | 55 | 2690 | 53 | 1.132 | 0.883 | 61.34 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-39-461.d | 9.96 | 0.31 | 0.3941 | 0.0073 | 0.46138 | 2430 | 28 | 2141 | 34 | 2678 | 54 | 1.203 | 0.831 | 79.95 |
| PD18-39-462.d | 6.7 | 1.9 | 0.2673 | 0.07 | 0.67809 | 2069 | 250 | 1526 | 280 | 2653 | 1.20E+04 | 1.285 | 0.778 | 57.52 |
| | | | | | | | | | | | | | | |
| PD17-32-245.d | 18.16 | 0.51 | 0.016 | 0.016 | 0.73307 | 2994 | 27 | 2737 | 70 | 3157 | 22 | 3.348 | 0.299 | 86.70 |
| PD17-32-246.d | 19.68 | 0.39 | 0.014 | 0.014 | 0.77847 | 3072 | 19 | 2933 | 56 | 3151 | 24 | 4.81 | 0.208 | 93.08 |
| PD17-32-247.d | 21.79 | 0.41 | 0.013 | 0.013 | 0.80783 | 3171 | 18 | 3084 | 51 | 3211 | 20 | 3.036 | 0.329 | 96.04 |
| PD17-32-248.d | 21.1 | 0.37 | 0.012 | 0.012 | 0.73265 | 3140 | 17 | 3038 | 50 | 3191 | 22 | 1.87 | 0.535 | 95.21 |
| PD17-32-249.d | 22.41 | 0.47 | 0.016 | 0.016 | 0.79161 | 3200 | 21 | 3150 | 63 | 3214 | 25 | 1.476 | 0.678 | 98.01 |
| PD17-32-250.d | 19.3 | 0.41 | 0.015 | 0.015 | 0.7532 | 3054 | 21 | 2806 | 62 | 3208 | 29 | 2.073 | 0.482 | 87.47 |
| PD17-32-251.d | 14.7 | 0.37 | 0.015 | 0.015 | 0.85941 | 2794 | 23 | 2446 | 64 | 3041 | 27 | 3.7 | 0.270 | 80.43 |
| PD17-32-252.d | 22.19 | 0.4 | 0.014 | 0.014 | 0.65858 | 3190 | 17 | 3161 | 57 | 3192 | 29 | 2.584 | 0.387 | 99.03 |
| PD17-32-253.d | 23.08 | 0.42 | 0.015 | 0.015 | 0.79493 | 3230 | 17 | 3247 | 57 | 3200 | 21 | 5.58 | 0.179 | 101.47 |
| PD17-32-254.d | 20.77 | 0.46 | 0.015 | 0.015 | 0.6865 | 3126 | 22 | 2997 | 62 | 3193 | 31 | 2.112 | 0.473 | 93.86 |
| PD17-32-255.d | 21.69 | 0.46 | 0.015 | 0.015 | 0.78129 | 3165 | 21 | 3085 | 62 | 3208 | 24 | 2.341 | 0.427 | 96.17 |
| PD17-32-256.d | 21.96 | 0.69 | 0.023 | 0.023 | 0.79386 | 3180 | 31 | 3147 | 91 | 3183 | 35 | 1.411 | 0.709 | 98.87 |
| PD17-32-256-2.d | 14.97 | 0.61 | 0.019 | 0.019 | 0.81295 | 2808 | 38 | 2254 | 85 | 3222 | 42 | 1.377 | 0.726 | 69.96 |
| PD17-32-266.d | 21.87 | 0.47 | 0.017 | 0.017 | 0.80509 | 3174 | 21 | 3113 | 68 | 3200 | 26 | 3.382 | 0.296 | 97.28 |
| PD17-32-267.d | 21.98 | 0.58 | 0.02 | 0.02 | 0.82581 | 3179 | 26 | 3172 | 78 | 3170 | 29 | 7.94 | 0.126 | 100.06 |
| PD17-32-268.d | 20.98 | 0.53 | 0.016 | 0.016 | 0.80833 | 3131 | 25 | 2980 | 65 | 3217 | 26 | 2.86 | 0.350 | 92.63 |
| PD17-32-269.d | 21.08 | 0.4 | 0.014 | 0.014 | 0.80901 | 3139 | 19 | 3044 | 54 | 3189 | 19 | 4.97 | 0.201 | 95.45 |
| PD17-32-270.d | 20.23 | 0.47 | 0.016 | 0.016 | 0.89613 | 3098 | 23 | 2897 | 65 | 3218 | 20 | 1.847 | 0.541 | 90.02 |
| PD17-32-271.d | 21.36 | 0.47 | 0.015 | 0.015 | 0.65267 | 3151 | 21 | 3026 | 61 | 3217 | 31 | 2.6 | 0.385 | 94.06 |
| PD17-32-272.d | 20.82 | 0.44 | 0.015 | 0.015 | 0.75271 | 3127 | 21 | 2959 | 61 | 3222 | 27 | 2.147 | 0.466 | 91.84 |
| PD17-32-273.d | 21.82 | 0.47 | 0.015 | 0.015 | 0.86866 | 3172 | 21 | 3088 | 60 | 3211 | 20 | 3.71 | 0.270 | 96.17 |
| PD17-32-274.d | 22.1 | 0.37 | 0.014 | 0.014 | 0.78252 | 3186 | 17 | 3106 | 55 | 3221 | 22 | 1.959 | 0.510 | 96.43 |
| PD17-32-275.d | 21.11 | 0.45 | 0.016 | 0.016 | 0.84702 | 3140 | 21 | 3020 | 64 | 3204 | 23 | 6.47 | 0.155 | 94.26 |
| PD17-32-276.d | 22.41 | 0.39 | 0.012 | 0.012 | 0.7064 | 3199 | 17 | 3192 | 46 | 3187 | 22 | 1.812 | 0.552 | 100.16 |
| PD17-32-277.d | 22.88 | 0.39 | 0.011 | 0.011 | 0.74045 | 3223 | 16 | 3201 | 45 | 3214 | 20 | 1.888 | 0.530 | 99.60 |
| PD17-32-287.d | 22.05 | 0.34 | 0.011 | 0.011 | 0.81539 | 3184 | 15 | 3078 | 46 | 3238 | 16 | 1.775 | 0.563 | 95.06 |
| PD17-32-288.d | 22.73 | 0.28 | 0.0093 | 0.0093 | 0.38748 | 3214 | 12 | 3212 | 36 | 3195 | 19 | 1.66 | 0.602 | 100.53 |
| PD17-32-289.d | 19.66 | 0.33 | 0.012 | 0.012 | 0.78406 | 3073 | 16 | 2967 | 47 | 3119 | 21 | 4.37 | 0.229 | 95.13 |
| PD17-32-290.d | 21.65 | 0.29 | 0.0094 | 0.0094 | 0.59459 | 3166 | 13 | 3079 | 38 | 3205 | 21 | 1.777 | 0.563 | 96.07 |
| PD17-32-291.d | 21.9 | 0.36 | 0.011 | 0.011 | 0.79344 | 3178 | 16 | 3117 | 45 | 3200 | 18 | 6.3 | 0.159 | 97.41 |
| PD17-32-292.d | 19.83 | 0.33 | 0.011 | 0.011 | 0.54068 | 3082 | 16 | 2874 | 46 | 3202 | 29 | 7.14 | 0.140 | 89.76 |
| PD17-32-293.d | 18.49 | 0.56 | 0.018 | 0.018 | 0.84445 | 3012 | 29 | 2684 | 78 | 3208 | 30 | 13.92 | 0.072 | 83.67 |
| PD17-32-294.d | 16.54 | 0.25 | 0.011 | 0.011 | 0.65295 | 2907 | 14 | 2774 | 46 | 2984 | 26 | 2.169 | 0.461 | 92.96 |
| | | | | | | | | | | | | | | |
| PD17-1-10.d | 7.71 | 0.18 | 0.3496 | 0.0092 | 0.83251 | 2195 | 20 | 1931 | 44 | 2436 | 28 | 8.13 | 0.123 | 79.27 |
| PD17-1-11.d | 11.89 | 0.24 | 0.513 | 0.014 | 0.86132 | 2593 | 18 | 2666 | 57 | 2523 | 24 | 5.57 | 0.180 | 105.67 |
| PD17-1-13.d | 9.19 | 0.44 | 0.411 | 0.019 | 0.942 | 2350 | 44 | 2214 | 86 | 2460 | 28 | 3.65 | 0.274 | 90.00 |
| PD17-1-14.d | 7.28 | 0.18 | 0.3363 | 0.0086 | 0.84751 | 2144 | 24 | 1867 | 42 | 2407 | 22 | 2.503 | 0.400 | 77.57 |
| PD17-1-15.d | 11.59 | 0.21 | 0.494 | 0.012 | 0.88216 | 2570 | 17 | 2586 | 50 | 2543 | 19 | 4.03 | 0.248 | 101.69 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-1-16.d | 12.44 | 0.21 | 0.507 | 0.0099 | 0.78882 | 2636 | 16 | 2643 | 42 | 2618 | 19 | 0.876 | 1.142 | 100.95 |
| PD17-1-17.d | 7.4 | 0.19 | 0.345 | 0.0093 | 0.90148 | 2154 | 22 | 1907 | 44 | 2398 | 26 | 7.51 | 0.133 | 79.52 |
| PD17-1-18.d | 11.96 | 0.19 | 0.512 | 0.011 | 0.82739 | 2599 | 15 | 2662 | 46 | 2536 | 19 | 6.4 | 0.156 | 104.97 |
| PD17-1-20.d | 12.09 | 0.33 | 0.501 | 0.017 | 0.91464 | 2605 | 26 | 2609 | 73 | 2593 | 22 | 8.9 | 0.112 | 100.62 |
| PD17-1-21.d | 6.39 | 0.14 | 0.2969 | 0.0063 | 0.8243 | 2029 | 19 | 1675 | 31 | 2391 | 18 | 11.55 | 0.087 | 70.05 |
| PD17-1-31.d | 6.15 | 0.14 | 0.2929 | 0.0075 | 0.83938 | 1997 | 19 | 1654 | 37 | 2362 | 25 | 1.57 | 0.637 | 70.03 |
| PD17-1-32.d | 4.394 | 0.092 | 0.229 | 0.0051 | 0.71959 | 1709 | 17 | 1328 | 27 | 2200 | 28 | 9.1 | 0.110 | 60.36 |
| PD17-1-33.d | 25.21 | 0.55 | 0.662 | 0.014 | 0.85826 | 3315 | 24 | 3272 | 55 | 3323 | 25 | 26.3 | 0.038 | 98.47 |
| PD17-1-34.d | 4.47 | 0.12 | 0.2338 | 0.0058 | 0.87494 | 1722 | 22 | 1353 | 30 | 2188 | 21 | 10.6 | 0.094 | 61.84 |
| PD17-1-35.d | 5.83 | 0.17 | 0.2666 | 0.0082 | 0.81015 | 1953 | 27 | 1522 | 43 | 2427 | 26 | 2.47 | 0.405 | 62.71 |
| PD17-1-37.d | 8.85 | 0.18 | 0.3888 | 0.0092 | 0.80884 | 2319 | 19 | 2115 | 43 | 2491 | 21 | 6.58 | 0.152 | 84.91 |
| PD17-1-38.d | 4.11 | 0.12 | 0.2179 | 0.0055 | 0.7047 | 1656 | 25 | 1270 | 29 | 2153 | 32 | 9.44 | 0.106 | 58.99 |
| PD17-1-39.d | 6.14 | 0.3 | 0.255 | 0.015 | 0.91757 | 1989 | 39 | 1462 | 76 | 2592 | 23 | 18.9 | 0.053 | 56.40 |
| PD17-1-41.d | 11.8 | 0.22 | 0.495 | 0.011 | 0.8672 | 2587 | 18 | 2588 | 48 | 2572 | 17 | 2.21 | 0.452 | 100.62 |
| PD17-1-42.d | 10.58 | 0.19 | 0.471 | 0.0097 | 0.86307 | 2485 | 17 | 2483 | 43 | 2472 | 19 | 14.33 | 0.070 | 100.44 |
| PD17-1-51.d | 11.7 | 0.21 | 0.4946 | 0.01 | 0.83237 | 2578 | 17 | 2588 | 44 | 2553 | 19 | 3.91 | 0.256 | 101.37 |
| PD17-1-52.d | 10.25 | 0.28 | 0.442 | 0.012 | 0.92504 | 2454 | 27 | 2355 | 54 | 2522 | 19 | 17.34 | 0.058 | 93.38 |
| PD17-1-53.d | 7.44 | 0.15 | 0.3323 | 0.0071 | 0.81762 | 2164 | 19 | 1848 | 35 | 2463 | 19 | 3.87 | 0.258 | 75.03 |
| PD17-1-54.d | 6.57 | 0.35 | 0.2764 | 0.0084 | 0.71475 | 2054 | 52 | 1572 | 43 | 2564 | 63 | 3.68 | 0.272 | 61.31 |
| PD17-1-55.d | 11.2 | 0.2 | 0.482 | 0.011 | 0.83837 | 2538 | 16 | 2532 | 48 | 2529 | 22 | 6.91 | 0.145 | 100.12 |
| PD17-1-56.d | 6.73 | 0.16 | 0.296 | 0.0079 | 0.88969 | 2074 | 20 | 1670 | 38 | 2480 | 19 | 13.62 | 0.073 | 67.34 |
| PD17-1-58.d | 11.46 | 0.24 | 0.489 | 0.015 | 0.82431 | 2563 | 19 | 2562 | 68 | 2542 | 26 | 14.74 | 0.068 | 100.79 |
| PD17-1-59.d | 11.3 | 0.27 | 0.477 | 0.012 | 0.91238 | 2546 | 24 | 2510 | 55 | 2561 | 39 | 3.91 | 0.256 | 98.01 |
| PD17-1-60.d | 11.22 | 0.23 | 0.482 | 0.012 | 0.90722 | 2534 | 17 | 2530 | 50 | 2525 | 19 | 15.23 | 0.066 | 100.20 |
| PD17-1-61.d | 3.78 | 0.15 | 0.2066 | 0.0059 | 0.90154 | 1581 | 29 | 1210 | 33 | 2093 | 32 | 0.691 | 1.447 | 57.81 |
| | | | | | | | | | | | | | | |
| PD17-5-70.d | 4.44 | 0.24 | 0.2396 | 0.0091 | 0.76651 | 1718 | 37 | 1384 | 46 | 2139 | 32 | 8.31 | 0.120 | 64.70 |
| PD17-5-71.d | 6.81 | 0.15 | 0.3204 | 0.0075 | 0.81003 | 2083 | 20 | 1790 | 37 | 2374 | 25 | 3.47 | 0.288 | 75.40 |
| PD17-5-72.d | 7.28 | 0.29 | 0.3042 | 0.0095 | 0.67132 | 2145 | 32 | 1711 | 48 | 2574 | 84 | 1.95 | 0.513 | 66.47 |
| PD17-5-73.d | 6.63 | 0.11 | 0.3046 | 0.0053 | 0.71596 | 2062 | 15 | 1713 | 26 | 2418 | 18 | 2.094 | 0.478 | 70.84 |
| PD17-5-75.d | 9.64 | 0.16 | 0.399 | 0.0097 | 0.63514 | 2399 | 16 | 2163 | 45 | 2591 | 36 | 4.2 | 0.238 | 83.48 |
| PD17-5-76.d | 11.58 | 0.45 | 0.468 | 0.016 | 0.84276 | 2571 | 37 | 2488 | 69 | 2626 | 27 | 1.95 | 0.513 | 94.74 |
| PD17-5-77.d | 7.17 | 0.2 | 0.3103 | 0.0073 | 0.80028 | 2129 | 26 | 1741 | 36 | 2508 | 23 | 1.786 | 0.560 | 69.42 |
| PD17-5-78.d | 10.36 | 0.22 | 0.4274 | 0.0094 | 0.56372 | 2465 | 20 | 2292 | 43 | 2595 | 32 | 1.585 | 0.631 | 88.32 |
| PD17-5-79.d | 9.57 | 0.27 | 0.397 | 0.0089 | 0.82144 | 2388 | 26 | 2152 | 41 | 2590 | 28 | 1.544 | 0.648 | 83.09 |
| PD17-5-81.d | 6.34 | 0.15 | 0.3057 | 0.0062 | 0.81958 | 2021 | 20 | 1718 | 30 | 2331 | 21 | 1.873 | 0.534 | 73.70 |
| PD17-5-90.d | 8.76 | 0.19 | 0.3579 | 0.008 | 0.72507 | 2313 | 21 | 1970 | 38 | 2616 | 26 | 1.355 | 0.738 | 75.31 |
| PD17-5-91.d | 6.95 | 0.4 | 0.319 | 0.015 | 0.87716 | 2098 | 63 | 1781 | 75 | 2411 | 42 | 2.94 | 0.340 | 73.87 |
| PD17-5-92.d | 9.49 | 0.24 | 0.407 | 0.01 | 0.78433 | 2383 | 24 | 2198 | 47 | 2530 | 23 | 2.19 | 0.457 | 86.88 |
| PD17-5-93.d | 9.38 | 0.18 | 0.413 | 0.0086 | 0.7663 | 2374 | 18 | 2227 | 41 | 2488 | 23 | 4.5 | 0.222 | 89.51 |
| PD17-5-94.d | 3.09 | 0.11 | 0.1901 | 0.0062 | 0.93762 | 1422 | 28 | 1120 | 34 | 1900 | 24 | 3.14 | 0.318 | 58.95 |
| PD17-5-95.d | 11.27 | 0.16 | 0.473 | 0.008 | 0.7895 | 2544 | 13 | 2495 | 35 | 2568 | 18 | 1.028 | 0.973 | 97.16 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-5-96.d | 5.87 | 0.17 | 0.2635 | 0.0056 | 0.82273 | 1950 | 26 | 1506 | 28 | 2443 | 29 | 2.033 | 0.492 | 61.65 |
| PD17-5-97.d | 6.31 | 0.15 | 0.2606 | 0.0054 | 0.62676 | 2019 | 19 | 1492 | 27 | 2594 | 35 | 1.72 | 0.581 | 57.52 |
| PD17-5-98.d | 8.73 | 0.16 | 0.3822 | 0.0074 | 0.75062 | 2307 | 17 | 2085 | 34 | 2495 | 23 | 2.79 | 0.358 | 83.57 |
| PD17-5-99.d | 6.91 | 0.16 | 0.3206 | 0.0076 | 0.86333 | 2096 | 20 | 1791 | 37 | 2397 | 20 | 2.5 | 0.400 | 74.72 |
| PD17-5-100.d | 11.86 | 0.17 | 0.4398 | 0.0076 | 0.78827 | 2592 | 14 | 2348 | 34 | 2772 | 17 | 2.56 | 0.391 | 84.70 |
| PD17-5-101.d | 7.23 | 0.17 | 0.2728 | 0.0066 | 0.57971 | 2137 | 21 | 1554 | 34 | 2739 | 54 | 2.283 | 0.438 | 56.74 |
| PD17-5-110.d | 10.7 | 0.19 | 0.4546 | 0.0096 | 0.81566 | 2495 | 16 | 2413 | 42 | 2547 | 20 | 1.562 | 0.640 | 94.74 |
| PD17-5-111.d | 6.62 | 0.35 | 0.3189 | 0.013 | 0.81969 | 2060 | 39 | 1783 | 61 | 2341 | 25 | 2.373 | 0.421 | 76.16 |
| PD17-5-112.d | 9.42 | 0.82 | 0.382 | 0.0095 | 0.64975 | 2374 | 60 | 2082 | 44 | 2620 | 82 | 2.08 | 0.481 | 79.47 |
| PD17-5-113.d | 7.4 | 0.12 | 0.3371 | 0.0066 | 0.83392 | 2159 | 15 | 1872 | 32 | 2430 | 16 | 1.76 | 0.568 | 77.04 |
| PD17-5-114.d | 7.59 | 0.14 | 0.3433 | 0.0066 | 0.74692 | 2182 | 17 | 1902 | 32 | 2441 | 20 | 1.164 | 0.859 | 77.92 |
| PD17-5-115.d | 7.79 | 0.36 | 0.3483 | 0.012 | 0.82382 | 2203 | 46 | 1925 | 57 | 2459 | 39 | 2.64 | 0.379 | 78.28 |
| PD17-5-116.d | 6.6 | 0.42 | 0.29 | 0.0089 | 0.72196 | 2054 | 46 | 1641 | 44 | 2498 | 64 | 1.93 | 0.518 | 65.69 |
| PD17-5-117.d | 9.57 | 0.3 | 0.423 | 0.013 | 0.82839 | 2391 | 32 | 2271 | 61 | 2480 | 20 | 7.69 | 0.130 | 91.57 |
| PD17-5-118.d | 10.33 | 0.18 | 0.4411 | 0.0074 | 0.65227 | 2462 | 16 | 2354 | 33 | 2541 | 21 | 1.469 | 0.681 | 92.64 |
| PD17-5-119.d | 8.27 | 0.19 | 0.3375 | 0.006 | 0.59027 | 2258 | 20 | 1874 | 29 | 2610 | 33 | 2.6 | 0.385 | 71.80 |
| | | | | | | | | | | | | | | |
| PD17-14-128.d | 14.67 | 0.31 | 0.496 | 0.011 | 0.81559 | 2790 | 21 | 2595 | 46 | 2920 | 22 | 1.152 | 0.868 | 88.87 |
| PD17-14-129.d | 15.64 | 0.75 | 0.514 | 0.025 | 0.88151 | 2852 | 59 | 2669 | 110 | 2968 | 19 | 1.145 | 0.873 | 89.93 |
| PD17-14-130.d | 19.43 | 0.39 | 0.609 | 0.012 | 0.70508 | 3066 | 20 | 3062 | 50 | 3054 | 22 | 0.792 | 1.263 | 100.26 |
| PD17-14-131.d | 15.02 | 0.8 | 0.5 | 0.024 | 0.69072 | 2812 | 68 | 2611 | 110 | 2955 | 36 | 1.698 | 0.589 | 88.36 |
| PD17-14-132.d | 14.47 | 0.39 | 0.456 | 0.013 | 0.85288 | 2777 | 25 | 2419 | 57 | 3041 | 18 | 0.993 | 1.007 | 79.55 |
| PD17-14-133.d | 10.92 | 0.68 | 0.398 | 0.019 | 0.8933 | 2511 | 48 | 2156 | 84 | 2799 | 27 | 2.239 | 0.447 | 77.03 |
| PD17-14-134.d | 20.53 | 0.69 | 0.612 | 0.016 | 0.75721 | 3111 | 36 | 3075 | 64 | 3132 | 35 | 0.622 | 1.608 | 98.18 |
| PD17-14-135.d | 17.01 | 0.71 | 0.534 | 0.013 | 0.61918 | 2936 | 38 | 2757 | 52 | 3045 | 43 | 0.977 | 1.024 | 90.54 |
| PD17-14-136.d | 12.71 | 0.33 | 0.395 | 0.013 | 0.78456 | 2656 | 26 | 2143 | 60 | 3059 | 22 | 1.218 | 0.821 | 70.06 |
| PD17-14-137.d | 12.52 | 0.21 | 0.4373 | 0.0085 | 0.88022 | 2642 | 16 | 2337 | 38 | 2870 | 15 | 2.71 | 0.369 | 81.43 |
| PD17-14-138.d | 21.46 | 3 | 0.586 | 0.044 | 0.57521 | 3155 | 92 | 2971 | 160 | 3259 | 57 | 1.288 | 0.776 | 91.16 |
| PD17-14-139.d | 11.52 | 0.49 | 0.434 | 0.013 | 0.8309 | 2568 | 35 | 2323 | 56 | 2753 | 24 | 6.35 | 0.157 | 84.38 |
| PD17-14-148.d | 15.48 | 0.31 | 0.521 | 0.012 | 0.78132 | 2844 | 20 | 2699 | 53 | 2913 | 19 | 0.946 | 1.057 | 92.65 |
| PD17-14-149.d | 9.15 | 0.8 | 0.263 | 0.016 | 0.8659 | 2348 | 62 | 1501 | 78 | 3199 | 49 | 0.893 | 1.120 | 46.92 |
| PD17-14-150.d | 15.63 | 0.27 | 0.52 | 0.0082 | 0.84868 | 2852 | 16 | 2711 | 34 | 2945 | 18 | 1.97 | 0.508 | 92.05 |
| PD17-14-151.d | 16.08 | 0.34 | 0.536 | 0.012 | 0.5468 | 2882 | 19 | 2762 | 49 | 2945 | 33 | 1.284 | 0.779 | 93.79 |
| PD17-14-153.d | 16.17 | 0.41 | 0.524 | 0.013 | 0.77533 | 2885 | 26 | 2713 | 58 | 2990 | 17 | 2.035 | 0.491 | 90.74 |
| PD17-14-154.d | 15.27 | 0.35 | 0.5 | 0.011 | 0.80776 | 2830 | 25 | 2612 | 49 | 2991 | 21 | 3.051 | 0.328 | 87.33 |
| PD17-14-155.d | 13.36 | 0.25 | 0.462 | 0.01 | 0.70568 | 2703 | 18 | 2446 | 46 | 2908 | 20 | 10.71 | 0.093 | 84.11 |
| PD17-14-156.d | 10.85 | 0.21 | 0.3779 | 0.0078 | 0.87565 | 2507 | 18 | 2065 | 37 | 2874 | 16 | 1.592 | 0.628 | 71.85 |
| PD17-14-157.d | 9.2 | 0.23 | 0.3285 | 0.0079 | 0.76425 | 2356 | 22 | 1830 | 38 | 2841 | 21 | 1.354 | 0.739 | 64.41 |
| PD17-14-158.d | 15.81 | 0.27 | 0.523 | 0.011 | 0.73895 | 2863 | 16 | 2708 | 45 | 2958 | 24 | 0.887 | 1.127 | 91.55 |
| PD17-14-159.d | 11.12 | 0.21 | 0.3835 | 0.0074 | 0.69287 | 2531 | 17 | 2091 | 35 | 2890 | 26 | 3.81 | 0.262 | 72.35 |
| PD17-14-168.d | 14.41 | 0.41 | 0.47 | 0.013 | 0.64762 | 2774 | 27 | 2480 | 58 | 2981 | 29 | 1.522 | 0.657 | 83.19 |
| PD17-14-169.d | 12.79 | 0.72 | 0.441 | 0.025 | 0.76375 | 2660 | 70 | 2351 | 120 | 2888 | 20 | 3.37 | 0.297 | 81.41 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-14-170.d | 12.39 | 0.25 | 0.4337 | 0.0077 | 0.63094 | 2633 | 19 | 2321 | 35 | 2865 | 24 | 1.718 | 0.582 | 81.01 |
| PD17-14-171.d | 16.61 | 0.44 | 0.555 | 0.014 | 0.79952 | 2910 | 28 | 2841 | 58 | 2927 | 27 | 1.472 | 0.679 | 97.06 |
| PD17-14-172.d | 12.51 | 0.3 | 0.42 | 0.011 | 0.86827 | 2641 | 23 | 2258 | 49 | 2935 | 18 | 0.645 | 1.550 | 76.93 |
| PD17-14-173.d | 8.24 | 0.26 | 0.2831 | 0.0089 | 0.87905 | 2256 | 32 | 1606 | 46 | 2910 | 17 | 3.79 | 0.264 | 55.19 |
| PD17-14-174.d | 9.32 | 0.16 | 0.3378 | 0.0074 | 0.86544 | 2369 | 17 | 1875 | 36 | 2814 | 16 | 1.371 | 0.729 | 66.63 |
| PD17-14-175.d | 11.21 | 0.18 | 0.3791 | 0.007 | 0.76154 | 2539 | 15 | 2071 | 33 | 2922 | 19 | 1.775 | 0.563 | 70.88 |
| PD17-14-176.d | 13.54 | 0.52 | 0.449 | 0.017 | 0.7246 | 2714 | 38 | 2402 | 80 | 2939 | 63 | 3.58 | 0.279 | 81.73 |
| PD17-14-177.d | 6.43 | 0.11 | 0.2377 | 0.0043 | 0.77457 | 2035 | 15 | 1374 | 23 | 2777 | 22 | 1.418 | 0.705 | 49.48 |
| | | | | | | | | | | | | | | |
| PD17-21-186.d | 7.18 | 0.52 | 0.2807 | 0.015 | 0.86826 | 2127 | 54 | 1593 | 72 | 2679 | 33 | 1.152 | 0.868 | 59.46 |
| PD17-21-187.d | 18.26 | 0.39 | 0.593 | 0.013 | 0.74553 | 3001 | 22 | 2999 | 53 | 2985 | 20 | 1.037 | 0.964 | 100.47 |
| PD17-21-188.d | 17.35 | 0.34 | 0.571 | 0.012 | 0.75061 | 2952 | 19 | 2908 | 52 | 2966 | 25 | 0.721 | 1.387 | 98.04 |
| PD17-21-189.d | 10.52 | 0.26 | 0.3659 | 0.0092 | 0.88169 | 2477 | 23 | 2008 | 43 | 2875 | 19 | 1.21 | 0.826 | 69.84 |
| PD17-21-190.d | 16.01 | 0.33 | 0.533 | 0.013 | 0.83986 | 2874 | 20 | 2750 | 53 | 2948 | 23 | 0.965 | 1.036 | 93.28 |
| PD17-21-191.d | 16.06 | 0.3 | 0.536 | 0.011 | 0.75264 | 2878 | 18 | 2762 | 48 | 2949 | 21 | 1.017 | 0.983 | 93.66 |
| PD17-21-192.d | 13.51 | 0.73 | 0.447 | 0.021 | 0.5845 | 2710 | 66 | 2379 | 98 | 2963 | 35 | 1.329 | 0.752 | 80.29 |
| PD17-21-193.d | 16.91 | 0.32 | 0.548 | 0.012 | 0.77579 | 2927 | 18 | 2814 | 49 | 2991 | 22 | 1.127 | 0.887 | 94.08 |
| PD17-21-194.d | 19.13 | 3.6 | 0.579 | 0.03 | 0.73158 | 3044 | 90 | 2939 | 110 | 3101 | 99 | 0.779 | 1.284 | 94.78 |
| PD17-21-195.d | 17.07 | 3.8 | 0.533 | 0.033 | 0.61054 | 2935 | 96 | 2754 | 120 | 3039 | 73 | 0.953 | 1.049 | 90.62 |
| PD17-21-196.d | 12.47 | 0.4 | 0.442 | 0.014 | 0.87949 | 2636 | 31 | 2354 | 62 | 2847 | 21 | 1.575 | 0.635 | 82.68 |
| PD17-21-197.d | 17.61 | 0.54 | 0.549 | 0.016 | 0.85333 | 2978 | 31 | 2816 | 66 | 3056 | 24 | 2.87 | 0.348 | 92.15 |
| PD17-21-206.d | 19.14 | 0.34 | 0.605 | 0.011 | 0.64866 | 3047 | 17 | 3045 | 44 | 3031 | 24 | 0.963 | 1.038 | 100.46 |
| PD17-21-207.d | 11.52 | 0.53 | 0.407 | 0.015 | 0.66514 | 2553 | 44 | 2195 | 69 | 2849 | 27 | 2.55 | 0.392 | 77.04 |
| PD17-21-208.d | 6.7 | 1.2 | 0.253 | 0.036 | 0.97084 | 2050 | 110 | 1450 | 160 | 2733 | 43 | 1.39 | 0.719 | 53.06 |
| PD17-21-209.d | 16.21 | 0.62 | 0.498 | 0.018 | 0.88749 | 2886 | 37 | 2603 | 76 | 3073 | 27 | 0.902 | 1.109 | 84.71 |
| PD17-21-210.d | 16.43 | 1.7 | 0.534 | 0.046 | 0.80766 | 2896 | 110 | 2750 | 190 | 2988 | 45 | 1.7 | 0.588 | 92.03 |
| PD17-21-211.d | 9.14 | 0.45 | 0.35 | 0.014 | 0.87247 | 2345 | 53 | 1949 | 69 | 2696 | 31 | 2.5 | 0.400 | 72.29 |
| PD17-21-212.d | 7.47 | 0.3 | 0.2889 | 0.0099 | 0.80086 | 2164 | 40 | 1634 | 50 | 2706 | 29 | 2.22 | 0.450 | 60.38 |
| PD17-21-213.d | 17.48 | 0.29 | 0.581 | 0.012 | 0.84299 | 2959 | 16 | 2949 | 48 | 2952 | 21 | 1.13 | 0.885 | 99.90 |
| PD17-21-214.d | 14.62 | 15 | 0.47 | 0.55 | 0.92596 | 2791 | 190 | 2478 | 540 | 3012 | 36 | 1.414 | 0.707 | 82.27 |
| PD17-21-215.d | 17.51 | 0.34 | 0.579 | 0.011 | 0.66109 | 2960 | 18 | 2952 | 42 | 2960 | 22 | 0.947 | 1.056 | 99.73 |
| PD17-21-216.d | 10.77 | 0.25 | 0.3858 | 0.01 | 0.65565 | 2502 | 21 | 2102 | 46 | 2826 | 26 | 2.147 | 0.466 | 74.38 |
| PD17-21-217.d | 16.23 | 0.27 | 0.5367 | 0.0086 | 0.77764 | 2889 | 16 | 2768 | 36 | 2957 | 21 | 1.056 | 0.947 | 93.61 |
| PD17-21-218.d | 16.89 | 0.27 | 0.558 | 0.011 | 0.5195 | 2927 | 16 | 2854 | 46 | 2960 | 27 | 1.082 | 0.924 | 96.42 |
| PD17-21-227.d | 17.72 | 0.28 | 0.578 | 0.0097 | 0.69811 | 2973 | 15 | 2948 | 41 | 2973 | 20 | 1.577 | 0.634 | 99.16 |
| PD17-21-228.d | 14.59 | 0.28 | 0.491 | 0.011 | 0.80752 | 2787 | 19 | 2573 | 47 | 2929 | 18 | 1.315 | 0.760 | 87.85 |
| PD17-21-229.d | 4.004 | 0.095 | 0.1891 | 0.0043 | 0.79585 | 1632 | 19 | 1116 | 23 | 2364 | 26 | 3.54 | 0.282 | 47.21 |
| PD17-21-230.d | 16.69 | 0.44 | 0.534 | 0.013 | 0.734 | 2913 | 24 | 2753 | 53 | 3010 | 28 | 1.015 | 0.985 | 91.46 |
| PD17-21-231.d | 11.06 | 93 | 0.383 | 2.7 | 0.94507 | 2515 | 420 | 2084 | 1900 | 2870 | 71 | 3.702 | 0.270 | 72.61 |
| PD17-21-232.d | 12.94 | 0.39 | 0.458 | 0.013 | 0.90963 | 2669 | 29 | 2429 | 60 | 2848 | 19 | 1.351 | 0.740 | 85.29 |
| PD17-21-233.d | 18.2 | 0.28 | 0.6 | 0.0097 | 0.76682 | 2998 | 15 | 3027 | 39 | 2962 | 20 | 1.222 | 0.818 | 102.19 |
| PD17-21-234.d | 17.87 | 3.2 | 0.565 | 0.061 | 0.73734 | 2986 | 100 | 2884 | 210 | 3038 | 53 | 0.954 | 1.048 | 94.93 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-21-235.d | 13.27 | 0.24 | 0.4766 | 0.0087 | 0.65694 | 2697 | 17 | 2511 | 38 | 2816 | 24 | 1.644 | 0.608 | 89.17 |
| PD17-21-236.d | 16.25 | 0.28 | 0.555 | 0.01 | 0.67064 | 2889 | 17 | 2843 | 41 | 2905 | 23 | 1.209 | 0.827 | 97.87 |
| | | | | | | | | | | | | | | |
| PD17-38-303.d | 18.87 | 0.37 | 0.555 | 0.012 | 0.82299 | 3033 | 19 | 2844 | 52 | 3145 | 18 | 2.63 | 0.380 | 90.43 |
| PD17-38-304.d | 11.66 | 0.71 | 0.372 | 0.02 | 0.9023 | 2571 | 48 | 2034 | 91 | 3033 | 27 | 1.315 | 0.760 | 67.06 |
| PD17-38-305.d | 22.07 | 0.4 | 0.633 | 0.015 | 0.83181 | 3184 | 18 | 3157 | 60 | 3182 | 20 | 2.8 | 0.357 | 99.21 |
| PD17-38-306.d | 21.33 | 0.39 | 0.625 | 0.017 | 0.83628 | 3151 | 18 | 3125 | 66 | 3147 | 24 | 2.51 | 0.398 | 99.30 |
| PD17-38-307.d | 20.04 | 0.43 | 0.623 | 0.016 | 0.83171 | 3090 | 21 | 3116 | 63 | 3052 | 20 | 3.89 | 0.257 | 102.10 |
| PD17-38-308.d | 19.9 | 0.38 | 0.607 | 0.013 | 0.82723 | 3084 | 18 | 3055 | 52 | 3089 | 20 | 4.61 | 0.217 | 98.90 |
| PD17-38-309.d | 20.98 | 0.45 | 0.622 | 0.016 | 0.81556 | 3134 | 21 | 3111 | 63 | 3134 | 23 | 5.7 | 0.175 | 99.27 |
| PD17-38-310.d | 20.47 | 1 | 0.611 | 0.027 | 0.87506 | 3108 | 60 | 3068 | 110 | 3123 | 34 | 1.023 | 0.978 | 98.24 |
| PD17-38-311.d | 19.38 | 0.43 | 0.581 | 0.014 | 0.82345 | 3056 | 22 | 2946 | 58 | 3116 | 24 | 1.73 | 0.578 | 94.54 |
| PD17-38-312.d | 20.05 | 0.4 | 0.624 | 0.016 | 0.87035 | 3091 | 19 | 3122 | 63 | 3056 | 20 | 2.75 | 0.364 | 102.16 |
| PD17-38-313.d | 19.55 | 0.45 | 0.571 | 0.011 | 0.80877 | 3066 | 23 | 2918 | 44 | 3148 | 22 | 2.47 | 0.405 | 92.69 |
| PD17-38-314.d | 23.57 | 0.48 | 0.699 | 0.016 | 0.81878 | 3247 | 21 | 3411 | 63 | 3133 | 21 | 5.02 | 0.199 | 108.87 |
| PD17-38-324.d | 22.31 | 0.53 | 0.663 | 0.017 | 0.83607 | 3194 | 25 | 3274 | 64 | 3140 | 21 | 1.65 | 0.606 | 104.27 |
| PD17-38-325.d | 18.45 | 0.93 | 0.56 | 0.026 | 0.87175 | 3011 | 64 | 2865 | 120 | 3077 | 22 | 2.291 | 0.436 | 93.11 |
| PD17-38-326.d | 10.49 | 16 | 0.338 | 0.34 | 0.95099 | 2467 | 280 | 1870 | 820 | 3011 | 66 | 1.781 | 0.561 | 62.11 |
| PD17-38-327.d | 20.77 | 0.29 | 0.624 | 0.011 | 0.78403 | 3126 | 14 | 3122 | 42 | 3111 | 17 | 2.9 | 0.345 | 100.35 |
| PD17-38-328.d | 19.42 | 0.71 | 0.569 | 0.019 | 0.88294 | 3059 | 41 | 2898 | 82 | 3166 | 21 | 1.215 | 0.823 | 91.54 |
| PD17-38-329.d | 21.5 | 0.46 | 0.623 | 0.016 | 0.85775 | 3158 | 20 | 3128 | 60 | 3164 | 21 | 3.28 | 0.305 | 98.86 |
| PD17-38-330.d | 21.06 | 0.33 | 0.626 | 0.012 | 0.80606 | 3142 | 14 | 3129 | 46 | 3129 | 17 | 7.8 | 0.128 | 100.00 |
| PD17-38-331.d | 16.47 | 0.88 | 0.492 | 0.024 | 0.83718 | 2899 | 57 | 2573 | 110 | 3122 | 37 | 1.493 | 0.670 | 82.42 |
| PD17-38-332.d | 19.25 | 0.43 | 0.598 | 0.014 | 0.80549 | 3051 | 22 | 3017 | 55 | 3058 | 24 | 5.43 | 0.184 | 98.66 |
| PD17-38-333.d | 19.59 | 0.52 | 0.608 | 0.014 | 0.79165 | 3067 | 27 | 3057 | 57 | 3058 | 28 | 4.13 | 0.242 | 99.97 |
| PD17-38-334.d | 21.43 | 0.38 | 0.646 | 0.014 | 0.84208 | 3159 | 18 | 3209 | 53 | 3112 | 18 | 26.8 | 0.037 | 103.12 |
| PD17-38-335.d | 21.44 | 0.57 | 0.631 | 0.015 | 0.8152 | 3155 | 27 | 3148 | 62 | 3138 | 21 | 1.98 | 0.505 | 100.32 |
| PD17-38-344.d | 20.65 | 0.37 | 0.614 | 0.011 | 0.74942 | 3120 | 17 | 3082 | 46 | 3127 | 19 | 1.65 | 0.606 | 98.56 |
| PD17-38-345.d | 20.86 | 0.29 | 0.6043 | 0.0092 | 0.76352 | 3131 | 13 | 3045 | 37 | 3167 | 17 | 1.517 | 0.659 | 96.15 |
| PD17-38-346.d | 10.54 | 0.32 | 0.332 | 0.012 | 0.79235 | 2479 | 27 | 1845 | 57 | 3036 | 27 | 2.83 | 0.353 | 60.77 |
| PD17-38-347.d | 20.38 | 0.49 | 0.594 | 0.015 | 0.88303 | 3106 | 25 | 3003 | 64 | 3156 | 19 | 2.79 | 0.358 | 95.15 |
| PD17-38-348.d | 19.16 | 0.34 | 0.555 | 0.012 | 0.80086 | 3048 | 18 | 2845 | 49 | 3182 | 17 | 1.983 | 0.504 | 89.41 |
| PD17-38-349.d | 21.98 | 0.67 | 0.638 | 0.019 | 0.80712 | 3180 | 33 | 3177 | 77 | 3168 | 23 | 1.842 | 0.543 | 100.28 |
| PD17-38-350.d | 20.93 | 0.4 | 0.616 | 0.013 | 0.85373 | 3133 | 18 | 3089 | 50 | 3137 | 19 | 17.7 | 0.056 | 98.47 |
| PD17-38-351.d | 19.76 | 0.39 | 0.573 | 0.013 | 0.80659 | 3078 | 20 | 2915 | 52 | 3183 | 18 | 1.758 | 0.569 | 91.58 |
| PD17-38-352.d | 19.83 | 0.45 | 0.564 | 0.013 | 0.86411 | 3079 | 23 | 2879 | 54 | 3198 | 21 | 0.638 | 1.567 | 90.03 |
| PD17-38-353.d | 20.49 | 0.39 | 0.589 | 0.012 | 0.80265 | 3112 | 19 | 2982 | 49 | 3181 | 17 | 1.395 | 0.717 | 93.74 |
| PD17-38-354.d | 21.61 | 0.26 | 0.6268 | 0.009 | 0.6423 | 3165 | 12 | 3135 | 36 | 3170 | 19 | 1.157 | 0.864 | 98.90 |
| | | | | | | | | | | | | | | |
| PD17-44-363.d | 20.42 | 0.41 | 0.578 | 0.014 | 0.85927 | 3109 | 20 | 2937 | 58 | 3204 | 21 | 2.653 | 0.377 | 91.67 |
| PD17-44-364.d | 10.35 | 0.47 | 0.354 | 0.012 | 0.82129 | 2464 | 34 | 1950 | 55 | 2904 | 31 | 2.31 | 0.433 | 67.15 |
| PD17-44-365.d | 9.76 | 0.24 | 0.2966 | 0.0085 | 0.81041 | 2410 | 23 | 1673 | 42 | 3095 | 22 | 4.65 | 0.215 | 54.05 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-44-366.d | 10.66 | 0.4 | 0.353 | 0.0085 | 0.74484 | 2490 | 32 | 1945 | 40 | 2962 | 50 | 4.78 | 0.209 | 65.67 |
| PD17-44-367.d | 17.16 | 0.41 | 0.531 | 0.014 | 0.72698 | 2941 | 23 | 2742 | 60 | 3063 | 24 | 1.74 | 0.575 | 89.52 |
| PD17-44-369.d | 22.55 | 0.47 | 0.655 | 0.017 | 0.9046 | 3204 | 21 | 3242 | 66 | 3162 | 17 | 4.037 | 0.248 | 102.53 |
| PD17-44-370.d | 14.56 | 0.33 | 0.495 | 0.012 | 0.82183 | 2783 | 23 | 2590 | 51 | 2904 | 21 | 0.926 | 1.080 | 89.19 |
| PD17-44-371.d | 16.68 | 0.33 | 0.5 | 0.011 | 0.84383 | 2915 | 19 | 2609 | 50 | 3116 | 21 | 4.852 | 0.206 | 83.73 |
| PD17-44-372.d | 11.55 | 0.28 | 0.373 | 0.0097 | 0.83017 | 2565 | 23 | 2043 | 46 | 2994 | 22 | 1.43 | 0.699 | 68.24 |
| PD17-44-373.d | 8.59 | 1.4 | 0.317 | 0.032 | 0.78015 | 2292 | 94 | 1773 | 140 | 2773 | 58 | 2.811 | 0.356 | 63.94 |
| PD17-44-382.d | 9.38 | 0.52 | 0.335 | 0.017 | 0.84856 | 2371 | 45 | 1858 | 80 | 2837 | 25 | 0.179 | 5.587 | 65.49 |
| PD17-44-383.d | 13.23 | 0.29 | 0.438 | 0.01 | 0.8469 | 2693 | 20 | 2341 | 46 | 2955 | 23 | 3.335 | 0.300 | 79.22 |
| PD17-44-384.d | 17.4 | 0.4 | 0.503 | 0.013 | 0.79543 | 2960 | 22 | 2623 | 58 | 3181 | 22 | 1.63 | 0.613 | 82.46 |
| PD17-44-385.d | 21.84 | 0.56 | 0.631 | 0.019 | 0.92542 | 3172 | 26 | 3145 | 74 | 3176 | 23 | 2.04 | 0.490 | 99.02 |
| PD17-44-386.d | 16.83 | 0.32 | 0.489 | 0.011 | 0.84275 | 2923 | 19 | 2564 | 46 | 3164 | 20 | 3.61 | 0.277 | 81.04 |
| PD17-44-387.d | 12.9 | 0.74 | 0.426 | 0.021 | 0.92379 | 2668 | 75 | 2285 | 100 | 2950 | 37 | 2.37 | 0.422 | 77.46 |
| PD17-44-388.d | 14.68 | 23 | 0.469 | 0.41 | 0.87883 | 2792 | 270 | 2477 | 870 | 3014 | 73 | 3.847 | 0.260 | 82.18 |
| PD17-44-389.d | 13.8 | 0.31 | 0.424 | 0.011 | 0.83645 | 2732 | 21 | 2277 | 49 | 3074 | 22 | 3.41 | 0.293 | 74.07 |
| PD17-44-390.d | 15.06 | 0.32 | 0.47 | 0.011 | 0.85872 | 2815 | 21 | 2480 | 50 | 3049 | 21 | 3.691 | 0.271 | 81.34 |
| PD17-44-391.d | 20.36 | 0.44 | 0.591 | 0.015 | 0.87193 | 3105 | 21 | 2989 | 62 | 3165 | 20 | 2.938 | 0.340 | 94.44 |
| PD17-44-392.d | 22.34 | 0.43 | 0.635 | 0.015 | 0.86735 | 3196 | 19 | 3163 | 58 | 3200 | 19 | 4.14 | 0.242 | 98.84 |
| PD17-44-393.d | 20.04 | 0.39 | 0.586 | 0.014 | 0.87691 | 3090 | 19 | 2967 | 57 | 3155 | 18 | 2.57 | 0.389 | 94.04 |
| PD17-44-402.d | 19.36 | 0.38 | 0.58 | 0.013 | 0.79754 | 3058 | 20 | 2944 | 55 | 3116 | 20 | 8.66 | 0.115 | 94.48 |
| PD17-44-403.d | 16.57 | 2.7 | 0.497 | 0.041 | 0.79401 | 2909 | 70 | 2599 | 150 | 3112 | 40 | 2.873 | 0.348 | 83.52 |
| PD17-44-404.d | 20.44 | 0.4 | 0.604 | 0.015 | 0.82552 | 3109 | 19 | 3039 | 59 | 3140 | 23 | 2.658 | 0.376 | 96.78 |
| PD17-44-405.d | 21 | 0.42 | 0.618 | 0.015 | 0.8678 | 3135 | 20 | 3095 | 58 | 3145 | 19 | 3.39 | 0.295 | 98.41 |
| PD17-44-406.d | 16.2 | 0.97 | 0.505 | 0.027 | 0.78638 | 2885 | 79 | 2632 | 130 | 3088 | 29 | 3.19 | 0.313 | 85.23 |
| PD17-44-407.d | 13.79 | 3.4 | 0.434 | 0.076 | 0.88392 | 2731 | 79 | 2319 | 210 | 3038 | 44 | 3.562 | 0.281 | 76.33 |
| PD17-44-408.d | 12.93 | 0.43 | 0.41 | 0.013 | 0.85906 | 2670 | 29 | 2213 | 57 | 3017 | 24 | 2.39 | 0.418 | 73.35 |
| PD17-44-409.d | 19.44 | 0.48 | 0.581 | 0.015 | 0.87259 | 3060 | 25 | 2950 | 63 | 3116 | 19 | 2.18 | 0.459 | 94.67 |
| PD17-44-410.d | 18.52 | 1.9 | 0.522 | 0.035 | 0.91944 | 3019 | 78 | 2701 | 140 | 3215 | 37 | 3.068 | 0.326 | 84.01 |
| PD17-44-411.d | 16.26 | 0.58 | 0.502 | 0.017 | 0.86417 | 2886 | 39 | 2616 | 75 | 3065 | 24 | 2.773 | 0.361 | 85.35 |
| PD17-44-412.d | 16.52 | 0.42 | 0.528 | 0.015 | 0.87354 | 2903 | 26 | 2727 | 63 | 3013 | 21 | 13.78 | 0.073 | 90.51 |
| PD17-44-414.d | 21.23 | 0.35 | 0.604 | 0.011 | 0.73562 | 3147 | 16 | 3042 | 46 | 3198 | 21 | 1.343 | 0.745 | 95.12 |
| PD17-44-423.d | 19.89 | 0.39 | 0.593 | 0.014 | 0.80893 | 3083 | 19 | 2998 | 56 | 3123 | 22 | 1.996 | 0.501 | 96.00 |
| PD17-44-425.d | 14.97 | 0.37 | 0.434 | 0.012 | 0.89078 | 2811 | 24 | 2320 | 55 | 3168 | 20 | 2.586 | 0.387 | 73.23 |
| PD17-44-426.d | 13.73 | 0.26 | 0.46 | 0.01 | 0.82218 | 2729 | 19 | 2439 | 44 | 2936 | 20 | 5.975 | 0.167 | 83.07 |
| PD17-44-427.d | 18.3 | 0.35 | 0.53 | 0.012 | 0.83505 | 3003 | 19 | 2737 | 51 | 3170 | 20 | 2.241 | 0.446 | 86.34 |
| | | | | | | | | | | | | | | |
| PD17-27-429.d | 17.81 | 0.47 | 0.589 | 0.016 | 0.69649 | 2976 | 26 | 2982 | 64 | 2962 | 41 | 1.113 | 0.898 | 100.68 |
| PD17-27-430.d | 14.55 | 0.35 | 0.492 | 0.01 | 0.8044 | 2784 | 23 | 2575 | 43 | 2931 | 33 | 1.59 | 0.629 | 87.85 |
| PD17-27-431.d | 14.66 | 0.57 | 0.473 | 0.019 | 0.82819 | 2787 | 37 | 2490 | 81 | 3001 | 44 | 0.951 | 1.052 | 82.97 |
| PD17-27-432.d | 17.84 | 0.47 | 0.59 | 0.014 | 0.75876 | 2978 | 25 | 2986 | 58 | 2961 | 37 | 1.448 | 0.691 | 100.84 |
| PD17-27-433.d | 17.43 | 0.52 | 0.574 | 0.015 | 0.80275 | 2955 | 29 | 2919 | 59 | 2971 | 37 | 1.092 | 0.916 | 98.25 |
| PD17-27-434.d | 14.23 | 0.32 | 0.483 | 0.0089 | 0.74105 | 2763 | 21 | 2539 | 39 | 2923 | 32 | 1.5 | 0.667 | 86.86 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-27-435.d | 17.89 | 0.53 | 0.583 | 0.015 | 0.66875 | 2980 | 28 | 2956 | 61 | 2985 | 42 | 0.841 | 1.189 | 99.03 |
| PD17-27-436.d | 17.95 | 0.51 | 0.588 | 0.015 | 0.67037 | 2982 | 28 | 2978 | 60 | 2977 | 40 | 1.17 | 0.855 | 100.03 |
| PD17-27-437.d | 17.24 | 0.56 | 0.565 | 0.02 | 0.81739 | 2943 | 32 | 2883 | 82 | 2977 | 42 | 1.306 | 0.766 | 96.84 |
| PD17-27-438.d | 17 | 0.39 | 0.559 | 0.012 | 0.78563 | 2932 | 22 | 2857 | 51 | 2975 | 33 | 1.112 | 0.899 | 96.03 |
| PD17-27-439.d | 16.06 | 0.57 | 0.515 | 0.017 | 0.86923 | 2874 | 34 | 2672 | 74 | 3010 | 36 | 1.691 | 0.591 | 88.77 |
| PD17-27-440.d | 9.99 | 0.24 | 0.3607 | 0.0099 | 0.774 | 2432 | 23 | 1983 | 47 | 2822 | 39 | 0.809 | 1.236 | 70.27 |
| PD17-27-441.d | 7.57 | 0.21 | 0.2807 | 0.0081 | 0.83584 | 2179 | 25 | 1593 | 41 | 2780 | 36 | 0.683 | 1.464 | 57.30 |
| PD17-27-450.d | 16.05 | 0.5 | 0.536 | 0.017 | 0.79873 | 2881 | 28 | 2761 | 71 | 2947 | 40 | 1.508 | 0.663 | 93.69 |
| PD17-27-451.d | 17.98 | 0.46 | 0.586 | 0.013 | 0.81222 | 2985 | 25 | 2969 | 55 | 2988 | 33 | 1.509 | 0.663 | 99.36 |
| PD17-27-452.d | 16.43 | 0.46 | 0.544 | 0.016 | 0.81707 | 2898 | 27 | 2796 | 67 | 2962 | 37 | 1.129 | 0.886 | 94.40 |
| PD17-27-452-2.d | 11.06 | 0.37 | 0.379 | 0.013 | 0.81057 | 2525 | 32 | 2069 | 63 | 2903 | 43 | 8.4 | 0.119 | 71.27 |
| PD17-27-453.d | 12.84 | 0.35 | 0.422 | 0.012 | 0.67683 | 2666 | 26 | 2267 | 54 | 2977 | 43 | 2.1 | 0.476 | 76.15 |
| PD17-27-454.d | 14.44 | 0.35 | 0.49 | 0.01 | 0.82457 | 2779 | 24 | 2568 | 45 | 2926 | 32 | 0.938 | 1.066 | 87.76 |
| PD17-27-455.d | 15.51 | 0.43 | 0.505 | 0.014 | 0.70682 | 2844 | 26 | 2630 | 59 | 2991 | 41 | 1.841 | 0.543 | 87.93 |
| PD17-27-456.d | 15.67 | 0.38 | 0.505 | 0.014 | 0.76742 | 2854 | 24 | 2631 | 58 | 2989 | 37 | 2.701 | 0.370 | 88.02 |
| PD17-27-457.d | 17.24 | 0.41 | 0.561 | 0.012 | 0.68847 | 2945 | 23 | 2867 | 50 | 2988 | 36 | 1.555 | 0.643 | 95.95 |
| PD17-27-458.d | 16.94 | 0.46 | 0.57 | 0.015 | 0.75972 | 2928 | 26 | 2906 | 60 | 2933 | 37 | 1.512 | 0.661 | 99.08 |
| PD17-27-459.d | 18 | 0.49 | 0.577 | 0.018 | 0.75298 | 2986 | 26 | 2931 | 72 | 3015 | 41 | 0.928 | 1.078 | 97.21 |
| PD17-27-460.d | 15.41 | 0.45 | 0.512 | 0.014 | 0.78901 | 2838 | 29 | 2661 | 58 | 2956 | 36 | 1.25 | 0.800 | 90.02 |
| PD17-27-461.d | 17.03 | 0.47 | 0.556 | 0.014 | 0.78377 | 2936 | 26 | 2846 | 57 | 2982 | 35 | 1.57 | 0.637 | 95.44 |
| PD17-27-462.d | 16.98 | 0.44 | 0.542 | 0.013 | 0.71588 | 2930 | 25 | 2790 | 54 | 3020 | 38 | 1.188 | 0.842 | 92.38 |
| PD17-27-471.d | 18.38 | 0.47 | 0.601 | 0.016 | 0.75717 | 3009 | 25 | 3027 | 64 | 2989 | 37 | 1.26 | 0.794 | 101.27 |
| PD17-27-472.d | 18.08 | 0.59 | 0.593 | 0.018 | 0.7686 | 2988 | 31 | 2995 | 73 | 2977 | 41 | 1.643 | 0.609 | 100.60 |
| PD17-27-473.d | 14.46 | 0.36 | 0.491 | 0.011 | 0.82635 | 2776 | 24 | 2570 | 49 | 2916 | 31 | 0.953 | 1.049 | 88.13 |
| PD17-27-474.d | 15.73 | 0.4 | 0.522 | 0.013 | 0.80819 | 2857 | 25 | 2703 | 57 | 2960 | 35 | 1.377 | 0.726 | 91.32 |
| | | | | | | | | | | | | | | |
| PD17-48-475.d | 20.4 | 0.51 | 0.596 | 0.015 | 0.85926 | 3108 | 24 | 3011 | 62 | 3159 | 31 | 3.85 | 0.260 | 95.31 |
| PD17-48-476.d | 20.35 | 0.42 | 0.6 | 0.01 | 0.81244 | 3106 | 20 | 3029 | 41 | 3145 | 29 | 1.65 | 0.606 | 96.31 |
| PD17-48-477.d | 21.34 | 0.42 | 0.6279 | 0.0095 | 0.7127 | 3152 | 19 | 3139 | 38 | 3148 | 30 | 3.93 | 0.254 | 99.71 |
| PD17-48-478.d | 21.77 | 0.49 | 0.632 | 0.013 | 0.89167 | 3171 | 22 | 3153 | 53 | 3172 | 28 | 4.2 | 0.238 | 99.40 |
| PD17-48-479.d | 21.75 | 0.49 | 0.638 | 0.015 | 0.87783 | 3173 | 21 | 3178 | 57 | 3151 | 29 | 19.3 | 0.052 | 100.86 |
| PD17-48-480.d | 21.61 | 0.51 | 0.628 | 0.014 | 0.81652 | 3164 | 23 | 3136 | 56 | 3171 | 31 | 2.13 | 0.469 | 98.90 |
| PD17-48-481.d | 19.54 | 0.44 | 0.573 | 0.012 | 0.81453 | 3066 | 22 | 2915 | 49 | 3153 | 30 | 2.04 | 0.490 | 92.45 |
| PD17-48-482.d | 17.08 | 0.63 | 0.506 | 0.016 | 0.80267 | 2936 | 35 | 2639 | 71 | 3136 | 42 | 1.094 | 0.914 | 84.15 |
| PD17-48-491.d | 20.81 | 0.42 | 0.611 | 0.011 | 0.84111 | 3130 | 20 | 3071 | 43 | 3156 | 28 | 3.37 | 0.297 | 97.31 |
| PD17-48-492.d | 20.9 | 0.45 | 0.612 | 0.011 | 0.77159 | 3131 | 21 | 3074 | 44 | 3154 | 30 | 2.5 | 0.400 | 97.46 |
| PD17-48-493.d | 21.07 | 0.5 | 0.621 | 0.013 | 0.87117 | 3139 | 23 | 3108 | 52 | 3144 | 28 | 12.5 | 0.080 | 98.85 |
| PD17-48-494.d | 19.74 | 0.43 | 0.587 | 0.012 | 0.61981 | 3077 | 21 | 2974 | 48 | 3130 | 30 | 0.508 | 1.969 | 95.02 |
| PD17-48-495.d | 21.39 | 0.46 | 0.627 | 0.012 | 0.74577 | 3155 | 21 | 3135 | 50 | 3155 | 32 | 5.99 | 0.167 | 99.37 |
| PD17-48-496.d | 20.85 | 0.51 | 0.614 | 0.014 | 0.67919 | 3129 | 24 | 3083 | 55 | 3150 | 33 | 3.13 | 0.319 | 97.87 |
| PD17-48-497.d | 21.67 | 0.49 | 0.63 | 0.014 | 0.82005 | 3168 | 22 | 3146 | 55 | 3167 | 30 | 5.25 | 0.190 | 99.34 |
| PD17-48-498.d | 21.56 | 0.43 | 0.63 | 0.012 | 0.87977 | 3165 | 19 | 3148 | 48 | 3160 | 29 | 6.77 | 0.148 | 99.62 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-48-499.d | 21.77 | 0.46 | 0.638 | 0.013 | 0.84624 | 3172 | 21 | 3179 | 50 | 3152 | 30 | 65 | 0.015 | 100.86 |
| PD17-48-500.d | 20.33 | 0.42 | 0.61 | 0.011 | 0.79932 | 3105 | 20 | 3069 | 43 | 3116 | 30 | 8.79 | 0.114 | 98.49 |
| PD17-48-501.d | 18.45 | 0.52 | 0.555 | 0.017 | 0.90596 | 3011 | 27 | 2841 | 70 | 3114 | 33 | 14 | 0.071 | 91.23 |
| PD17-48-502.d | 20.49 | 0.48 | 0.607 | 0.013 | 0.80867 | 3112 | 23 | 3054 | 51 | 3139 | 31 | 2.54 | 0.394 | 97.29 |
| PD17-48-503.d | 21.07 | 0.47 | 0.616 | 0.012 | 0.8324 | 3139 | 22 | 3089 | 47 | 3161 | 29 | 3.42 | 0.292 | 97.72 |
| PD17-48-512.d | 20.91 | 0.48 | 0.618 | 0.013 | 0.87037 | 3133 | 22 | 3099 | 50 | 3141 | 29 | 12.5 | 0.080 | 98.66 |
| PD17-48-513.d | 21.87 | 0.44 | 0.6343 | 0.0095 | 0.70496 | 3176 | 20 | 3165 | 38 | 3171 | 30 | 1.612 | 0.620 | 99.81 |
| PD17-48-514.d | 21.8 | 0.45 | 0.63 | 0.011 | 0.83345 | 3173 | 20 | 3145 | 43 | 3178 | 29 | 2.87 | 0.348 | 98.96 |
| PD17-48-515.d | 20.23 | 0.44 | 0.597 | 0.012 | 0.8122 | 3101 | 21 | 3017 | 48 | 3146 | 31 | 1.056 | 0.947 | 95.90 |
| PD17-48-516.d | 20.55 | 0.74 | 0.597 | 0.019 | 0.84756 | 3115 | 36 | 3015 | 76 | 3161 | 37 | 2.75 | 0.364 | 95.38 |
| PD17-48-517.d | 22.31 | 0.5 | 0.648 | 0.013 | 0.81868 | 3195 | 22 | 3218 | 52 | 3169 | 30 | 7.05 | 0.142 | 101.55 |
| PD17-48-518.d | 19.45 | 0.66 | 0.562 | 0.02 | 0.79782 | 3061 | 33 | 2871 | 81 | 3174 | 42 | 1.446 | 0.692 | 90.45 |
| PD17-48-519.d | 12.04 | 0.29 | 0.3554 | 0.0073 | 0.8941 | 2605 | 22 | 1959 | 35 | 3145 | 29 | 0.545 | 1.835 | 62.29 |
| PD17-48-520.d | 17.08 | 0.55 | 0.49 | 0.016 | 0.89268 | 2937 | 31 | 2566 | 70 | 3172 | 34 | 1.79 | 0.559 | 80.90 |
| PD17-48-521.d | 19.91 | 0.47 | 0.586 | 0.012 | 0.81964 | 3084 | 23 | 2968 | 51 | 3148 | 31 | 4.84 | 0.207 | 94.28 |
| PD17-48-522.d | 21.31 | 0.47 | 0.627 | 0.012 | 0.85236 | 3151 | 22 | 3136 | 47 | 3146 | 29 | 4.34 | 0.230 | 99.68 |
| | | | | | | | | | | | | | | |
| PD17-49-531.d | 20.78 | 0.44 | 0.596 | 0.011 | 0.80069 | 3126 | 20 | 3013 | 43 | 3188 | 29 | 6.1 | 0.164 | 94.51 |
| PD17-49-532.d | 10.13 | 0.29 | 0.3069 | 0.0085 | 0.86846 | 2444 | 27 | 1724 | 42 | 3082 | 34 | 1.93 | 0.518 | 55.94 |
| PD17-49-533.d | 17.59 | 0.44 | 0.527 | 0.012 | 0.87708 | 2966 | 24 | 2728 | 51 | 3122 | 30 | 2.76 | 0.362 | 87.38 |
| PD17-49-534.d | 12.71 | 0.46 | 0.4 | 0.015 | 0.87895 | 2656 | 34 | 2167 | 70 | 3041 | 37 | 2.81 | 0.356 | 71.26 |
| PD17-49-535.d | 17.81 | 0.67 | 0.528 | 0.018 | 0.85731 | 2977 | 36 | 2730 | 75 | 3138 | 36 | 3.71 | 0.270 | 87.00 |
| PD17-49-536.d | 16.19 | 0.51 | 0.49 | 0.016 | 0.87956 | 2885 | 30 | 2570 | 67 | 3097 | 34 | 3.06 | 0.327 | 82.98 |
| PD17-49-537.d | 16.35 | 0.33 | 0.4977 | 0.0086 | 0.74151 | 2896 | 20 | 2602 | 37 | 3093 | 30 | 1.464 | 0.683 | 84.13 |
| PD17-49-538.d | 15.85 | 0.37 | 0.466 | 0.01 | 0.80854 | 2866 | 22 | 2466 | 44 | 3146 | 32 | 1.799 | 0.556 | 78.39 |
| PD17-49-539.d | 13.09 | 0.36 | 0.417 | 0.011 | 0.86325 | 2684 | 27 | 2244 | 53 | 3025 | 33 | 3.34 | 0.299 | 74.18 |
| PD17-49-540.d | 11.77 | 0.27 | 0.4037 | 0.0074 | 0.85309 | 2584 | 22 | 2184 | 34 | 2902 | 30 | 1.6 | 0.625 | 75.26 |
| PD17-49-541.d | 4.39 | 0.14 | 0.1525 | 0.0058 | 0.60227 | 1708 | 27 | 914 | 33 | 2865 | 58 | 2.237 | 0.447 | 31.90 |
| PD17-49-542.d | 16.71 | 0.4 | 0.501 | 0.012 | 0.70728 | 2917 | 23 | 2616 | 53 | 3123 | 39 | 0.201 | 4.975 | 83.77 |
| PD17-49-551.d | 18.7 | 0.47 | 0.487 | 0.01 | 0.50656 | 3028 | 24 | 2556 | 44 | 3320 | 40 | 1.32 | 0.758 | 76.99 |
| PD17-49-552.d | 16.76 | 0.65 | 0.472 | 0.02 | 0.84149 | 2919 | 38 | 2492 | 90 | 3197 | 42 | 13.68 | 0.073 | 77.95 |
| PD17-49-553.d | 16.41 | 0.38 | 0.4968 | 0.0084 | 0.78348 | 2900 | 22 | 2599 | 36 | 3119 | 29 | 1.476 | 0.678 | 83.33 |
| PD17-49-554.d | 7.38 | 0.21 | 0.2447 | 0.0073 | 0.77336 | 2156 | 25 | 1410 | 38 | 2957 | 38 | 2.247 | 0.445 | 47.68 |
| PD17-49-555.d | 15.45 | 0.37 | 0.466 | 0.01 | 0.70687 | 2842 | 23 | 2465 | 44 | 3110 | 35 | 1.006 | 0.994 | 79.26 |
| PD17-49-556.d | 13.51 | 0.49 | 0.432 | 0.014 | 0.81816 | 2713 | 35 | 2311 | 64 | 3013 | 41 | 2.103 | 0.476 | 76.70 |
| PD17-49-557.d | 12.85 | 0.42 | 0.411 | 0.012 | 0.85398 | 2666 | 30 | 2216 | 56 | 3018 | 38 | 3.01 | 0.332 | 73.43 |
| PD17-49-558.d | 10.29 | 0.27 | 0.3395 | 0.0071 | 0.88442 | 2459 | 24 | 1883 | 34 | 2966 | 30 | 2.41 | 0.415 | 63.49 |
| PD17-49-559.d | 20.06 | 0.43 | 0.524 | 0.014 | 0.7975 | 3093 | 21 | 2715 | 59 | 3319 | 36 | 1.205 | 0.830 | 81.80 |
| PD17-49-560.d | 20.74 | 0.41 | 0.607 | 0.01 | 0.79558 | 3125 | 19 | 3054 | 42 | 3159 | 31 | 1.883 | 0.531 | 96.68 |
| PD17-49-561.d | 12.86 | 0.36 | 0.413 | 0.013 | 0.90839 | 2667 | 27 | 2225 | 60 | 3014 | 33 | 2.302 | 0.434 | 73.82 |
| PD17-49-562.d | 16.68 | 0.41 | 0.496 | 0.012 | 0.8773 | 2914 | 24 | 2593 | 52 | 3114 | 30 | 1.92 | 0.521 | 83.27 |
| PD17-49-571.d | 17.84 | 0.36 | 0.5244 | 0.0091 | 0.84764 | 2980 | 20 | 2715 | 38 | 3149 | 28 | 2.004 | 0.499 | 86.22 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-49-572.d | 8.19 | 0.28 | 0.2167 | 0.0087 | 0.90172 | 2249 | 31 | 1263 | 46 | 3299 | 37 | 1.132 | 0.883 | 38.28 |
| PD17-49-573.d | 13.43 | 0.54 | 0.427 | 0.014 | 0.92683 | 2707 | 39 | 2288 | 65 | 3019 | 36 | 0.802 | 1.247 | 75.79 |
| PD17-49-574.d | 22.35 | 0.56 | 0.616 | 0.012 | 0.71087 | 3195 | 24 | 3090 | 49 | 3254 | 32 | 0.802 | 1.247 | 94.96 |
| PD17-49-575.d | 18.87 | 0.41 | 0.529 | 0.011 | 0.83024 | 3033 | 21 | 2741 | 45 | 3221 | 30 | 3.88 | 0.258 | 85.10 |
| PD17-49-576.d | 15.94 | 0.44 | 0.467 | 0.011 | 0.72865 | 2872 | 26 | 2468 | 51 | 3150 | 37 | 1.924 | 0.520 | 78.35 |
| PD17-49-577.d | 18.68 | 0.52 | 0.563 | 0.02 | 0.77943 | 3024 | 27 | 2874 | 84 | 3116 | 44 | 1.371 | 0.729 | 92.23 |
| PD17-49-578.d | 17.89 | 0.49 | 0.534 | 0.014 | 0.83651 | 2981 | 27 | 2757 | 57 | 3119 | 32 | 3.09 | 0.324 | 88.39 |
| PD17-49-579.d | 20 | 0.43 | 0.591 | 0.013 | 0.85861 | 3089 | 21 | 2988 | 51 | 3143 | 31 | 1.8 | 0.556 | 95.07 |
| PD17-49-580.d | 9.88 | 0.22 | 0.3372 | 0.0073 | 0.73365 | 2422 | 21 | 1872 | 35 | 2910 | 34 | 1.011 | 0.989 | 64.33 |
| PD17-49-581.d | 18.43 | 0.39 | 0.529 | 0.01 | 0.87533 | 3011 | 21 | 2737 | 44 | 3185 | 28 | 4.02 | 0.249 | 85.93 |
| | | | | | | | | | | | | | | |
| PD17-56-590.d | 22.5 | 0.65 | 0.636 | 0.019 | 0.74262 | 3204 | 29 | 3169 | 76 | 3214 | 40 | 1.88 | 0.532 | 98.60 |
| PD17-56-591.d | 20.11 | 0.5 | 0.554 | 0.013 | 0.74212 | 3095 | 24 | 2841 | 52 | 3231 | 34 | 86 | 0.012 | 87.93 |
| PD17-56-592.d | 24.52 | 0.62 | 0.651 | 0.013 | 0.61772 | 3285 | 25 | 3235 | 50 | 3309 | 37 | 1.29 | 0.775 | 97.76 |
| PD17-56-593.d | 23.61 | 0.62 | 0.682 | 0.016 | 0.79861 | 3256 | 28 | 3351 | 64 | 3181 | 34 | 98 | 0.010 | 105.34 |
| PD17-56-594.d | 20.76 | 0.42 | 0.5925 | 0.0088 | 0.74126 | 3126 | 20 | 2997 | 36 | 3194 | 29 | 40.3 | 0.025 | 93.83 |
| PD17-56-595.d | 24.88 | 0.67 | 0.669 | 0.013 | 0.48456 | 3300 | 26 | 3300 | 52 | 3273 | 42 | 0.922 | 1.085 | 100.82 |
| PD17-56-596.d | 23.37 | 0.63 | 0.65 | 0.015 | 0.64171 | 3239 | 26 | 3223 | 60 | 3241 | 38 | 2.21 | 0.452 | 99.44 |
| PD17-56-597.d | 21.48 | 0.48 | 0.613 | 0.011 | 0.86536 | 3159 | 22 | 3082 | 46 | 3203 | 30 | 22.7 | 0.044 | 96.22 |
| PD17-56-598.d | 22.22 | 0.43 | 0.611 | 0.0086 | 0.76905 | 3192 | 19 | 3072 | 35 | 3254 | 28 | 20.7 | 0.048 | 94.41 |
| PD17-56-599.d | 23.11 | 0.47 | 0.632 | 0.011 | 0.68989 | 3232 | 19 | 3156 | 43 | 3261 | 31 | 4.16 | 0.240 | 96.78 |
| PD17-56-600.d | 24.9 | 0.69 | 0.655 | 0.013 | 0.58845 | 3299 | 28 | 3245 | 51 | 3319 | 39 | 1.06 | 0.943 | 97.77 |
| PD17-56-601.d | 25.68 | 0.49 | 0.668 | 0.0093 | 0.65709 | 3333 | 19 | 3296 | 36 | 3337 | 30 | 0.9958 | 1.004 | 98.77 |
| PD17-56-610.d | 22.47 | 0.57 | 0.584 | 0.014 | 0.54976 | 3201 | 25 | 2963 | 55 | 3342 | 40 | 1.1 | 0.909 | 88.66 |
| PD17-56-611.d | 21.53 | 0.58 | 0.574 | 0.015 | 0.60532 | 3159 | 26 | 2919 | 61 | 3303 | 42 | 1.065 | 0.939 | 88.37 |
| PD17-56-612.d | 25.36 | 0.75 | 0.676 | 0.015 | 0.54886 | 3316 | 29 | 3324 | 57 | 3298 | 44 | 1.394 | 0.717 | 100.79 |
| PD17-56-613.d | 22.27 | 0.52 | 0.615 | 0.012 | 0.7823 | 3193 | 22 | 3088 | 46 | 3245 | 30 | 2.52 | 0.397 | 95.16 |
| PD17-56-614.d | 15.71 | 0.66 | 0.422 | 0.016 | 0.70934 | 2854 | 39 | 2267 | 73 | 3292 | 53 | 1.551 | 0.645 | 68.86 |
| PD17-56-615.d | 23.87 | 0.68 | 0.657 | 0.016 | 0.72845 | 3259 | 28 | 3252 | 62 | 3248 | 39 | 2.46 | 0.407 | 100.12 |
| PD17-56-616.d | 23.01 | 0.56 | 0.62 | 0.014 | 0.74019 | 3225 | 24 | 3108 | 58 | 3282 | 34 | 1.087 | 0.920 | 94.70 |
| PD17-56-617.d | 21.66 | 0.46 | 0.583 | 0.011 | 0.6782 | 3166 | 21 | 2958 | 45 | 3287 | 33 | 0.512 | 1.953 | 89.99 |
| PD17-56-618.d | 22.12 | 0.72 | 0.613 | 0.018 | 0.59148 | 3186 | 31 | 3078 | 72 | 3237 | 48 | 3.06 | 0.327 | 95.09 |
| PD17-56-619.d | 22.18 | 0.54 | 0.637 | 0.011 | 0.76058 | 3188 | 23 | 3176 | 45 | 3176 | 30 | 12.4 | 0.081 | 100.00 |
| PD17-56-620.d | 26 | 0.66 | 0.678 | 0.016 | 0.66321 | 3344 | 25 | 3334 | 61 | 3334 | 37 | 0.8 | 1.250 | 100.00 |
| PD17-56-621.d | 23.96 | 0.58 | 0.662 | 0.014 | 0.81384 | 3264 | 24 | 3272 | 53 | 3243 | 31 | 2.1 | 0.476 | 100.89 |
| PD17-56-630.d | 23.72 | 0.49 | 0.646 | 0.011 | 0.58238 | 3255 | 20 | 3219 | 42 | 3267 | 33 | 3.52 | 0.284 | 98.53 |
| PD17-56-631.d | 22.51 | 0.49 | 0.622 | 0.01 | 0.69837 | 3204 | 21 | 3115 | 41 | 3245 | 33 | 1.267 | 0.789 | 95.99 |
| PD17-56-632.d | 21.4 | 0.54 | 0.588 | 0.011 | 0.7525 | 3154 | 25 | 2977 | 44 | 3248 | 31 | 6.93 | 0.144 | 91.66 |
| PD17-56-633.d | 24.58 | 0.7 | 0.658 | 0.015 | 0.57653 | 3287 | 28 | 3254 | 57 | 3285 | 39 | 1.004 | 0.996 | 99.06 |
| PD17-56-634.d | 22.73 | 0.52 | 0.612 | 0.011 | 0.58116 | 3213 | 22 | 3082 | 42 | 3286 | 35 | 0.781 | 1.280 | 93.79 |
| PD17-56-635.d | 25.25 | 0.76 | 0.669 | 0.016 | 0.52498 | 3316 | 31 | 3297 | 63 | 3315 | 47 | 1.59 | 0.629 | 99.46 |
| PD17-56-636.d | 24.7 | 0.63 | 0.658 | 0.016 | 0.6614 | 3293 | 25 | 3253 | 61 | 3305 | 38 | 0.962 | 1.040 | 98.43 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-56-637.d | 25.39 | 0.61 | 0.681 | 0.014 | 0.62705 | 3321 | 23 | 3346 | 54 | 3291 | 36 | 1.191 | 0.840 | 101.67 |
| PD17-56-638.d | 6.96 | 0.25 | 0.1884 | 0.0068 | 0.47287 | 2102 | 32 | 1112 | 37 | 3277 | 60 | 5.26 | 0.190 | 33.93 |
| PD17-56-639.d | 24.42 | 0.55 | 0.648 | 0.013 | 0.77038 | 3286 | 21 | 3215 | 53 | 3312 | 33 | 0.651 | 1.536 | 97.07 |
| PD17-56-640.d | 24.72 | 0.77 | 0.653 | 0.016 | 0.63946 | 3292 | 31 | 3236 | 64 | 3310 | 43 | 1 | 1.000 | 97.76 |
| PD17-56-641.d | 22.74 | 0.77 | 0.642 | 0.019 | 0.83054 | 3209 | 33 | 3192 | 75 | 3198 | 38 | 3.7 | 0.270 | 99.81 |
| PD17-56-642.d | 24.54 | 0.64 | 0.66 | 0.014 | 0.58364 | 3286 | 25 | 3263 | 56 | 3286 | 39 | 0.905 | 1.105 | 99.30 |
| PD17-56-651.d | 21.12 | 0.55 | 0.595 | 0.015 | 0.75625 | 3147 | 23 | 3008 | 61 | 3211 | 35 | 3.07 | 0.326 | 93.68 |
| PD17-56-652.d | 21.99 | 0.61 | 0.609 | 0.016 | 0.75002 | 3180 | 27 | 3062 | 64 | 3241 | 36 | 2.077 | 0.481 | 94.48 |
| PD17-56-653.d | 24.49 | 0.51 | 0.644 | 0.01 | 0.59434 | 3289 | 19 | 3201 | 39 | 3324 | 32 | 0.7182 | 1.392 | 96.30 |

Appendix 2.2 Zircon REE compositions (ppm) – Granitoids of the Dharwar Craton

| *Comments* | *La139* | *Ce140* | *Pr141* | *Nd146* | *Sm147* | *Eu153* | *Gd157* | *Tb159* | *Dy163* | *Ho165* | *Er166* | *Tm169* | *Yb172* | *Lu175* | *Hf178* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-44-363* | 6.49 | 32.9 | 2.17 | 11 | 12.1 | 1.57 | 60.2 | 20.3 | 235 | 81.3 | 372 | 80.6 | 734 | 139.1 | 15660 |
| *PD17-44-364* | 34.1 | 128.6 | 12.9 | 68.9 | 39.6 | 3.79 | 129 | 37.9 | 374 | 123.3 | 552 | 121.1 | 1148 | 220.9 | 12890 |
| *PD17-44-365* | 48.3 | 151.3 | 17.74 | 103.2 | 85.8 | 16.2 | 261 | 66.8 | 493 | 105.6 | 331 | 63 | 604 | 129.1 | 15390 |
| *PD17-44-366* | 36.2 | 98.5 | 12.1 | 68.3 | 43.7 | 12.2 | 136 | 35.2 | 301 | 82.3 | 346 | 77.8 | 802 | 168.8 | 15590 |
| *PD17-44-367* | 7.15 | 40.4 | 3.59 | 22.7 | 18.4 | 3.03 | 60.7 | 17.9 | 180.6 | 57 | 241.1 | 51.9 | 513 | 103.8 | 12540 |
| *PD17-44-369* | 1.23 | 17.5 | 0.403 | 2.39 | 3.68 | 0.313 | 21.8 | 8.78 | 119.1 | 47.5 | 231.7 | 52.5 | 504 | 95.8 | 15480 |
| *PD17-44-370* | 7.96 | 56.5 | 3.42 | 22.9 | 25 | 3.5 | 99.7 | 30.6 | 315 | 104 | 432 | 84.5 | 743 | 138.1 | 11760 |
| *PD17-44-371* | 21.9 | 53.4 | 6.69 | 38.6 | 29.5 | 3.91 | 87.9 | 20.9 | 184.3 | 59.8 | 303 | 74.8 | 788 | 179.1 | 12100 |
| *PD17-44-372* | 38.7 | 160.2 | 16.7 | 102.8 | 82.9 | 10.48 | 234 | 58.2 | 524 | 151.9 | 578 | 110.4 | 965 | 172.1 | 13740 |
| *PD17-44-383* | 10.5 | 34.8 | 2.98 | 17.4 | 9.2 | 5.1 | 30.1 | 8.9 | 114.6 | 54 | 312 | 76.1 | 778 | 161.8 | 11230 |
| *PD17-44-384* | 17.2 | 60.2 | 7.4 | 46.3 | 39 | 7.7 | 135 | 38 | 341 | 98 | 365 | 64.3 | 565 | 104.4 | 11460 |
| *PD17-44-385* | 280 | 580 | 63 | 202 | 39.5 | 4.03 | 90.8 | 25.8 | 276 | 95.2 | 402 | 83.4 | 773 | 151.7 | 10440 |
| *PD17-44-386* | 46.9 | 115.2 | 14.12 | 76.2 | 59.7 | 8.59 | 191 | 57.2 | 456 | 107.8 | 356 | 70.1 | 678 | 136.3 | 14750 |
| *PD17-44-387* | 3.84 | 29 | 1.43 | 9.7 | 10.7 | 1.19 | 48.6 | 16.3 | 199 | 80.9 | 392 | 90.6 | 896 | 184.6 | 12750 |
| *PD17-44-389* | 32.7 | 101.3 | 12.38 | 72.6 | 48.9 | 8.32 | 143 | 37.5 | 310 | 75 | 274 | 56.7 | 533 | 107.9 | 13720 |
| *PD17-44-390* | 54 | 106 | 10.8 | 45.9 | 21.2 | 12.53 | 71.4 | 20.8 | 198 | 61.2 | 263 | 56.8 | 573 | 114.2 | 11650 |
| *PD17-44-391* | 10.29 | 47.1 | 4.53 | 26.8 | 22.6 | 3.13 | 70.4 | 19.9 | 198.2 | 63.6 | 277.8 | 59.9 | 581 | 112.3 | 12200 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-44-392* | 0.49 | 11.7 | 0.249 | 1.76 | 3.23 | 0.312 | 17.7 | 7.16 | 104 | 50.6 | 294 | 73.6 | 797 | 175.3 | 10440 |
| *PD17-44-393* | 47.4 | 129 | 14.6 | 81.4 | 59.7 | 9.25 | 174.6 | 45.2 | 409 | 122 | 453 | 86.1 | 744 | 144.8 | 10360 |
| *PD17-44-402* | 11.7 | 21.7 | 2.31 | 11.1 | 5.5 | 1.03 | 20.6 | 6.5 | 65.1 | 25.1 | 146.7 | 41.2 | 491 | 119.2 | 16690 |
| *PD17-44-404* | 4.74 | 38.9 | 3.05 | 20.6 | 15.2 | 2.2 | 67.7 | 21.9 | 254 | 95 | 420 | 85.2 | 784 | 150.1 | 10630 |
| *PD17-44-405* | 60 | 158 | 16.1 | 68 | 26.7 | 7.51 | 69.5 | 19.6 | 179 | 54.6 | 242.4 | 55.5 | 564 | 116.4 | 13780 |
| *PD17-44-408* | 21.4 | 68.5 | 7.41 | 41.8 | 38.7 | 15.5 | 127 | 36.6 | 315 | 85.8 | 342 | 72.4 | 700 | 141.4 | 14060 |
| *PD17-44-409* | 57 | 126 | 19 | 90 | 34.1 | 5.2 | 89 | 24.3 | 241 | 80.5 | 349 | 72.3 | 683 | 135.6 | 9830 |
| *PD17-44-411* | 12.4 | 49.4 | 3.5 | 20.3 | 17.8 | 12.15 | 63.2 | 20.3 | 225 | 79 | 366 | 82.9 | 823 | 149.2 | 19920 |
| *PD17-44-412* | 0.03 | 4.67 | 0.038 | 0.53 | 0.8 | 0.145 | 6.78 | 3.28 | 53.2 | 27.6 | 168 | 45.8 | 510 | 117.8 | 14450 |
| *PD17-44-414* | 5.68 | 33 | 2.59 | 19.7 | 26.2 | 5.63 | 137.3 | 44.3 | 499 | 176.9 | 731 | 136.1 | 1142 | 206.9 | 10490 |
| *PD17-44-423* | 1.51 | 31.4 | 0.779 | 9.21 | 17.6 | 1.72 | 107.3 | 37 | 447 | 169.2 | 730 | 142.9 | 1254 | 234.8 | 10820 |
| *PD17-44-425* | 16.1 | 75.6 | 8.9 | 58.1 | 39.6 | 13.1 | 123.8 | 33.4 | 311 | 90 | 349 | 67.8 | 626 | 120.2 | 12930 |
| *PD17-44-426* | 301 | 630 | 80 | 400 | 86 | 13.4 | 105.8 | 20.9 | 181 | 54.4 | 243.7 | 54.7 | 572 | 125.8 | 10770 |
| *PD17-44-427* | 11.79 | 50.2 | 5.58 | 35.9 | 28.3 | 7.43 | 103.3 | 28.2 | 278 | 87.9 | 360 | 72.5 | 675 | 136.7 | 10040 |
| | | | | | | | | | | | | | | | |
| *PD17-38-303* | 42.8 | 123.3 | 12.1 | 63.4 | 22.1 | 7.79 | 55.5 | 16.83 | 190.8 | 64.6 | 275 | 56.2 | 527 | 103.6 | 11000 |
| *PD17-38-305* | 16 | 43.5 | 3.31 | 17.9 | 11.7 | 4.16 | 46.8 | 15.5 | 180 | 62.2 | 256 | 47.9 | 420 | 78.5 | 13690 |
| *PD17-38-306* | 40.8 | 95.1 | 8.9 | 43.3 | 20 | 6.8 | 65 | 21.2 | 256 | 84 | 345 | 66.8 | 592 | 110 | 11660 |
| *PD17-38-307* | 2.61 | 15.09 | 0.559 | 4.49 | 4.8 | 1.91 | 22.3 | 7.38 | 84.4 | 31.34 | 145.8 | 33.28 | 342.6 | 73 | 10540 |
| *PD17-38-308* | 0.314 | 11.57 | 0.16 | 2.24 | 3.19 | 1.58 | 19.3 | 6.42 | 75 | 28.6 | 137.5 | 32.3 | 336 | 73 | 10470 |
| *PD17-38-309* | 9.3 | 25 | 1.63 | 7.89 | 5.43 | 1.97 | 24.2 | 8.8 | 104 | 38.6 | 174 | 37.6 | 374 | 76.3 | 12700 |
| *PD17-38-310* | 74 | 199 | 19.1 | 102 | 40.3 | 13.8 | 118 | 35.4 | 391 | 123 | 477 | 88 | 746 | 134 | 10300 |
| *PD17-38-311* | 10.4 | 33.3 | 1.93 | 11.1 | 9.83 | 3.99 | 41 | 13.03 | 143 | 49.7 | 217 | 44.7 | 412 | 84.6 | 9200 |
| *PD17-38-312* | 12.23 | 39 | 2.18 | 12.5 | 10.75 | 3.76 | 43.5 | 13.6 | 156.7 | 55.1 | 237.6 | 51.7 | 508 | 104 | 10540 |
| *PD17-38-313* | 12.7 | 38.6 | 2.37 | 11.3 | 8.1 | 3.12 | 37.3 | 12.9 | 153 | 54.1 | 236 | 48.5 | 459 | 89.5 | 11150 |
| *PD17-38-314* | 35.9 | 93.8 | 7.17 | 30 | 9.7 | 3.25 | 30.4 | 9.64 | 116 | 39.6 | 169.6 | 36 | 347 | 71.6 | 10720 |
| *PD17-38-324* | 15.5 | 45.6 | 3.5 | 18.9 | 10.7 | 3.4 | 38.9 | 12.5 | 146 | 50.6 | 214 | 43.7 | 415 | 79.6 | 10950 |
| *PD17-38-325* | 19.6 | 75 | 5.46 | 30.7 | 14.9 | 5.32 | 66.2 | 22.5 | 274 | 97 | 413 | 83.8 | 761 | 145 | 12590 |
| *PD17-38-327* | 9.06 | 42.5 | 1.98 | 10.6 | 8.48 | 3.39 | 40 | 12.72 | 144.2 | 51.2 | 221.4 | 45.9 | 449 | 90 | 11190 |
| *PD17-38-328* | 25.7 | 90.6 | 5.77 | 28.2 | 16.5 | 5.94 | 72.7 | 24.4 | 267 | 92 | 376 | 73.7 | 644 | 121 | 10280 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-38-329* | 6 | 34 | 1.73 | 10.6 | 7 | 2.77 | 30.3 | 10.4 | 121 | 46 | 202 | 44.1 | 428 | 87.3 | 12740 |
| *PD17-38-330* | 23.6 | 51.7 | 4.04 | 19 | 9.2 | 3.14 | 29.6 | 10.5 | 128 | 45.3 | 194 | 40.4 | 388 | 78.6 | 13530 |
| *PD17-38-331* | 31.1 | 81 | 6.8 | 35.4 | 15.1 | 4.95 | 47.3 | 14 | 164 | 55.5 | 230 | 45.9 | 407 | 80.4 | 11060 |
| *PD17-38-332* | 15.1 | 45.3 | 3.35 | 13.9 | 8.1 | 2.96 | 27 | 8.7 | 103 | 36.9 | 166 | 37.4 | 376 | 79.9 | 10970 |
| *PD17-38-333* | 17.3 | 60.1 | 5.47 | 31.9 | 13.9 | 3.76 | 45.6 | 14.5 | 170 | 60.7 | 269 | 58.7 | 584 | 115.5 | 11090 |
| *PD17-38-334* | 30 | 22.1 | 2.26 | 7.57 | 1.58 | 0.45 | 7.8 | 3.11 | 45 | 19.2 | 105.1 | 28.4 | 333.3 | 75.6 | 15110 |
| *PD17-38-335* | 3.07 | 24.2 | 0.83 | 7.41 | 8.78 | 3.79 | 41.1 | 12.29 | 132.6 | 46.7 | 206.9 | 43.2 | 418 | 87 | 9570 |
| *PD17-38-344* | 25.3 | 92 | 8.5 | 49.5 | 21.5 | 7.67 | 68 | 20.4 | 232 | 78.4 | 323 | 64.6 | 592 | 114.9 | 9720 |
| *PD17-38-345* | 12.5 | 46.7 | 3 | 15.2 | 9.76 | 3.67 | 41.8 | 14 | 163.8 | 57.8 | 242 | 48.7 | 447 | 89.2 | 10290 |
| *PD17-38-347* | 5.5 | 20.9 | 1.24 | 7.3 | 5.5 | 2.51 | 27.6 | 8.8 | 110 | 38.6 | 173 | 36.4 | 348 | 72.5 | 10520 |
| *PD17-38-348* | Below LOD | 29.3 | 0.117 | 2.44 | 7.69 | 3.18 | 50.8 | 18.9 | 230 | 85.3 | 371 | 76.1 | 689 | 131.5 | 11800 |
| *PD17-38-349* | 16.3 | 54.7 | 4.79 | 26.4 | 13.2 | 4.52 | 45.6 | 16.1 | 186 | 64.9 | 276 | 56.7 | 526 | 97.2 | 11110 |
| *PD17-38-350* | 19.2 | 49 | 4.27 | 22.1 | 9 | 3.55 | 34.9 | 11 | 135 | 48.7 | 218 | 46.7 | 479 | 99.3 | 10620 |
| *PD17-38-351* | 10.3 | 50.9 | 2.83 | 16.9 | 13.8 | 5.01 | 62 | 21.1 | 252 | 89.1 | 385 | 78.4 | 720 | 139.8 | 11430 |
| *PD17-38-352* | 225 | 404 | 44.9 | 227 | 121.3 | 37.2 | 385 | 129.3 | 1509 | 450 | 1697 | 294 | 2259 | 348 | 11350 |
| *PD17-38-353* | 27.2 | 80.2 | 7.11 | 39.3 | 17.6 | 6.89 | 61.4 | 19.5 | 221 | 74.5 | 301 | 61.7 | 547 | 106.6 | 9460 |
| *PD17-38-354* | 20.8 | 44 | 2.95 | 14.3 | 9.42 | 3.64 | 42.5 | 13.85 | 158.4 | 55.1 | 236.2 | 47 | 436.9 | 87.8 | 9380 |
| | | | | | | | | | | | | | | | |
| *PD18-126 - 5* | 32.8 | 137.6 | 20.9 | 141.7 | 58.9 | 14.65 | 66.3 | 10.63 | 90 | 29.11 | 131.5 | 28.64 | 283.1 | 61.3 | 9060 |
| *PD18-126 - 6* | 56.5 | 270 | 37.6 | 229 | 126.9 | 56.6 | 218.8 | 39.7 | 316.7 | 91.6 | 348.1 | 71.8 | 682 | 134.7 | 10570 |
| *PD18-126 - 7* | 28.3 | 132 | 21.5 | 147 | 67.8 | 12.77 | 74.3 | 9.55 | 63.9 | 19.63 | 90.7 | 20.82 | 226.8 | 52.6 | 9680 |
| *PD18-126 - 9* | 17.9 | 112 | 10.3 | 66 | 27.1 | 9.5 | 51.6 | 12.52 | 131.4 | 47.53 | 206.1 | 44 | 399.9 | 77.5 | 9980 |
| *PD18-126 - 11* | 0.101 | 12.76 | 0.172 | 0.8 | 0.93 | 0.37 | 5.21 | 1.81 | 26.9 | 11.69 | 66.1 | 16.81 | 192.2 | 46.6 | 10600 |
| *PD18-126 - 12* | 0.395 | 21.54 | 0.57 | 3.14 | 2.94 | 0.81 | 11.3 | 4.12 | 54.1 | 24.85 | 137 | 33.4 | 360 | 79.6 | 8980 |
| *PD18-126 - 13* | 39.2 | 114.9 | 14.56 | 74.6 | 8.86 | 6.88 | 8.78 | 2.03 | 26.8 | 13.7 | 84 | 23.14 | 267.2 | 61.2 | 11160 |
| *PD18-126 - 14* | 20.7 | 92.1 | 12.05 | 71.7 | 23.3 | 9.2 | 39.9 | 9.64 | 96.9 | 33 | 145 | 31.3 | 316 | 64.4 | 10820 |
| *PD18-126 - 15* | 62.8 | 281 | 34.9 | 206 | 77.3 | 14.7 | 77.5 | 12.12 | 99.4 | 33.8 | 159.4 | 36.2 | 375.3 | 84.3 | 9640 |
| *PD18-126 - 17* | 8.5 | 68 | 6.4 | 37 | 18.8 | 4.2 | 33.2 | 9.05 | 93.3 | 35.39 | 160.4 | 35.72 | 355.3 | 71.1 | 10260 |
| *PD18-126 - 19* | 5.94 | 65 | 4.02 | 19.8 | 9.43 | 2.69 | 34.6 | 10.93 | 123.2 | 44.9 | 190.8 | 39.16 | 357.6 | 69.3 | 8100 |
| *PD18-126 - 20* | 4.29 | 125 | 3.38 | 28.5 | 30.2 | 10.32 | 86.7 | 21.9 | 203 | 64.2 | 267 | 53.4 | 491 | 99.5 | 7560 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-126 - 21* | 15.2 | 70.6 | 10 | 55.8 | 26.7 | 4.19 | 30 | 5.57 | 49 | 18.31 | 88.3 | 21.16 | 230.2 | 51.5 | 10460 |
| *PD18-126 - 22* | 44.6 | 214.7 | 37.3 | 260.9 | 111.2 | 49.6 | 112.6 | 12.4 | 76.1 | 20.83 | 98.7 | 25.67 | 293.8 | 67.3 | 9980 |
| *PD18-126 - 24* | 25.5 | 164 | 18 | 100.5 | 41.9 | 12.4 | 53.6 | 10.4 | 91.1 | 31.5 | 150.2 | 34.4 | 355 | 78.1 | 10090 |
| *PD18-126 - 27* | 58.1 | 347 | 44.2 | 339 | 183 | 73.3 | 194 | 20.3 | 109.2 | 29.4 | 123.7 | 27.3 | 279.9 | 60.8 | 10390 |
| *PD18-126 - 28* | 39.9 | 202 | 33.9 | 211 | 86.1 | 28.3 | 80.4 | 10.91 | 65.1 | 19.28 | 92.2 | 23.12 | 258.7 | 59.9 | 10250 |
| *PD18-126 - 31* | 23.5 | 129.2 | 17.9 | 105 | 41.6 | 7.66 | 42.8 | 7.19 | 61.8 | 24.24 | 116 | 27.01 | 294.2 | 63.5 | 10630 |
| *PD18-126 - 32* | 5.08 | 51.7 | 3.04 | 20.3 | 16.2 | 5.22 | 61.2 | 18.78 | 206.5 | 69.5 | 289.3 | 58.5 | 514.1 | 95.9 | 8430 |
| *PD18-126 - 33* | 56.5 | 147.2 | 15.64 | 91.8 | 37.2 | 7.84 | 57.3 | 12.46 | 124.2 | 42.8 | 180.6 | 35.2 | 318.1 | 60.3 | 6640 |
| *PD18-126 - 35* | 10.7 | 48.4 | 7.4 | 40.4 | 19.9 | 3.46 | 22.5 | 4.75 | 40.1 | 15.17 | 76.8 | 20.08 | 235.8 | 54.6 | 12520 |
| *PD18-126 - 36* | 14.1 | 59.3 | 7.74 | 48.3 | 20.2 | 4.63 | 24.4 | 4.15 | 37.7 | 15.18 | 81.1 | 20.67 | 244 | 59.4 | 10110 |
| *PD18-126 - 37* | 3.36 | 65.7 | 1.94 | 11.6 | 9.11 | 2.92 | 40 | 12.47 | 137.7 | 49.6 | 206.1 | 41 | 374 | 72.2 | 8660 |
| | | | | | | | | | | | | | | | |
| *PD17-32-247* | 0.319 | 26.21 | 0.267 | 2.88 | 6.4 | 0.836 | 42.9 | 16.97 | 226.8 | 89.7 | 415.3 | 85.8 | 787 | 145.6 | 14590 |
| *PD17-32-248* | 571 | 1020 | 110 | 503 | 65.5 | 6.67 | 83.5 | 20.7 | 229 | 82 | 353 | 69.7 | 620 | 119.4 | 9570 |
| *PD17-32-249* | 0.91 | 50.7 | 0.52 | 6.48 | 12.6 | 1.72 | 90.5 | 34.7 | 440 | 166.4 | 734 | 144.1 | 1246 | 222.3 | 11500 |
| *PD17-32-250* | 1.55 | 37.4 | 1.015 | 9.43 | 12.95 | 2.13 | 74.2 | 27 | 333 | 126.6 | 548 | 108.4 | 946 | 171.6 | 11180 |
| *PD17-32-252* | 0.354 | 28.37 | 0.204 | 3.06 | 7.83 | 0.988 | 55.7 | 21.66 | 280.2 | 111.4 | 494 | 101 | 891 | 165.6 | 12340 |
| *PD17-32-253* | 0.0071 | 17 | 0.034 | 1.06 | 3.29 | 0.468 | 27.5 | 11 | 148 | 61.1 | 289 | 61.9 | 591 | 113.5 | 14490 |
| *PD17-32-254* | 3.15 | 39.9 | 1.94 | 14.6 | 15.86 | 2.39 | 89 | 31.2 | 382 | 147.1 | 635 | 123.6 | 1080 | 193.1 | 12050 |
| *PD17-32-255* | 12.1 | 58.2 | 6.2 | 39.1 | 19.8 | 2.44 | 64.7 | 21.54 | 255.4 | 98.3 | 436 | 90.7 | 825 | 156.3 | 12720 |
| *PD17-32-256* | 0.96 | 46.5 | 0.67 | 7.5 | 12.7 | 1.99 | 77 | 28.2 | 346 | 130 | 567 | 110.3 | 994 | 181.3 | 12380 |
| *PD17-32-266* | 2.61 | 33 | 1.5 | 10.1 | 9.92 | 1.66 | 53.4 | 20.78 | 269.9 | 105.5 | 483 | 105.2 | 979 | 190.1 | 13170 |
| *PD17-32-267* | 3.47 | 20.6 | 2.14 | 12.4 | 8.25 | 1.57 | 24.5 | 8.69 | 103.2 | 40.9 | 200.8 | 46.8 | 483 | 99.5 | 12600 |
| *PD17-32-269* | 4.29 | 26.9 | 2.36 | 15.1 | 12.39 | 2.24 | 45.6 | 16.43 | 204 | 84.2 | 433 | 102.6 | 1025 | 211.1 | 12840 |
| *PD17-32-270* | 5.65 | 114.2 | 3.26 | 25.1 | 21.6 | 3.79 | 102 | 35.8 | 434 | 163.2 | 697 | 140.9 | 1235 | 219.1 | 12690 |
| *PD17-32-271* | 0.922 | 12.64 | 0.567 | 6.24 | 9.27 | 2.69 | 58.3 | 19.02 | 227.6 | 83.4 | 355.7 | 70.2 | 623 | 118.5 | 10130 |
| *PD17-32-272* | 3.79 | 36.6 | 2.44 | 15.5 | 12.53 | 2.22 | 50.9 | 16.02 | 186.6 | 68.4 | 299.2 | 61.3 | 556 | 107.2 | 12220 |
| *PD17-32-274* | 1.74 | 29.36 | 1.015 | 9.81 | 15.46 | 2.12 | 89.9 | 31.96 | 383.5 | 146.7 | 634 | 124.2 | 1069 | 192.8 | 11760 |
| *PD17-32-275* | 3.7 | 22.2 | 2.05 | 14.3 | 10.3 | 2.2 | 34.4 | 11.1 | 131.6 | 53.7 | 272 | 65.4 | 694 | 149.3 | 14380 |
| *PD17-32-276* | 0.021 | 31.3 | 0.2 | 4.78 | 12.87 | 1.49 | 86.1 | 31.8 | 404 | 157.1 | 686 | 134.4 | 1156 | 208.4 | 11500 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-32-277* | 0.462 | 26.09 | 0.577 | 8.2 | 17.4 | 2.78 | 103.4 | 35.2 | 424 | 155.7 | 660 | 127.4 | 1115 | 199 | 11950 |
| *PD17-32-288* | 0.115 | 37.69 | 0.183 | 3.51 | 11.02 | 1.22 | 73.7 | 28.07 | 364.8 | 142.9 | 622 | 121.8 | 1078 | 194.3 | 11590 |
| *PD17-32-290* | 2.08 | 28.58 | 0.883 | 8.47 | 14.21 | 1.98 | 88 | 31.19 | 376.6 | 142.2 | 616 | 120.4 | 1016 | 189.1 | 11560 |
| *PD17-32-291* | 0.716 | 9.43 | 0.367 | 2.43 | 1.7 | 0.192 | 9.47 | 3.87 | 56.5 | 25.64 | 134.1 | 31.63 | 334.4 | 73.3 | 15320 |
| *PD17-32-292* | 2.05 | 11.15 | 1.103 | 6.76 | 4.1 | 0.89 | 15.15 | 5.56 | 73.4 | 30.64 | 169.2 | 42.8 | 483 | 109.1 | 14260 |
| *PD17-32-293* | 9.6 | 61.2 | 7.81 | 51.1 | 23.9 | 5.09 | 53.7 | 14.7 | 162 | 57.4 | 274 | 65.3 | 721 | 152.4 | 15930 |
| | | | | | | | | | | | | | | | |
| *PD17-27-429* | 9.5 | 77.5 | 5.11 | 30.2 | 17.2 | 3.69 | 59.3 | 18.85 | 217.8 | 82.7 | 368.7 | 76.2 | 678 | 135.5 | 10840 |
| *PD17-27-430* | 45.4 | 194 | 19.8 | 101 | 29.1 | 5.01 | 54.9 | 16.97 | 187.3 | 69.1 | 321.9 | 68.4 | 651 | 133.5 | 11280 |
| *PD17-27-432* | 9.6 | 86.2 | 4.3 | 22.1 | 13.36 | 2.62 | 41.9 | 13.85 | 162.2 | 61.9 | 285.4 | 61.3 | 574 | 117.1 | 11320 |
| *PD17-27-433* | 10.08 | 104.8 | 5.28 | 31.5 | 20.4 | 4.39 | 66.5 | 20.8 | 239.1 | 89.6 | 402 | 83.9 | 751 | 148 | 10810 |
| *PD17-27-434* | 37.3 | 196 | 23.7 | 119 | 56.2 | 11 | 105 | 29.5 | 296 | 101.1 | 437 | 91 | 834 | 165.9 | 11520 |
| *PD17-27-435* | 15.4 | 90.5 | 7.54 | 41.5 | 23.6 | 4.29 | 74.7 | 23.12 | 264.7 | 97.2 | 423 | 87.3 | 775 | 146.8 | 10120 |
| *PD17-27-436* | 11.4 | 63.8 | 4.59 | 28 | 16.8 | 3.13 | 58.5 | 18.5 | 211.5 | 80.1 | 352 | 71.9 | 653 | 123.3 | 9930 |
| *PD17-27-437* | 3.84 | 41.5 | 1.85 | 11.7 | 9.5 | 2.01 | 39.6 | 14.24 | 170.7 | 67.4 | 316 | 68.9 | 641 | 125.9 | 10770 |
| *PD17-27-438* | 13.3 | 65.2 | 2.76 | 14.8 | 9.35 | 1.81 | 38.6 | 13.57 | 162.5 | 63.6 | 291 | 61.3 | 566 | 110.6 | 10290 |
| *PD17-27-450* | 17.5 | 100.2 | 11.1 | 63 | 34.3 | 7.09 | 86 | 22.7 | 245 | 84.6 | 371 | 75.7 | 706 | 139.6 | 11110 |
| *PD17-27-451* | 5.45 | 53.6 | 2.22 | 11.68 | 7.62 | 1.271 | 30.9 | 11.11 | 136.5 | 54.4 | 247.7 | 53.3 | 499 | 101.1 | 11780 |
| *PD17-27-452* | 8.1 | 66.1 | 4.37 | 23.6 | 15.15 | 3 | 54.9 | 17.96 | 207.5 | 77.9 | 344.1 | 70 | 633 | 124.1 | 10270 |
| *PD17-27-454* | 191 | 359 | 30.6 | 108.2 | 27.6 | 5.4 | 69.6 | 20.98 | 244.9 | 89.1 | 388 | 78.8 | 712 | 139.7 | 10150 |
| *PD17-27-455* | 58.2 | 220 | 24.4 | 112 | 41 | 8 | 75.1 | 20.7 | 219 | 75.9 | 334 | 71.4 | 680 | 128.6 | 11140 |
| *PD17-27-456* | 11.29 | 63 | 7.42 | 36.5 | 17.6 | 3.59 | 33.2 | 9.5 | 102.4 | 36.21 | 165.9 | 36.7 | 363.4 | 77.9 | 11340 |
| *PD17-27-457* | 82.9 | 229 | 23.2 | 106.8 | 32.1 | 6.24 | 62.3 | 17.2 | 178 | 61.7 | 271 | 56.7 | 524 | 105.5 | 11660 |
| *PD17-27-458* | 17.5 | 110 | 11.9 | 68 | 30.4 | 6.85 | 69.3 | 18.7 | 193.6 | 68.5 | 304.6 | 64 | 586 | 116.1 | 10750 |
| *PD17-27-459* | 29.3 | 90.8 | 8.4 | 41.7 | 20 | 3.43 | 64.3 | 20.91 | 243.7 | 89.6 | 391.5 | 80 | 709 | 134.3 | 10260 |
| *PD17-27-460* | 26 | 145 | 15.1 | 75.8 | 34.8 | 6.72 | 84.8 | 25.2 | 282.5 | 99.8 | 434 | 87.6 | 798 | 154.8 | 10440 |
| *PD17-27-461* | 50 | 175 | 14.4 | 67.5 | 21.6 | 4.65 | 49.8 | 14.24 | 155.7 | 57.2 | 256 | 53.5 | 488 | 97.6 | 10540 |
| *PD17-27-462* | 24.3 | 200 | 12.4 | 67 | 32.1 | 6.65 | 78.9 | 23.8 | 255 | 89.3 | 392 | 80.5 | 728 | 141.1 | 10550 |
| *PD17-27-471* | 4.34 | 46.2 | 3.12 | 18.5 | 12.9 | 2.41 | 47.4 | 15.3 | 186 | 71.2 | 321 | 67 | 620 | 119.5 | 11200 |
| *PD17-27-472* | 12.5 | 56.2 | 5.54 | 29.5 | 14.5 | 3.04 | 44.2 | 12.7 | 146.7 | 53.3 | 247.9 | 53 | 507 | 100.9 | 10630 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-27-473* | 8.59 | 90.7 | 5.47 | 28.4 | 17.67 | 3.24 | 59.2 | 20.28 | 247.2 | 93.4 | 429 | 89.6 | 832 | 160.2 | 10810 |
| *PD17-27-474* | 14.3 | 97.3 | 9.4 | 54.5 | 26.5 | 5.55 | 75.7 | 22.38 | 254.1 | 91.5 | 404 | 83.3 | 749 | 147.9 | 10750 |
| | | | | | | | | | | | | | | | |
| *PD18-116 - 1* | 19.9 | 145.6 | 20.2 | 108.1 | 80 | 15.6 | 147.2 | 40.3 | 316 | 86 | 323.4 | 62.3 | 547 | 102.7 | 9200 |
| *PD18-116 - 2* | 4.46 | 45.3 | 4.25 | 36.6 | 27.2 | 9.3 | 69.7 | 15.7 | 151 | 49.6 | 201 | 41.8 | 406 | 83.2 | 11090 |
| *PD18-116 - 4* | 14.4 | 94.2 | 10.45 | 60.8 | 42.8 | 10 | 93.4 | 23.7 | 213 | 63.8 | 248.5 | 48.28 | 429.4 | 83 | 8970 |
| *PD18-116 - 5* | 6.5 | 38 | 6.2 | 35 | 25 | 5.4 | 43 | 9.7 | 88 | 21.8 | 92 | 20.1 | 208 | 42.9 | 11520 |
| *PD18-116 - 9* | 1.86 | 35.4 | 2.17 | 19.9 | 10.8 | 4.18 | 30.2 | 7.1 | 80.8 | 31.2 | 148 | 33.5 | 325 | 68.4 | 10680 |
| *PD18-116 - 10* | 10.85 | 81.6 | 10 | 80 | 53.5 | 17.5 | 129.7 | 22.4 | 161.6 | 42.6 | 162.6 | 35.28 | 357 | 76.5 | 12590 |
| *PD18-116 - 12* | 7.36 | 48.2 | 6.83 | 44 | 30.3 | 10.13 | 63.4 | 15.01 | 136.4 | 41.3 | 178.5 | 39.2 | 373.8 | 81.1 | 12800 |
| *PD18-116 - 15* | 1.76 | 44.3 | 2.04 | 17.9 | 16 | 4.23 | 52.4 | 14.04 | 149.3 | 51.4 | 217.2 | 43.31 | 392.8 | 75.6 | 8304 |
| *PD18-116 - 16* | 4 | 34 | 3.69 | 24.8 | 17.3 | 7.29 | 44.8 | 8.18 | 84.4 | 29.6 | 137 | 31.43 | 338.4 | 81 | 11960 |
| *PD18-116 - 18* | 8.1 | 61.2 | 8 | 52.8 | 37.9 | 16.9 | 97.3 | 15.3 | 123.8 | 37.4 | 161.5 | 37.37 | 377.4 | 84.9 | 11180 |
| *PD18-116 - 20* | 6.48 | 87.7 | 6.31 | 35.7 | 29.7 | 6.41 | 66.4 | 19.71 | 202.2 | 67.5 | 287 | 59.6 | 544 | 104.4 | 9840 |
| *PD18-116 - 22* | 49.4 | 300 | 48.7 | 261 | 176 | 34 | 272 | 69.2 | 537 | 123.4 | 438 | 81.3 | 697 | 128.9 | 6820 |
| *PD18-116 - 23* | 1.1 | 15.6 | 0.99 | 8.9 | 7.2 | 1.82 | 19.4 | 5.5 | 63.9 | 26.33 | 134 | 31.98 | 332 | 71.3 | 12100 |
| *PD18-116 - 25* | 2.25 | 40.9 | 2.17 | 19 | 14.8 | 7.09 | 42.4 | 10.8 | 100.7 | 32.6 | 132.1 | 28.5 | 284 | 60 | 9350 |
| *PD18-116 - 26* | 1.51 | 36.7 | 1.69 | 11.7 | 10.2 | 2.69 | 27.7 | 7.59 | 80.1 | 28.7 | 132.1 | 30.05 | 305.4 | 66.2 | 9160 |
| *PD18-116 - 28* | 3.93 | 58.1 | 3.97 | 26.4 | 19.2 | 6.21 | 47.8 | 11.68 | 104.7 | 34.13 | 148.6 | 31.26 | 316.4 | 69.1 | 7690 |
| *PD18-116 - 29* | 1.29 | 17.62 | 0.97 | 9.02 | 7.89 | 3.26 | 25 | 6.63 | 64.2 | 21.7 | 86.9 | 17.31 | 156.4 | 30 | 7450 |
| *PD18-116 - 31* | 1.16 | 36.2 | 1.25 | 9.8 | 8.2 | 2.65 | 30.2 | 8.56 | 95.7 | 35.1 | 159 | 34.4 | 325 | 68.3 | 9390 |
| *PD18-116 - 34* | 0.288 | 15.3 | 0.343 | 4.14 | 7.66 | 1.06 | 54.1 | 19.69 | 256 | 104 | 473 | 96.3 | 861 | 166.2 | 10980 |
| *PD18-116 - 35* | 25.5 | 183 | 25.9 | 145 | 106.2 | 21.6 | 167 | 41.2 | 306 | 74.8 | 265 | 50.4 | 459 | 97.1 | 7950 |
| *PD18-116 - 38* | 22.3 | 168 | 21.9 | 129 | 91.5 | 22.4 | 171 | 37.6 | 286 | 69.6 | 245 | 46.5 | 425 | 83.9 | 9830 |
| | | | | | | | | | | | | | | | |
| *PD18-118 - 1* | 0.016 | 10.1 | 0.378 | 7.23 | 17.7 | 5.16 | 121.4 | 42.47 | 508 | 191.5 | 821 | 160.9 | 1444 | 276.1 | 10300 |
| *PD18-118 - 2* | 0.142 | 8.78 | 0.331 | 6.07 | 15.51 | 4.31 | 101.4 | 35.3 | 424 | 157.4 | 672 | 133.3 | 1165 | 217.8 | 10050 |
| *PD18-118 - 3* | 1.06 | 12.34 | 0.906 | 10.81 | 22.4 | 5.69 | 138.8 | 46.8 | 552 | 204.1 | 868 | 168.8 | 1499 | 286 | 10980 |
| *PD18-118 - 4* | 0.152 | 10.65 | 0.91 | 14.2 | 30.5 | 7.44 | 177 | 59.7 | 695 | 256 | 1096 | 221 | 1990 | 383 | 10900 |
| *PD18-118 - 5* | 1.13 | 9.79 | 0.91 | 8 | 10.96 | 2.87 | 61.6 | 22.18 | 275.7 | 107.2 | 483 | 101 | 948 | 189.2 | 11330 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-118 - 6* | 0.185 | 6.69 | 0.344 | 5.84 | 12.6 | 3.87 | 81 | 28.1 | 333 | 125.8 | 545 | 110.4 | 996 | 194.7 | 10790 |
| *PD18-118 - 7* | 0.091 | 9.89 | 0.348 | 6.76 | 17.61 | 4.99 | 125.6 | 43 | 512 | 192.3 | 807 | 159.2 | 1391 | 264.4 | 10460 |
| *PD18-118 - 8* | 0.03 | 10.04 | 0.457 | 8.88 | 20.5 | 5.47 | 127.9 | 43.2 | 501 | 183.6 | 767 | 149.5 | 1301 | 246.5 | 10100 |
| *PD18-118 - 9* | 0.0154 | 8.83 | 0.294 | 6.69 | 17.1 | 4.51 | 112.9 | 39.6 | 466 | 175.3 | 759 | 149.6 | 1330 | 254.6 | 10190 |
| *PD18-118 - 10* | 0.02 | 10.11 | 0.351 | 7.28 | 19.17 | 4.68 | 122.3 | 41.47 | 474 | 174.2 | 720 | 142.1 | 1233 | 230.8 | 10660 |
| *PD18-118 - 14* | Below LOD | 6.06 | 0.125 | 2.78 | 8.64 | 2.38 | 72.3 | 27 | 346 | 137.1 | 613 | 127.4 | 1180 | 232.8 | 10900 |
| *PD18-118 - 15* | 0.0094 | 7.64 | 0.096 | 2.9 | 10.25 | 2.36 | 80.9 | 31.6 | 401 | 159.4 | 719 | 146.9 | 1351 | 265.3 | 11100 |
| *PD18-118 - 16* | 0.186 | 10.4 | 1.21 | 17.9 | 32.6 | 7.8 | 164 | 52 | 589 | 214 | 886 | 174 | 1520 | 288 | 10690 |
| *PD18-118 - 17* | 0.017 | 7.46 | 0.157 | 3.91 | 11.04 | 3.08 | 92.5 | 35.12 | 445 | 174.9 | 779 | 160.3 | 1477 | 290 | 11180 |
| *PD18-118 - 18* | 0.089 | 9.31 | 0.55 | 8.3 | 16.9 | 4.89 | 106.7 | 39.3 | 472 | 179.7 | 789 | 160.2 | 1445 | 279.8 | 10830 |
| *PD18-118 - 19* | 0.0091 | 5.28 | 0.086 | 1.86 | 6.51 | 2.05 | 55.1 | 20.74 | 271.2 | 110.4 | 501 | 104.9 | 966 | 190.7 | 10950 |
| *PD18-118 - 20* | 0.0156 | 10.3 | 0.457 | 8.8 | 22 | 5.54 | 144.2 | 49.6 | 583 | 213 | 904 | 176.7 | 1529 | 287.4 | 10640 |
| *PD18-118 - 21* | 0.014 | 6.54 | 0.169 | 4.07 | 10.72 | 3.3 | 76.5 | 26.71 | 325.1 | 123.4 | 532.5 | 107.2 | 970 | 186.9 | 10730 |
| *PD18-118 - 22* | 0.54 | 9.9 | 0.487 | 6.98 | 14.05 | 4.08 | 91.8 | 32.38 | 392 | 149.4 | 650.1 | 129.3 | 1166 | 224.6 | 10380 |
| *PD18-118 - 23* | 0.043 | 7.29 | 0.265 | 4.95 | 12.51 | 4.04 | 86.8 | 30 | 363 | 136 | 591 | 119.2 | 1063 | 205.1 | 10790 |
| *PD18-118 - 24* | Below LOD | 4.88 | 0.071 | 1.76 | 6.11 | 1.68 | 50.4 | 19.34 | 250.2 | 99.8 | 458.6 | 97 | 928 | 187.6 | 11070 |
| *PD18-118 - 26* | 0.528 | 9.19 | 0.529 | 7.03 | 13.2 | 4.34 | 86.3 | 29.4 | 354 | 133.8 | 581 | 116.8 | 1043 | 200.2 | 10610 |
| *PD18-118 - 27* | 0.0142 | 7.29 | 0.24 | 4.79 | 13.15 | 3.71 | 88.8 | 31.6 | 378.9 | 142.7 | 610 | 123.2 | 1110 | 212.4 | 10650 |
| *PD18-118 - 30* | 0.018 | 4.13 | 0.107 | 1.97 | 6.02 | 1.64 | 43.1 | 17.3 | 222 | 87.9 | 412 | 88.7 | 848 | 173 | 9110 |
| *PD18-118 - 31* | 0.084 | 8.15 | 0.229 | 4.6 | 12.49 | 3.4 | 88.6 | 32.25 | 398.8 | 151.1 | 667 | 136 | 1231 | 240.1 | 10340 |
| *PD18-118 - 32* | 0.354 | 5.35 | 0.251 | 2.78 | 5.98 | 1.91 | 45.2 | 16.26 | 204.6 | 81.4 | 366.7 | 77.5 | 738 | 152.3 | 10810 |
| *PD18-118 - 33* | 0.019 | 9.51 | 0.246 | 6.45 | 18.68 | 4.86 | 128.7 | 46.2 | 560 | 210.7 | 895 | 175.4 | 1540 | 295 | 10850 |
| *PD18-118 - 34* | 0.0171 | 6.85 | 0.143 | 3.04 | 10.14 | 2.8 | 76.5 | 28.1 | 357 | 138.4 | 617 | 127.4 | 1156 | 227 | 10680 |
| *PD18-118 - 35* | Below LOD | 7.94 | 0.163 | 4.35 | 12.8 | 3.69 | 93.2 | 32.8 | 401 | 153.1 | 658 | 132.1 | 1179 | 226 | 11020 |
| *PD18-118 - 37* | Below LOD | 8.76 | 0.17 | 4.06 | 13.53 | 3.49 | 108.5 | 40.4 | 514 | 198.8 | 869 | 175.4 | 1567 | 302.1 | 10940 |
| *PD18-118 - 38* | Below LOD | 7.1 | 0.175 | 3.7 | 10.44 | 2.96 | 76.4 | 27.68 | 343.4 | 130.8 | 572.4 | 115.9 | 1039 | 203.7 | 10960 |
| | | | | | | | | | | | | | | | |
| *PD17-21-186* | 10.9 | 116.7 | 4.4 | 27.3 | 23.8 | 8.2 | 93.6 | 32.1 | 383 | 149.3 | 683 | 151 | 1450 | 285 | 12040 |
| *PD17-21-187* | 14.8 | 81 | 5.5 | 28.3 | 18.1 | 4 | 62.3 | 19.89 | 237 | 87.9 | 407 | 85.4 | 798 | 156.7 | 11060 |
| *PD17-21-188* | 3.99 | 58.8 | 1.5 | 13.4 | 15.4 | 3.83 | 67.9 | 21.6 | 243 | 87.3 | 381 | 76.9 | 693 | 132.5 | 10190 |

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| *PD17-21-189* | 50.9 | 157.7 | 12.94 | 75.7 | 22.2 | 8.78 | 51.7 | 15.86 | 189.3 | 73.1 | 337 | 74.5 | 717 | 150.9 | 13460 |
| *PD17-21-190* | 15.1 | 93.2 | 5.46 | 27.1 | 13 | 3.57 | 52 | 17.05 | 201 | 76.9 | 351.4 | 74.6 | 688 | 137.3 | 11340 |
| *PD17-21-191* | 12.6 | 95.6 | 5.26 | 31.2 | 14.8 | 3.64 | 56.1 | 19.2 | 234.7 | 92.6 | 418.8 | 91 | 838 | 160.5 | 11200 |
| *PD17-21-192* | 19.7 | 96 | 8.5 | 44.7 | 16.9 | 3.6 | 50.8 | 15.82 | 189.8 | 74.5 | 351 | 78.5 | 751 | 156.4 | 10950 |
| *PD17-21-193* | 7.79 | 66 | 3.76 | 25.6 | 16.5 | 5.3 | 56.4 | 18.43 | 218.2 | 84.2 | 386 | 83 | 762 | 147.4 | 11180 |
| *PD17-21-196* | 22.9 | 92 | 6.01 | 26.8 | 11.87 | 2.99 | 42.7 | 15.02 | 192.4 | 79.7 | 387.2 | 88.4 | 883 | 184.1 | 13000 |
| *PD17-21-197* | 29.4 | 131 | 15.7 | 79.3 | 24.1 | 9.7 | 50.7 | 13.44 | 139.7 | 52 | 238.9 | 53.4 | 530 | 119.8 | 12980 |
| *PD17-21-206* | 13.5 | 74.9 | 4.82 | 25.7 | 13.29 | 2.89 | 47.7 | 14.6 | 180.5 | 69.7 | 317.1 | 67.9 | 637 | 126.3 | 10680 |
| *PD17-21-207* | 24 | 77.2 | 5.03 | 23.6 | 10 | 2.97 | 37.1 | 13.02 | 167 | 67.8 | 331 | 76.4 | 794 | 176.2 | 13810 |
| *PD17-21-209* | 75 | 231 | 22 | 128 | 37.4 | 11.03 | 66.5 | 18.05 | 204.2 | 78.4 | 368 | 80.4 | 766 | 153.8 | 11410 |
| *PD17-21-211* | 3.24 | 33.7 | 1.41 | 8.2 | 5.27 | 2.39 | 23.2 | 8.34 | 110.5 | 46.3 | 241.9 | 57.2 | 608 | 139.7 | 12380 |
| *PD17-21-212* | 108 | 252 | 23.1 | 87.6 | 30 | 6.87 | 65.7 | 18.25 | 196.4 | 72 | 345 | 78.6 | 835 | 181.5 | 13620 |
| *PD17-21-213* | 4.81 | 53.4 | 1.67 | 10.5 | 10.48 | 2.69 | 52.4 | 18.56 | 235.2 | 92.3 | 437 | 92.9 | 859 | 171.2 | 11520 |
| *PD17-21-215* | 10 | 60.8 | 2.96 | 17.3 | 11.4 | 3.09 | 43.8 | 13.75 | 157 | 58.3 | 264 | 55.4 | 508 | 98.6 | 10790 |
| *PD17-21-216* | 29.5 | 123.6 | 11.25 | 71.7 | 17.8 | 4.31 | 48.8 | 14.06 | 160.7 | 60.5 | 267.9 | 58.9 | 583 | 129.7 | 14240 |
| *PD17-21-217* | 5.3 | 55.1 | 2.12 | 12.4 | 10.67 | 2.43 | 49.6 | 16.69 | 204.1 | 79.2 | 363 | 77.7 | 736 | 146.7 | 10790 |
| *PD17-21-218* | 18.27 | 84.4 | 4.43 | 29.5 | 14.8 | 8.49 | 54.4 | 16.27 | 185.6 | 68.8 | 300 | 62.9 | 579 | 111.7 | 10660 |
| *PD17-21-227* | 11.9 | 61.5 | 3.99 | 21.1 | 11.2 | 2.6 | 42.1 | 13.99 | 163.9 | 63.5 | 295 | 64.7 | 635 | 131.5 | 13020 |
| *PD17-21-228* | 3.61 | 57.7 | 1.53 | 9.91 | 9.81 | 2.31 | 42.4 | 14.66 | 180.1 | 72.4 | 340.6 | 73.7 | 703 | 143 | 11500 |
| *PD17-21-229* | 9.5 | 79.1 | 5.32 | 38.4 | 11.02 | 6.17 | 19.9 | 5.99 | 84 | 42.2 | 266.6 | 80.4 | 1061 | 293.5 | 20960 |
| *PD17-21-230* | 35.1 | 126 | 8.4 | 41.2 | 14.9 | 3.24 | 49.4 | 16.55 | 202.2 | 77.4 | 356 | 77.3 | 722 | 138.2 | 10580 |
| *PD17-21-232* | 6.83 | 61.3 | 2.12 | 12.78 | 12.9 | 3.87 | 55.5 | 17.1 | 199.4 | 77.8 | 363.5 | 79.6 | 776 | 160.7 | 10580 |
| *PD17-21-233* | 2.74 | 37.5 | 1.51 | 8.92 | 8.07 | 2.12 | 38.2 | 13.2 | 166.9 | 67.2 | 319 | 69.6 | 657 | 131.9 | 12560 |
| *PD17-21-235* | 27.3 | 91.9 | 5.54 | 25 | 9.87 | 2.22 | 33.1 | 11.24 | 138.3 | 53 | 255.4 | 56.1 | 545.6 | 117.3 | 12040 |
| *PD17-21-236* | 13 | 81 | 4.3 | 21 | 9.06 | 1.84 | 32 | 10.88 | 133.6 | 51.8 | 241.2 | 51.7 | 491 | 96.4 | 11250 |
| | | | | | | | | | | | | | | | |
| *PD18-108-70* | 95.7 | 1228 | 119.1 | 676 | 327 | 53.1 | 342 | 56.6 | 351 | 84.8 | 291.2 | 54.7 | 463 | 86.2 | 12960 |
| *PD18-108-72* | 261 | 2360 | 210 | 1235 | 472 | 75.7 | 484 | 70 | 383 | 78.7 | 250 | 47.2 | 454 | 94.6 | 11960 |
| *PD18-108-73* | 24 | 161 | 21.3 | 133 | 43.8 | 25.1 | 52.4 | 9.1 | 83.7 | 28.4 | 123.4 | 27.9 | 259 | 55.9 | 11340 |
| *PD18-108-75* | 11.07 | 98.9 | 12.9 | 79.5 | 30 | 10.95 | 38.9 | 7.77 | 65.5 | 21.3 | 90.2 | 20.21 | 191.2 | 38.9 | 10870 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-108-76* | 10.9 | 120 | 12.8 | 78 | 41.5 | 10.9 | 56.6 | 10.7 | 87 | 27.9 | 115.1 | 23.45 | 214.9 | 43 | 8520 |
| *PD18-108-77* | 3.13 | 21 | 3.3 | 18.8 | 6.7 | 1.11 | 11.3 | 3.02 | 35.7 | 15.08 | 72.3 | 16.27 | 154.9 | 32.1 | 11270 |
| *PD18-108-78* | 143 | 759 | 81.4 | 530 | 279 | 82.3 | 363 | 45.1 | 265 | 64.6 | 226.4 | 43.5 | 390 | 75.7 | 12240 |
| *PD18-108-79* | 9.13 | 92.6 | 7.98 | 46.7 | 21.9 | 11.11 | 49.2 | 12.49 | 129 | 44.2 | 191.7 | 40.3 | 383 | 77.1 | 9250 |
| *PD18-108-80* | 14 | 55 | 5.7 | 27.3 | 5.42 | 5.9 | 21.5 | 6.25 | 64.2 | 22.6 | 97.5 | 20.2 | 182 | 37.9 | 8380 |
| *PD18-108-81* | 3.2 | 30.3 | 1.92 | 11.8 | 7.84 | 2.28 | 34.5 | 12.81 | 149.1 | 55.7 | 246.3 | 51.3 | 454 | 84.4 | 11940 |
| *PD18-108-83* | 6.41 | 64.5 | 6.41 | 41.1 | 20.9 | 3.96 | 37.1 | 8.55 | 85.9 | 32.5 | 147 | 33.7 | 333 | 76.5 | 10920 |
| *PD18-108-84* | 84.3 | 824 | 80.7 | 446 | 171.2 | 58.1 | 179.4 | 30.5 | 189.5 | 42.3 | 146.3 | 28.2 | 254 | 47.8 | 11670 |
| *PD18-108-92* | 96 | 971 | 94.3 | 500 | 161 | 33.4 | 155 | 20.7 | 140 | 44.7 | 219.9 | 55.8 | 615 | 142 | 12080 |
| *PD18-108-93* | 48.9 | 390 | 45.8 | 265 | 96 | 21.2 | 118 | 24.1 | 210 | 61.2 | 250 | 49.6 | 456 | 86.3 | 11860 |
| *PD18-108-94* | 10.94 | 92.5 | 9.67 | 55 | 18.5 | 9.05 | 32.1 | 7.42 | 73.4 | 26.6 | 107.8 | 22.21 | 201 | 37.9 | 12240 |
| *PD18-108-96* | 1.79 | 36.7 | 2.06 | 19 | 16.3 | 7.09 | 63.6 | 16.83 | 164.2 | 54 | 214.4 | 41.6 | 368 | 71.6 | 8320 |
| *PD18-108-98* | 7.6 | 63.3 | 5.87 | 38.2 | 21.5 | 3.88 | 62 | 15.9 | 166 | 53.9 | 222 | 44.7 | 399 | 72.7 | 11600 |
| *PD18-108-99* | 7.81 | 71.3 | 7.92 | 39 | 22.5 | 10.53 | 51.4 | 13.07 | 123.2 | 40.7 | 163.4 | 32.8 | 284 | 54.7 | 8820 |
| *PD18-108-100* | 14.8 | 127 | 12.2 | 69.9 | 34.3 | 5.87 | 59 | 14.77 | 146.9 | 52.2 | 223.3 | 48.3 | 456 | 91.2 | 10170 |
| *PD18-108-101* | 14.8 | 105.4 | 12.4 | 74.2 | 26.6 | 8.39 | 48 | 12.82 | 139.6 | 51.3 | 224.2 | 46.9 | 438 | 82.9 | 11620 |
| *PD18-108-102* | 94.8 | 531 | 67.6 | 353 | 94.7 | 32.5 | 97.2 | 17 | 147.7 | 48 | 209 | 45.3 | 431 | 85.1 | 10180 |
| *PD18-108-103* | 187.9 | 1279 | 88.3 | 418 | 146 | 57.7 | 161 | 27.6 | 207.5 | 58.3 | 235.7 | 47.9 | 438 | 82.8 | 14360 |
| *PD18-108-104* | 32.8 | 266 | 31 | 179 | 49.6 | 14.4 | 43.7 | 6.95 | 53.1 | 17.26 | 78.4 | 18.13 | 195.6 | 42.2 | 12070 |
| *PD18-108-105* | 11.1 | 58.7 | 6.03 | 33 | 15.6 | 4.71 | 34.7 | 8.88 | 95.4 | 34 | 145 | 30.2 | 280.9 | 57.1 | 9510 |
| *PD18-108-106* | 6.73 | 52.9 | 6.15 | 38.6 | 18.3 | 7.65 | 19.6 | 4.27 | 34.7 | 11.6 | 50.9 | 10.79 | 108.4 | 22.32 | 10720 |
| *PD18-108-114* | 101 | 627 | 78.1 | 482 | 107.5 | 41.1 | 115.6 | 21.71 | 186.2 | 59.9 | 241.9 | 49.1 | 457 | 89 | 12230 |
| *PD18-108-115* | 143.8 | 1178 | 156.8 | 897 | 446 | 64.2 | 520 | 88.9 | 564 | 120.2 | 372 | 63.2 | 503 | 91.3 | 13190 |
| *PD18-108-116* | 109.3 | 1008 | 107.1 | 656 | 262 | 41.1 | 298 | 48 | 332 | 79.8 | 284 | 52.6 | 450 | 81.4 | 12540 |
| *PD18-108-117* | 34.2 | 236 | 26.1 | 140.2 | 48.1 | 16.8 | 61.9 | 11.62 | 103 | 33.7 | 141 | 29.1 | 273 | 53.7 | 11050 |
| *PD18-108-118* | 4.54 | 60.1 | 3.91 | 21.5 | 11.5 | 4.15 | 28.1 | 7.87 | 91.6 | 35.5 | 158.4 | 34.8 | 328 | 65.3 | 11630 |
| | | | | | | | | | | | | | | | |
| *PD18-34-147* | 7.8 | 31.3 | 2.56 | 35 | 41.9 | 6.48 | 42.9 | 6.39 | 55.2 | 19.53 | 94 | 20.86 | 215.1 | 45.8 | 11450 |
| *PD18-34-148* | 0.056 | 19.7 | 0.164 | 2.82 | 4.86 | 1.26 | 23.1 | 6.72 | 72.6 | 26.3 | 117.1 | 24.2 | 236 | 50.2 | 10780 |
| *PD18-34-149* | 101.9 | 273 | 32.1 | 221 | 86.1 | 13.54 | 136 | 26.7 | 230 | 56.7 | 190.6 | 32.98 | 297.1 | 59.6 | 10660 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-34-150* | 257 | 792 | 101 | 499 | 125 | 60 | 446 | 83.1 | 458 | 84.4 | 288 | 52.3 | 474 | 92.1 | 11600 |
| *PD18-34-151* | 750 | 2660 | 415 | 2960 | 1105 | 98.8 | 1212 | 261 | 2500 | 616 | 1890 | 264 | 1720 | 252 | 11650 |
| *PD18-34-152* | 136 | 209 | 17.9 | 108 | 50.5 | 43 | 67.2 | 14.3 | 143 | 51.9 | 246.5 | 54.6 | 550 | 103.2 | 11950 |
| *PD18-34-153* | 163.9 | 396 | 38.7 | 235 | 162.5 | 80.4 | 312 | 52.9 | 412 | 111.3 | 435 | 79.6 | 706 | 128 | 11510 |
| *PD18-34-154* | 28.3 | 65.7 | 8.3 | 77.5 | 25.9 | 12.23 | 26.8 | 8.09 | 118.4 | 52.67 | 295.9 | 74.2 | 843 | 186.7 | 13950 |
| *PD18-34-155* | 278 | 994 | 143.7 | 764 | 261 | 62 | 566 | 131.4 | 1344 | 439 | 1800 | 338 | 2780 | 464 | 12990 |
| *PD18-34-156* | 1398 | 2930 | 209.1 | 1418 | 1127 | 298.5 | 1326 | 133.1 | 804 | 201.8 | 770 | 145.3 | 1324 | 242.3 | 12880 |
| *PD18-34-157* | 523 | 825 | 90.7 | 356 | 64.3 | 37.9 | 80.8 | 17.89 | 188.2 | 63.2 | 294.7 | 65 | 663 | 142.2 | 11920 |
| *PD18-34-158* | 11.81 | 124 | 1.29 | 13.02 | 22.3 | 2.61 | 121.6 | 40.9 | 505 | 181.8 | 823 | 161.7 | 1460 | 267.6 | 9090 |
| *PD18-34-159* | 10.8 | 55.2 | 4.76 | 30.3 | 18.4 | 2.16 | 65.8 | 23.94 | 315 | 118.5 | 539 | 105.7 | 933 | 168.5 | 13490 |
| *PD18-34-160* | 146.5 | 480 | 67.7 | 531 | 136 | 72.5 | 145.3 | 21.95 | 236.6 | 84.5 | 387 | 77.7 | 711 | 132.8 | 12460 |
| *PD18-34-161* | 16.7 | 63.6 | 6.93 | 47.5 | 18.41 | 5.46 | 38.8 | 10.13 | 121.8 | 43.87 | 196.5 | 38.02 | 346.4 | 66.2 | 10180 |
| *PD18-34-169* | 94 | 400 | 50.1 | 264 | 70.5 | 70.8 | 231 | 92 | 1090 | 310 | 962 | 147 | 1099 | 165.5 | 10190 |
| *PD18-34-170* | 30.2 | 113 | 6.68 | 34.5 | 18 | 2.43 | 63 | 18.7 | 235 | 83 | 382 | 76.4 | 712 | 132 | 10890 |
| *PD18-34-171* | 327 | 327 | 41.6 | 186 | 33.8 | 7.41 | 66 | 18.2 | 216 | 82.3 | 393 | 82.7 | 782 | 143.8 | 13880 |
| *PD18-34-172* | 393 | 1222 | 168.3 | 1313 | 334 | 172.9 | 298 | 37.3 | 378 | 138.2 | 636 | 129.1 | 1179 | 214.6 | 13480 |
| *PD18-34-173* | 36 | 132.6 | 17.1 | 137.4 | 57.2 | 6.91 | 86.3 | 16.28 | 168.8 | 57.4 | 243 | 44.9 | 405 | 75.9 | 11190 |
| *PD18-34-174* | 390 | 1270 | 153 | 904 | 283 | 28.3 | 400 | 93.2 | 933 | 228 | 679 | 99.9 | 759 | 125.4 | 10300 |
| *PD18-34-175* | 1389 | 1604 | 129.4 | 568 | 240.2 | 140.7 | 673 | 129.3 | 955 | 206.8 | 655 | 114.5 | 1097 | 200.6 | 15920 |
| *PD18-34-176* | 21.8 | 126.7 | 13.8 | 88 | 33 | 7.83 | 96.2 | 28.4 | 344 | 119.6 | 521 | 100.1 | 904 | 167.7 | 10330 |
| *PD18-34-177* | 21.6 | 81.5 | 8.77 | 52.3 | 15.5 | 8.12 | 41.5 | 12.05 | 141 | 52.3 | 246 | 50.6 | 487 | 97.2 | 10290 |
| *PD18-34-178* | 506 | 2350 | 317 | 1731 | 402 | 133.2 | 1144 | 337 | 3340 | 793 | 2315 | 314 | 2049 | 283.3 | 10780 |
| *PD18-34-179* | 179 | 600 | 93 | 550 | 184 | 20.9 | 264 | 54.5 | 498 | 143 | 549 | 100.3 | 890 | 159.2 | 12560 |
| *PD18-34-180* | 79.4 | 134 | 10 | 46.5 | 10 | 2 | 18.5 | 5.44 | 69.7 | 28.62 | 157.4 | 38.45 | 418 | 89.1 | 12960 |
| *PD18-34-181* | 60.5 | 142.9 | 11.12 | 59.3 | 49.5 | 20.9 | 118.8 | 18.16 | 128.9 | 31.14 | 116 | 22.5 | 210.1 | 42 | 10290 |
| *PD18-34-182* | 6.5 | 40.4 | 2.17 | 14.9 | 9.71 | 1.74 | 43.3 | 14.46 | 171.5 | 64.1 | 291 | 58.3 | 541 | 103.2 | 10240 |
| *PD18-34-183* | 0.059 | 27.99 | 0.144 | 1.86 | 3.7 | 0.762 | 21.94 | 7.99 | 102.4 | 39.85 | 191.5 | 40.44 | 381.2 | 75.5 | 10730 |
| *PD18-34-192* | 18.6 | 136.6 | 11.16 | 65.8 | 25.1 | 2.05 | 44 | 10.66 | 116 | 42.6 | 205.6 | 42.8 | 413 | 83.1 | 11510 |
| *PD18-34-193* | 118.4 | 387 | 35.3 | 156 | 38.2 | 8.86 | 58.5 | 14.54 | 172.9 | 62.2 | 292 | 59.5 | 565 | 103.6 | 11830 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-37-194* | 42.2 | 124 | 8.83 | 56.4 | 34.4 | 7.6 | 90.3 | 19.8 | 175 | 47.1 | 172 | 27.9 | 211 | 34.2 | 9610 |
| *PD18-37-195* | 12.59 | 78.2 | 4.41 | 36.7 | 25.7 | 9.47 | 70.4 | 15.54 | 134.5 | 36.1 | 139 | 23.5 | 199 | 35.6 | 7730 |
| *PD18-37-196* | 18.7 | 103.3 | 5.07 | 38.9 | 28.2 | 15.4 | 92.4 | 14.2 | 112.1 | 30.7 | 115.7 | 19.7 | 171 | 30.8 | 7680 |
| *PD18-37-197* | 6.44 | 29.7 | 1.74 | 12.4 | 5.57 | 1.57 | 11.1 | 2.3 | 22.3 | 6.74 | 27.4 | 5.18 | 51.3 | 10.58 | 12180 |
| *PD18-37-198* | 72.5 | 234 | 16.34 | 156.7 | 69 | 24.2 | 87.1 | 14.67 | 118.6 | 31.9 | 116 | 19.3 | 160.5 | 28.7 | 9890 |
| *PD18-37-199* | 6.6 | 43.1 | 2.76 | 20.7 | 8.4 | 3.31 | 21 | 4.41 | 41.2 | 11.7 | 46.6 | 8.33 | 74.1 | 14.62 | 10890 |
| *PD18-37-200* | 5.4 | 90.8 | 2.53 | 29.4 | 28.2 | 10.81 | 80 | 17.41 | 154.1 | 42.6 | 162 | 28.1 | 242.3 | 43.1 | 8040 |
| *PD18-37-201* | 7.7 | 43.9 | 3.05 | 21.3 | 15.4 | 3.11 | 34.1 | 6.6 | 51.8 | 14.1 | 51.1 | 8.77 | 74.7 | 14.8 | 10690 |
| *PD18-37-202* | 39 | 78.5 | 4.19 | 21.3 | 11.8 | 3.65 | 32.1 | 7.04 | 64.2 | 20.05 | 86.5 | 17.95 | 180.5 | 36.2 | 14770 |
| *PD18-37-203* | 5.11 | 56.5 | 1.85 | 14.76 | 15.37 | 5.46 | 45.8 | 10 | 88.9 | 25.54 | 97.2 | 17.36 | 149.2 | 26.6 | 8620 |
| *PD18-37-204* | 10.51 | 107.6 | 7.29 | 37.4 | 14.89 | 6.41 | 30.9 | 6.35 | 54.5 | 15.23 | 58.1 | 10.08 | 87.8 | 16.21 | 11020 |
| *PD18-37-205* | 30.8 | 160.2 | 7.7 | 34.9 | 16.81 | 7.89 | 56.9 | 13.13 | 123.1 | 35.96 | 135.4 | 23.62 | 200.5 | 35.5 | 8010 |
| *PD18-37-213* | 848 | 1104 | 77.7 | 760 | 205.5 | 57.8 | 239.4 | 38.6 | 301.2 | 77.9 | 272.6 | 44.6 | 359.1 | 59.8 | 8910 |
| *PD18-37-214* | 15.8 | 58.6 | 5.11 | 38.1 | 13.3 | 3.76 | 20.2 | 3.94 | 33.6 | 9.24 | 34 | 5.82 | 53.7 | 10.64 | 12270 |
| *PD18-37-215* | 3.06 | 58.8 | 1.18 | 14.88 | 18.86 | 7.52 | 60.2 | 13.05 | 116.9 | 33.01 | 125 | 22.2 | 187.1 | 33.28 | 8200 |
| *PD18-37-216* | 7.28 | 53 | 2.9 | 45.4 | 14.1 | 5.48 | 20.3 | 4.22 | 37.7 | 11.5 | 50.1 | 10.4 | 107.8 | 22.9 | 13850 |
| *PD18-37-217* | 13.2 | 84.7 | 3.39 | 19.8 | 17.8 | 7.51 | 54.9 | 12.11 | 107.8 | 30.94 | 117.9 | 20.8 | 179.8 | 32.23 | 7780 |
| *PD18-37-218* | 20.4 | 115.2 | 8.61 | 84.1 | 42 | 18.56 | 70.8 | 12.98 | 107.2 | 29.7 | 109.8 | 18.8 | 165 | 29.7 | 8060 |
| *PD18-37-219* | 0.127 | 41.6 | 0.489 | 9.7 | 8.2 | 2.86 | 25.8 | 5.77 | 53.4 | 15.7 | 64.9 | 12.2 | 106.6 | 20.8 | 10830 |
| *PD18-37-221* | 30.4 | 221 | 14.1 | 109 | 43.9 | 13.3 | 92 | 17.9 | 150 | 39.9 | 148 | 26.2 | 226 | 42.1 | 11670 |
| *PD18-37-222* | 356 | 812 | 83.2 | 528 | 279 | 51.6 | 363 | 55.3 | 361 | 73.9 | 213.1 | 30.1 | 201.9 | 31.1 | 10010 |
| *PD18-37-223* | 307 | 622 | 67 | 495 | 343 | 70.5 | 641 | 118.3 | 836 | 175 | 535 | 82.4 | 594 | 89.7 | 11720 |
| *PD18-37-224* | 319 | 549 | 35.8 | 138 | 40.7 | 13.6 | 87.5 | 19.18 | 172.6 | 50.3 | 200.1 | 36.6 | 318 | 58.1 | 10350 |
| *PD18-37-225* | 16.1 | 182 | 7.72 | 81.4 | 71.8 | 20.89 | 166.5 | 32.95 | 266.1 | 69.6 | 253.7 | 42.8 | 353.6 | 60.9 | 8150 |
| *PD18-37-226* | 39.4 | 129.1 | 15.76 | 106.2 | 51.6 | 9.07 | 91.5 | 17.31 | 136.5 | 35.3 | 124.7 | 20.25 | 168.7 | 29.61 | 7550 |
| *PD18-37-227* | 8.4 | 200 | 1.56 | 21.9 | 33.4 | 11.5 | 104 | 24 | 217 | 62.6 | 239 | 41.5 | 350 | 61.1 | 8360 |
| *PD18-37-235* | 20.1 | 116.1 | 6.08 | 63.8 | 23.6 | 4.89 | 62.9 | 15.21 | 150.1 | 45.6 | 181.7 | 31.3 | 270.3 | 46.5 | 10180 |
| *PD18-37-236* | 0.241 | 33.2 | 0.51 | 6.4 | 4.8 | 2 | 11.7 | 2.84 | 28.9 | 10.1 | 51.8 | 12.4 | 140 | 33.3 | 7470 |
| *PD18-37-237* | 5.17 | 81.8 | 2.99 | 28.5 | 24.9 | 9.31 | 73.8 | 14.51 | 129.2 | 35.71 | 136.1 | 22.85 | 194.9 | 33.98 | 7700 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-54-240* | 188 | 1350 | 120 | 1010 | 361 | 72 | 336 | 45.6 | 273 | 58.5 | 220 | 47.7 | 551 | 121.1 | 13990 |
| *PD18-54-241* | 316 | 1178 | 114 | 588 | 195 | 31 | 230 | 37.5 | 261.7 | 64.2 | 270 | 61.9 | 701 | 145.4 | 12340 |
| *PD18-54-242* | 32.1 | 125 | 12.2 | 54.5 | 17.7 | 5.78 | 23.2 | 3.76 | 33.7 | 12.7 | 88.9 | 30.5 | 418 | 101.4 | 13200 |
| *PD18-54-243* | 195 | 1420 | 131 | 950 | 299 | 55.2 | 314 | 49.6 | 323 | 67.3 | 244 | 50.7 | 553 | 114.9 | 12400 |
| *PD18-54-244* | 133 | 967 | 88.5 | 677 | 274 | 52.4 | 287 | 40.9 | 266 | 58.4 | 205 | 40 | 393 | 77.5 | 12270 |
| *PD18-54-245* | 150.3 | 868 | 113.4 | 766 | 193 | 40.9 | 213 | 31.2 | 220 | 53 | 214 | 46.9 | 519 | 110.3 | 12600 |
| *PD18-54-246* | 642 | 7410 | 547 | 4570 | 1355 | 304 | 1357 | 166.4 | 908 | 159.1 | 466 | 78.4 | 765 | 154.9 | 12330 |
| *PD18-54-247* | 187 | 1410 | 94.6 | 595 | 269 | 43.5 | 339 | 57.7 | 408 | 91.7 | 318 | 58.9 | 584 | 115 | 11870 |
| *PD18-54-248* | 137.2 | 839 | 81.6 | 536 | 148.5 | 29.7 | 177 | 28.1 | 204.9 | 52.5 | 215.1 | 46 | 496 | 105.4 | 10610 |
| *PD18-54-249* | 336 | 2210 | 212 | 1600 | 454 | 95 | 453 | 61.6 | 357 | 70.3 | 234 | 49.7 | 554 | 117.8 | 12510 |
| *PD18-54-250* | 270.8 | 1142 | 141.7 | 974 | 233 | 48 | 252 | 34.3 | 244 | 65.4 | 263.7 | 54.7 | 570 | 115 | 11340 |
| *PD18-54-251* | 23.2 | 161 | 18.5 | 133 | 43.3 | 9.52 | 67.4 | 14.3 | 141.9 | 44.7 | 199 | 41.7 | 438 | 90.4 | 12370 |
| *PD18-54-252* | 95 | 200 | 34.2 | 176 | 63.8 | 11.6 | 109.7 | 25.8 | 255 | 82.6 | 359.7 | 68.5 | 649 | 126 | 9690 |
| *PD18-54-260* | 272 | 990 | 121 | 760 | 177 | 33.5 | 190 | 30.3 | 234 | 62.2 | 251 | 52 | 544 | 111.7 | 12190 |
| *PD18-54-261* | 218.4 | 777 | 91.2 | 635 | 181 | 49.5 | 181 | 21.5 | 134.8 | 35.8 | 167.6 | 46.3 | 594 | 126.1 | 12300 |
| *PD18-54-262* | 78 | 364 | 51 | 302 | 75.7 | 16.9 | 84.1 | 14.5 | 107.2 | 27.1 | 124.5 | 31.5 | 395 | 87.8 | 13230 |
| *PD18-54-263* | 216 | 827 | 118.7 | 676 | 150 | 28.1 | 157.9 | 27.2 | 231 | 64.3 | 270 | 54.5 | 549 | 107.9 | 13100 |
| *PD18-54-264* | 1177 | 3480 | 457 | 2570 | 781 | 126 | 830 | 118.6 | 769 | 161.7 | 519 | 86.6 | 706 | 124.5 | 11970 |
| *PD18-54-265* | 194 | 930 | 81 | 400 | 163 | 32 | 202 | 34 | 237 | 53.4 | 208 | 45.6 | 521 | 113.6 | 13710 |
| *PD18-54-266* | 308.7 | 1113 | 110.4 | 629 | 213 | 37.1 | 225 | 33.7 | 220 | 51.2 | 213.1 | 50.6 | 598 | 126.5 | 13910 |
| *PD18-54-267* | 169 | 1110 | 91 | 510 | 183 | 32.5 | 223 | 39.2 | 290 | 71.1 | 277 | 55 | 552 | 109.7 | 12940 |
| *PD18-54-268* | 217 | 761 | 89.1 | 592 | 368 | 52.3 | 523 | 60.9 | 412 | 106 | 399 | 72.9 | 692 | 124.5 | 12010 |
| *PD18-54-269* | 252 | 730 | 76 | 441 | 198 | 43.7 | 207 | 26.4 | 182 | 48.9 | 228 | 54.4 | 653 | 132.5 | 13000 |
| *PD18-54-270* | 383 | 2680 | 226 | 1332 | 434 | 84.1 | 515 | 79.9 | 519 | 110.2 | 371 | 66.9 | 661 | 127 | 12740 |
| *PD18-54-271* | 61 | 393 | 26.5 | 143 | 51.9 | 12.3 | 101.4 | 24.1 | 225.8 | 71.2 | 296.5 | 56.5 | 513 | 97.4 | 9580 |
| *PD18-54-272* | 87.2 | 479 | 50.8 | 340 | 164 | 39.9 | 247 | 31.6 | 217 | 55.9 | 213.4 | 39.8 | 371.7 | 69.4 | 11550 |
| *PD18-54-273* | 179.5 | 464 | 85.1 | 546 | 128.7 | 28.4 | 150.7 | 28.5 | 263 | 81.9 | 359 | 69.3 | 657 | 124.6 | 11830 |
| *PD18-54-274* | 491 | 394 | 175 | 840 | 182 | 26.1 | 191 | 27.5 | 238 | 80.6 | 397 | 87.1 | 893 | 179.8 | 20940 |
| *PD18-54-275* | 361 | 2980 | 263 | 1611 | 508 | 92.2 | 596 | 81.8 | 486 | 87.3 | 280 | 54.8 | 597 | 127.3 | 12630 |
| *PD18-54-276* | 353 | 4850 | 425 | 3670 | 1281 | 278 | 1354 | 180.9 | 1118 | 219 | 652 | 97.8 | 753 | 128.8 | 12800 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-54-284* | 74.4 | 414 | 46.7 | 277 | 93.1 | 18.9 | 109.7 | 19.7 | 168 | 50.3 | 227 | 47 | 495 | 99.9 | 10550 |
| *PD18-54-285* | 147 | 783 | 100.7 | 777 | 277 | 54.9 | 286.6 | 35.27 | 223.3 | 50.2 | 180.6 | 35.09 | 356.8 | 73.4 | 12010 |
| *PD18-54-286* | 72 | 62.9 | 23.4 | 107.6 | 36.4 | 6.2 | 53.7 | 11.35 | 109.3 | 34.2 | 146.8 | 29.2 | 295 | 57.9 | 13380 |
| *PD18-54-287* | 12.6 | 17.25 | 5.14 | 25.5 | 9.24 | 2.46 | 23.8 | 6.44 | 78.1 | 29.2 | 144.5 | 30.2 | 306 | 64.6 | 10470 |
| | | | | | | | | | | | | | | | |
| *PD18-45-320* | 89 | 305 | 29.6 | 239 | 49.7 | 14.8 | 64.1 | 14.6 | 172 | 60.7 | 277 | 55.6 | 519 | 98.1 | 11710 |
| *PD18-45-328* | 22.9 | 88.5 | 7.4 | 50.7 | 20.1 | 71.1 | 41.4 | 9.82 | 106 | 37.6 | 180 | 37.9 | 369 | 70.6 | 12160 |
| *PD18-45-330* | 64.6 | 307 | 22.9 | 162 | 21 | 8.22 | 56.1 | 16.15 | 190.8 | 69.2 | 314 | 62.4 | 596 | 109.1 | 11480 |
| *PD18-45-332* | 6.9 | 75.6 | 2.21 | 21.2 | 19.1 | 3.72 | 83.7 | 25.61 | 308.1 | 109.3 | 482 | 91 | 819 | 149.9 | 10410 |
| *PD18-45-333* | 3.83 | 22.7 | 0.58 | 2.78 | 1.12 | 0.114 | 5.19 | 1.82 | 28.6 | 12.31 | 65.5 | 14.97 | 162.2 | 34.23 | 12470 |
| *PD18-45-334* | 39 | 97 | 7.8 | 48 | 14.7 | 1.79 | 39.6 | 11.09 | 132.8 | 48.1 | 229.8 | 45.6 | 417 | 80.3 | 11660 |
| *PD18-45-335* | 74 | 217 | 23.4 | 99 | 20.4 | 2.89 | 42.2 | 10.55 | 117.7 | 42.1 | 195.4 | 39.3 | 367 | 71.9 | 10860 |
| *PD18-45-336* | 13.69 | 73.8 | 4.47 | 37 | 9.19 | 4.79 | 23.1 | 7.09 | 88.9 | 33.9 | 163.2 | 34.1 | 335.3 | 64.4 | 10700 |
| *PD18-45-337* | 51.5 | 162.3 | 9.03 | 63 | 10.11 | 8.91 | 33.4 | 10.35 | 135.8 | 50.5 | 240.9 | 48.6 | 466 | 88.4 | 10950 |
| *PD18-45-338* | 88.3 | 561 | 50.3 | 442 | 112.6 | 15.4 | 104.2 | 19.28 | 194.7 | 66.8 | 304 | 57.4 | 534 | 99.4 | 11280 |
| *PD18-45-339* | 225 | 304 | 20.9 | 160 | 31.8 | 5.85 | 68.4 | 17.38 | 203.9 | 73.7 | 341.7 | 65.5 | 614 | 114.7 | 9340 |
| *PD18-45-340* | 84.5 | 151.3 | 10.01 | 65.2 | 9.43 | 2.38 | 27.1 | 8.24 | 103.3 | 38.1 | 185 | 37.1 | 357 | 68.6 | 11620 |
| *PD18-45-341* | 66.9 | 235.8 | 17.1 | 90.3 | 19.7 | 6.75 | 60.2 | 16.93 | 206.3 | 73.3 | 337 | 69.3 | 619 | 117.9 | 11800 |
| *PD18-45-342* | 59.1 | 127.4 | 9.72 | 57.7 | 13.2 | 3.32 | 34.9 | 9.53 | 111.9 | 39.2 | 185.8 | 36.5 | 342 | 66.2 | 9700 |
| *PD18-45-350* | 14 | 70 | 2.49 | 12.2 | 7.2 | 0.86 | 37.1 | 11.8 | 150.2 | 56 | 265 | 53.1 | 496 | 96.1 | 11210 |
| *PD18-45-351* | 19.8 | 74.6 | 3.55 | 22.5 | 7.02 | 2.19 | 37.1 | 11.4 | 144 | 52.2 | 247 | 48.2 | 455 | 86.8 | 13100 |
| *PD18-45-352* | 0.65 | 31.5 | 0.399 | 4.04 | 4.69 | 0.436 | 24.3 | 8.14 | 104.7 | 39.1 | 193 | 39.4 | 383 | 73.4 | 12530 |
| *PD18-45-353* | 80.1 | 170 | 11.3 | 106 | 16.9 | 3.65 | 41.8 | 12.3 | 149 | 54.4 | 254 | 48.8 | 464 | 87.3 | 11600 |
| *PD18-45-354* | 58.9 | 197 | 10.73 | 119.8 | 27.3 | 26.9 | 36.3 | 7.2 | 75.5 | 27.4 | 137.3 | 29.25 | 296.5 | 60.3 | 12630 |
| *PD18-45-357* | 45.1 | 198 | 19 | 143 | 31.7 | 6.43 | 52 | 12.61 | 144.3 | 50.3 | 226.3 | 44.3 | 420 | 79.8 | 11990 |
| *PD18-45-358* | 37.7 | 99.7 | 4.93 | 39.8 | 16.9 | 2.85 | 63.4 | 18.55 | 231.9 | 83.8 | 383.6 | 76.5 | 706 | 130.2 | 11770 |
| *PD18-45-359* | 70.7 | 169.7 | 13.01 | 74.4 | 14.9 | 3.3 | 44 | 12.3 | 156 | 55 | 267 | 52.5 | 490 | 93 | 13390 |
| *PD18-45-360* | 27.4 | 84.8 | 3.93 | 40.3 | 11.47 | 3.64 | 34.4 | 10.75 | 134.4 | 49.6 | 242 | 48.2 | 471 | 91.4 | 11270 |
| *PD18-45-362* | 119.3 | 295 | 25.7 | 229 | 29.4 | 11.88 | 35.1 | 5.75 | 64.6 | 24.44 | 123.4 | 26.92 | 273.4 | 55.1 | 13900 |
| *PD18-45-365* | 54.1 | 133.4 | 9.75 | 70.5 | 12.4 | 3.18 | 25 | 7.11 | 86.2 | 33.58 | 164.4 | 34.19 | 337 | 65.6 | 11760 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-47-288* | 12.3 | 66.9 | 5.97 | 41 | 18.8 | 7.53 | 68.4 | 18.6 | 186 | 53.5 | 198.3 | 32.3 | 264 | 43 | 11790 |
| *PD18-47-289* | 8.2 | 21.76 | 1.115 | 6.17 | 5.07 | 2.4 | 26.6 | 7.61 | 90.7 | 32.1 | 141.7 | 26.8 | 256.1 | 49 | 11770 |
| *PD18-47-290* | 15.8 | 41 | 2.55 | 15.8 | 9.8 | 3.65 | 33.7 | 8.91 | 98.4 | 32.4 | 138.7 | 26 | 239 | 43.8 | 11710 |
| *PD18-47-291* | 12.1 | 56.3 | 3.33 | 27 | 23.9 | 9.1 | 72.8 | 16.31 | 163 | 50.5 | 211 | 39.2 | 347 | 63.9 | 10080 |
| *PD18-47-292* | 6.52 | 22.87 | 1.62 | 10.63 | 5.89 | 1.68 | 18.2 | 3.96 | 32.6 | 8.11 | 26.9 | 4.46 | 37.2 | 6.64 | 10870 |
| *PD18-47-293* | 1.17 | 14.8 | 0.456 | 5.4 | 7.7 | 2.95 | 32.5 | 9.22 | 100.3 | 32.2 | 134.6 | 24.6 | 220 | 40.5 | 12190 |
| *PD18-47-294* | 41.5 | 100 | 7.84 | 91.6 | 35 | 12.79 | 60.1 | 11.8 | 114.8 | 31.9 | 119.1 | 20.48 | 174.9 | 29.12 | 12540 |
| *PD18-47-295* | 7.79 | 69.2 | 4.97 | 24.7 | 10.7 | 9.77 | 34.2 | 8.63 | 94.4 | 32.2 | 140 | 27 | 243 | 45.5 | 12060 |
| *PD18-47-296* | 3.78 | 14.7 | 0.64 | 4.16 | 4.07 | 1.95 | 17.8 | 5.6 | 57.9 | 18.08 | 77.8 | 15.04 | 136.3 | 25.9 | 12040 |
| *PD18-47-297* | 19.9 | 82 | 7.41 | 40.3 | 20.7 | 6.6 | 60.6 | 15.71 | 156 | 45.9 | 190.3 | 34.7 | 307.5 | 56.5 | 10240 |
| *PD18-47-298* | 4230 | 9370 | 958 | 3690 | 673 | 48.4 | 567 | 79.5 | 460 | 76.9 | 206.3 | 28.65 | 220.7 | 35.27 | 8600 |
| *PD18-47-306* | 3.67 | 29.4 | 1.17 | 7.52 | 6.57 | 2.78 | 30.6 | 9.32 | 106 | 35.15 | 153.9 | 29.09 | 261.4 | 49.05 | 9570 |
| *PD18-47-307* | 13.5 | 51.4 | 4.57 | 29.6 | 17.6 | 5.02 | 48.5 | 10.71 | 109 | 32 | 133.1 | 24.3 | 227.6 | 40.7 | 13380 |
| *PD18-47-308* | 18.77 | 117.6 | 15.78 | 107.6 | 54.1 | 22.2 | 113.3 | 23.65 | 202.5 | 53.3 | 196.8 | 34.67 | 297.1 | 52.1 | 12540 |
| *PD18-47-309* | 38.3 | 118 | 10.9 | 46.8 | 10.4 | 2.86 | 38 | 13.76 | 181 | 61.5 | 255 | 46.1 | 392 | 67.9 | 13230 |
| *PD18-47-310* | 11.03 | 52.9 | 4.97 | 37.8 | 15.2 | 15.4 | 38.7 | 9.5 | 107.8 | 35.5 | 150.9 | 27.64 | 247 | 42 | 16750 |
| *PD18-47-311* | 10.83 | 53.1 | 2.9 | 28.9 | 19.1 | 10.25 | 49.5 | 11.1 | 114.4 | 34.3 | 139.7 | 24.57 | 221.7 | 39.9 | 10280 |
| *PD18-47-312* | 9.34 | 39.9 | 3.98 | 24.1 | 9.28 | 3.77 | 27.9 | 6.96 | 79.1 | 26.7 | 119.7 | 24.2 | 243.2 | 50.4 | 13830 |
| *PD18-47-313* | 2.98 | 16 | 0.798 | 6.6 | 6.74 | 2.62 | 24.6 | 6.11 | 67.9 | 22.3 | 100.1 | 20.3 | 194 | 36.4 | 12710 |
| *PD18-47-314* | 88 | 89.2 | 12.76 | 39.5 | 4.29 | 1.21 | 3.63 | 1.23 | 23.9 | 13.47 | 96.7 | 27.7 | 361 | 93.7 | 33200 |
| *PD18-47-315* | 11.8 | 69 | 3.57 | 20.2 | 13.43 | 4.91 | 45.9 | 11.48 | 117.7 | 36.3 | 148.1 | 26.34 | 234.8 | 43.3 | 9200 |
| *PD18-47-318* | 31.6 | 106 | 12.5 | 63.4 | 28.7 | 8.82 | 65.2 | 15.03 | 145.1 | 43.8 | 174.9 | 31.81 | 289.4 | 53.2 | 10680 |
| | | | | | | | | | | | | | | | |
| *PD18-27-101* | 12.03 | 43.5 | 5.83 | 36.4 | 14.5 | 2.28 | 29.2 | 8.32 | 102 | 35.39 | 169.2 | 35.68 | 324.4 | 58.5 | 12310 |
| *PD18-27-102* | 14 | 61.3 | 4.49 | 47.7 | 63.6 | 23.3 | 99.3 | 11.85 | 97.2 | 30.9 | 129.8 | 26.84 | 263 | 49 | 11480 |
| *PD18-27-103* | 382 | 1320 | 217 | 1320 | 461 | 45.8 | 579 | 90.6 | 550 | 107.7 | 303 | 49.1 | 386 | 67.3 | 12120 |
| *PD18-27-104* | 311 | 1108 | 143.2 | 857 | 324 | 60 | 691 | 183.1 | 1345 | 255.2 | 548 | 60.4 | 406.3 | 63.8 | 12520 |
| *PD18-27-105* | 57.5 | 229.7 | 28.4 | 189.1 | 30 | 31.3 | 72.9 | 16.4 | 149 | 41.2 | 160.5 | 32 | 304.1 | 56.4 | 13450 |
| *PD18-27-106* | 62.9 | 257 | 29.3 | 103.7 | 15.47 | 8.76 | 25.7 | 6.75 | 78.4 | 29.1 | 143.1 | 32.9 | 337 | 65.3 | 12460 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-27-107* | 18 | 62.6 | 5.44 | 56.3 | 64.7 | 28.9 | 104.7 | 16.92 | 146 | 43.6 | 169 | 32.53 | 291.5 | 51.9 | 12770 |
| *PD18-27-108* | 217 | 769 | 98.7 | 704 | 289 | 48.7 | 456 | 93.5 | 727 | 154.5 | 418 | 61.1 | 418 | 66.5 | 10690 |
| *PD18-27-109* | 281 | 873 | 124.5 | 782 | 195 | 63.9 | 295 | 69.1 | 621 | 142.9 | 359 | 43.7 | 294.3 | 45.8 | 12720 |
| *PD18-27-110* | 51.5 | 169 | 21.9 | 137 | 51 | 10.8 | 81.7 | 16.5 | 149 | 45.1 | 180.2 | 35.1 | 316 | 56.7 | 13280 |
| *PD18-27-111* | 217.2 | 1082 | 125.3 | 800 | 341 | 87.4 | 341 | 45 | 345 | 96.9 | 387 | 74.4 | 629 | 116.3 | 13150 |
| *PD18-27-112* | 25.2 | 110 | 12.5 | 75 | 22.3 | 10.8 | 40.9 | 8.57 | 86.5 | 30.2 | 139.6 | 30.9 | 306 | 58.2 | 11250 |
| *PD18-27-113* | 7 | 16 | 0.671 | 4.35 | 6.88 | 2.65 | 39.1 | 12.02 | 130.6 | 41.6 | 164 | 29.6 | 254.7 | 45 | 12640 |
| *PD18-27-114* | 106.9 | 402 | 61.3 | 426 | 80.1 | 44.3 | 123.3 | 25.7 | 216 | 52.1 | 179.7 | 32.5 | 297.8 | 54.3 | 12750 |
| *PD18-27-115* | 364 | 1289 | 141.1 | 1324 | 430 | 131.6 | 337 | 38.1 | 207.3 | 46.1 | 174.1 | 36.2 | 357.8 | 67.9 | 12680 |
| *PD18-27-124* | 49.9 | 201 | 29.1 | 170.6 | 39.2 | 15.45 | 102.9 | 28.1 | 267 | 67.1 | 216.9 | 35.3 | 296.8 | 52.6 | 11700 |
| *PD18-27-125* | 15.8 | 58.2 | 4.85 | 26.8 | 8.6 | 5.65 | 25.6 | 5.88 | 60.5 | 20.36 | 99.1 | 24.14 | 275.8 | 59 | 11970 |
| *PD18-27-126* | 379 | 1398 | 182.1 | 1188 | 394 | 130.6 | 737 | 160.3 | 1273 | 265.9 | 627 | 69.5 | 419 | 56.3 | 10610 |
| *PD18-27-127* | 441 | 2092 | 259.2 | 1857 | 740 | 101.7 | 1034 | 224.8 | 1800 | 370 | 844 | 92.6 | 557 | 78.8 | 9930 |
| *PD18-27-128* | 79 | 187 | 25.2 | 134 | 51.5 | 7.66 | 92 | 26.4 | 241 | 62.2 | 223 | 41.9 | 369 | 65.4 | 11960 |
| *PD18-27-129* | 617 | 1417 | 147 | 1186 | 438 | 172.5 | 411 | 37.8 | 207 | 47.6 | 170.9 | 31.65 | 298 | 55.2 | 12500 |
| *PD18-27-130* | 307 | 1330 | 179 | 1190 | 350 | 83.7 | 488 | 81.6 | 525 | 100.2 | 257 | 38.9 | 317.9 | 54.5 | 11410 |
| *PD18-27-131* | 29.5 | 154 | 19.7 | 99.9 | 20.5 | 19.23 | 45.6 | 10.32 | 103.5 | 31 | 129.4 | 28 | 287.7 | 54.7 | 12840 |
| *PD18-27-132* | 170 | 498 | 63 | 373 | 151 | 30.7 | 245 | 54.2 | 458 | 108.6 | 306 | 40.1 | 307 | 51.1 | 10060 |
| *PD18-27-133* | 191 | 808 | 128.4 | 936 | 258 | 50.5 | 319 | 59.4 | 456 | 102.8 | 274 | 40.5 | 344.4 | 62.2 | 11540 |
| *PD18-27-134* | 19.2 | 44.5 | 4.04 | 18.4 | 11.2 | 2.74 | 44.5 | 12.77 | 135.1 | 43.1 | 174.7 | 32.21 | 275.4 | 49.3 | 12080 |
| *PD18-27-135* | 23.7 | 53.1 | 5.39 | 29.1 | 17.79 | 5.68 | 61.1 | 15.8 | 157 | 45.1 | 180 | 33.1 | 284 | 51 | 12170 |
| *PD18-27-136* | 247.3 | 1177 | 154.3 | 1242 | 590 | 136.4 | 771 | 172.9 | 1557 | 354 | 946 | 115.8 | 682 | 79.7 | 11130 |
| *PD18-27-137* | 298 | 634 | 94.9 | 660 | 237.9 | 51.8 | 257.9 | 34 | 192.4 | 40.7 | 138.1 | 27.21 | 277 | 52.2 | 13210 |
| *PD18-27-138* | 121 | 441 | 60.8 | 428 | 127 | 42.9 | 189 | 32.4 | 246 | 59 | 206.4 | 38.2 | 325.6 | 60.3 | 11410 |
| | | | | | | | | | | | | | | | |
| *PD18-44-373* | 49 | 79.6 | 5.53 | 26.6 | 10.3 | 0.87 | 41.1 | 12.28 | 154.3 | 55.8 | 250.5 | 48.3 | 442 | 81.1 | 12540 |
| *PD18-44-374* | 6.3 | 62.5 | 2.58 | 20.7 | 18.2 | 2.06 | 81.3 | 23.4 | 278 | 100.8 | 462 | 86.2 | 758 | 133.1 | 12200 |
| *PD18-44-375* | 4.01 | 71.1 | 3.31 | 25.8 | 17.9 | 1.61 | 48.8 | 11.93 | 127 | 42.9 | 187 | 36.04 | 333 | 63.6 | 10590 |
| *PD18-44-376* | 14.3 | 55.6 | 4.39 | 24.2 | 8.85 | 1.81 | 25.4 | 7.14 | 82.9 | 29.76 | 136 | 26.69 | 253.1 | 47.9 | 10780 |
| *PD18-44-377* | 22 | 91.6 | 5.64 | 27.8 | 13.3 | 1.56 | 55.1 | 18.07 | 229.1 | 85.8 | 429 | 88.6 | 834 | 156.3 | 12720 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-44-378* | 68.1 | 204 | 19.5 | 115 | 47.3 | 6.29 | 91 | 19.4 | 200.9 | 68.4 | 314 | 63.9 | 626 | 121.6 | 14510 |
| *PD18-44-379* | 9.26 | 87.7 | 6.09 | 62.1 | 34.2 | 10.01 | 63.7 | 12.55 | 140.8 | 48.5 | 220.1 | 42.6 | 391.6 | 71.9 | 10060 |
| *PD18-44-380* | 10.5 | 64 | 5.82 | 56.6 | 29.6 | 8.9 | 65.6 | 15.28 | 164.8 | 53.6 | 228.5 | 41.5 | 370 | 67.6 | 9970 |
| *PD18-44-381* | 139 | 457 | 41.3 | 292 | 98 | 47.6 | 180 | 27 | 262 | 82.4 | 357 | 67.8 | 609 | 112.5 | 10850 |
| *PD18-44-382* | 1.16 | 32 | 0.76 | 7.27 | 8.56 | 1.24 | 42.5 | 13.13 | 158.3 | 56.1 | 255.3 | 48.6 | 450 | 84.4 | 9870 |
| *PD18-44-384* | 9.23 | 89.9 | 6.86 | 66.4 | 32 | 3.94 | 41.8 | 8.32 | 83.9 | 29.2 | 135.6 | 27.8 | 272.7 | 55 | 14750 |
| *PD18-44-385* | 7.5 | 49.4 | 4.22 | 33 | 10.6 | 2.76 | 25.2 | 6.13 | 70.1 | 23.8 | 112 | 22.79 | 228 | 47.7 | 13490 |
| *PD18-44-386* | 41 | 238 | 26.5 | 240 | 112.9 | 22.3 | 171.9 | 21.23 | 167 | 50.2 | 217 | 42 | 408 | 81 | 11080 |
| *PD18-44-387* | 145.2 | 409 | 47.4 | 380 | 73.5 | 33.2 | 81.3 | 13.98 | 140.4 | 50.5 | 240 | 49.8 | 479 | 91.9 | 14220 |
| *PD18-44-396* | 25.3 | 183 | 17.6 | 139 | 92 | 6.5 | 138 | 22.4 | 202 | 63.4 | 274 | 51.5 | 472 | 88.1 | 10660 |
| *PD18-44-397* | 133 | 342 | 34.7 | 161 | 35.4 | 5.66 | 77.4 | 18.67 | 209.1 | 70.2 | 309 | 57.6 | 529 | 95.1 | 10380 |
| *PD18-44-398* | 28.4 | 145 | 14.2 | 107 | 23 | 9 | 36.8 | 7.36 | 74.1 | 24.9 | 118.2 | 25.2 | 265 | 59.8 | 14990 |
| *PD18-44-399* | 7.4 | 71.9 | 4.09 | 37.8 | 14.4 | 1.7 | 29.4 | 8.36 | 96.1 | 34.28 | 159.5 | 31.87 | 300.5 | 56.8 | 11510 |
| *PD18-44-401* | 36.3 | 170.7 | 13.64 | 93.1 | 22.4 | 7.53 | 63.3 | 17.17 | 200.1 | 69.4 | 311.8 | 58.9 | 539 | 96 | 11040 |
| *PD18-44-402* | 28.5 | 112 | 9.1 | 48.7 | 20 | 1.44 | 61.9 | 17.56 | 210.7 | 73 | 333 | 62 | 561 | 102.4 | 12570 |
| *PD18-44-403* | 52 | 167 | 20.2 | 132 | 44.4 | 7.66 | 64.8 | 10.71 | 89.9 | 27.8 | 120 | 23.17 | 220.5 | 43.8 | 11620 |
| *PD18-44-404* | 75.4 | 247 | 26 | 232 | 65.6 | 14.87 | 64.9 | 10.96 | 102.9 | 32.6 | 141.8 | 26.99 | 258 | 49.7 | 10370 |
| *PD18-44-405* | 30.1 | 101.2 | 8.01 | 57.4 | 20 | 7.24 | 55.9 | 15.46 | 175.1 | 61.9 | 271.6 | 51.8 | 461 | 85.6 | 11620 |
| *PD18-44-406* | 134 | 820 | 95.9 | 887 | 158 | 44.1 | 129 | 17 | 120.9 | 32.9 | 135.6 | 26.6 | 271 | 55.7 | 12370 |
| *PD18-44-407* | 46 | 133 | 11 | 66.4 | 21.9 | 6.35 | 48.6 | 11.99 | 134.6 | 47.4 | 216.8 | 42.4 | 397 | 73.9 | 11480 |
| *PD18-44-408* | 148 | 715 | 58.4 | 452 | 138 | 125 | 213 | 45.8 | 452 | 140.6 | 608 | 111.7 | 984 | 177.6 | 11180 |
| *PD18-44-409* | 93.1 | 509 | 41.4 | 240 | 47.7 | 23.8 | 92.5 | 26.8 | 351 | 133.9 | 633 | 128.5 | 1227 | 231 | 11420 |
| | | | | | | | | | | | | | | | |
| *PD18-39-425* | 38 | 305 | 23.7 | 168 | 114.3 | 15.5 | 136.9 | 23.17 | 220.8 | 70.9 | 328.3 | 68.1 | 689 | 137.3 | 9980 |
| *PD18-39-426* | 87.2 | 586 | 66.7 | 408 | 136.4 | 22.5 | 177 | 36.6 | 351 | 106.2 | 453 | 85.2 | 805 | 153.1 | 11520 |
| *PD18-39-427* | 71.2 | 560 | 41.6 | 237 | 105.1 | 21.9 | 151 | 33.7 | 309 | 94.6 | 416 | 86.3 | 831 | 157.2 | 12150 |
| *PD18-39-428* | 27.3 | 169.2 | 16.7 | 104.3 | 38.2 | 7.03 | 65.2 | 15.13 | 161.1 | 52.6 | 240.7 | 49.3 | 488 | 96.1 | 11620 |
| *PD18-39-429* | 11.09 | 74.3 | 7.07 | 44.4 | 15.9 | 3.12 | 29.4 | 7.02 | 79.8 | 27.5 | 126.2 | 26 | 263 | 53 | 12370 |
| *PD18-39-430* | 109 | 501 | 52.6 | 305 | 120.9 | 23.2 | 181 | 39.9 | 371 | 109.7 | 436 | 80.6 | 745 | 137.5 | 12250 |
| *PD18-39-431* | 625 | 4040 | 368 | 2000 | 741 | 148.6 | 1022 | 192.6 | 1541 | 378 | 1339 | 221.2 | 1828 | 284.1 | 13300 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-39-432* | 8.9 | 42.6 | 3.72 | 24.6 | 12.2 | 2.7 | 24 | 6.16 | 71 | 26.6 | 134.3 | 30.5 | 327 | 68.1 | 12250 |
| *PD18-39-433* | 227 | 1720 | 164 | 982 | 450 | 85.4 | 603 | 114.8 | 964 | 247 | 944 | 166 | 1426 | 229.6 | 11440 |
| *PD18-39-434* | 1.72 | 17.3 | 0.99 | 5.8 | 2.96 | 0.7 | 9.75 | 3.45 | 45.3 | 17.94 | 94.8 | 21.51 | 228.5 | 47.6 | 13610 |
| *PD18-39-435* | 32.4 | 494 | 19 | 105.7 | 45.9 | 10.43 | 73.1 | 16.2 | 148.5 | 42.1 | 178.6 | 34 | 324 | 59 | 12670 |
| *PD18-39-436* | 259 | 2070 | 153.9 | 907 | 340 | 66.8 | 477 | 93.6 | 825 | 226.5 | 856 | 151 | 1348 | 242.5 | 11000 |
| *PD18-39-437* | 20.7 | 259 | 12.8 | 68 | 34.2 | 8.29 | 59.8 | 16.1 | 153 | 46.6 | 196 | 38.1 | 355 | 67.7 | 8300 |
| *PD18-39-438* | 17.1 | 118.2 | 12.88 | 80.1 | 36.5 | 5.69 | 54.5 | 10.75 | 106.3 | 36.7 | 172 | 36.6 | 377 | 77.3 | 13360 |
| *PD18-39-439* | 20.8 | 187.9 | 17.95 | 123.1 | 53 | 9.04 | 76.7 | 15.44 | 140.3 | 40.8 | 172 | 33.2 | 320 | 61.5 | 10460 |
| *PD18-39-448* | 267 | 1350 | 148 | 828 | 307 | 56.1 | 387 | 74.8 | 605 | 157.6 | 593 | 107.9 | 963 | 164.5 | 13220 |
| *PD18-39-449* | 31.6 | 69 | 7.3 | 37.5 | 12.1 | 2.09 | 20.2 | 4.76 | 52.3 | 18.67 | 90.3 | 18.39 | 190.5 | 39.9 | 8180 |
| *PD18-39-450* | 52.8 | 324 | 38.6 | 218 | 83.3 | 15.4 | 116 | 25.2 | 254 | 79.8 | 356.5 | 74.5 | 741 | 142.2 | 11570 |
| *PD18-39-451* | 810 | 6110 | 461 | 2776 | 1076 | 192.7 | 1242 | 207.4 | 1470 | 337 | 1181 | 215.9 | 1962 | 351.1 | 13130 |
| *PD18-39-452* | 104.6 | 764 | 66.9 | 410 | 178 | 33.9 | 244 | 47.3 | 395 | 107.6 | 415 | 76.9 | 714 | 131.5 | 15440 |
| *PD18-39-453* | 35.4 | 151 | 12.5 | 70 | 31.9 | 5.75 | 64.7 | 16.21 | 174.7 | 59.8 | 277.1 | 57.5 | 574 | 116.1 | 9500 |
| *PD18-39-454* | 125.4 | 1031 | 95.4 | 536 | 231 | 43.4 | 311 | 64.3 | 578 | 156.9 | 610 | 113.5 | 1033 | 174.9 | 12350 |
| *PD18-39-455* | 67.2 | 577 | 45.4 | 357 | 130.3 | 23.35 | 144.5 | 24.74 | 220.1 | 67.8 | 301.1 | 61.6 | 610 | 119.4 | 10550 |
| *PD18-39-456* | 629 | 3350 | 432 | 2530 | 1038 | 210.4 | 1365 | 252 | 1942 | 454 | 1572 | 265 | 2160 | 335 | 11290 |
| *PD18-39-457* | 90.2 | 487 | 57.5 | 351 | 120.7 | 21 | 164.3 | 32.3 | 306 | 93.2 | 377 | 70.5 | 657 | 121.3 | 12860 |
| *PD18-39-458* | 96.8 | 725 | 78.7 | 485 | 158 | 26.4 | 197 | 39.9 | 342 | 92.3 | 345 | 63.2 | 544 | 93.6 | 12920 |
| *PD18-39-459* | 1.27 | 39.7 | 1.51 | 10.2 | 5.32 | 1.37 | 20.2 | 6.31 | 78.8 | 28.4 | 133.3 | 27.2 | 273.4 | 55.3 | 10890 |
| *PD18-39-460* | 50.2 | 610 | 36.4 | 232 | 104.5 | 19.7 | 154 | 31.7 | 278 | 77.1 | 308 | 57.3 | 527 | 97 | 12470 |
| *PD18-39-461* | 18.38 | 135.7 | 9.75 | 63.4 | 30.6 | 5.58 | 49.1 | 11.36 | 114.3 | 37.91 | 167.7 | 33.37 | 311.5 | 60.2 | 10940 |
| *PD18-39-462* | 82.6 | 449 | 48.5 | 272 | 101.5 | 18.9 | 152 | 31.6 | 311 | 92.8 | 377 | 69.5 | 621 | 111.7 | 9610 |
| | | | | | | | | | | | | | | | |
| *PD18-01-10* | 11.08 | 123.9 | 6.77 | 37.6 | 11.99 | 5.89 | 46 | 13.18 | 148.9 | 54.5 | 245.8 | 52.9 | 507 | 98.8 | 8980 |
| *PD18-01-12* | 230 | 898 | 108 | 656 | 187 | 58.1 | 151.9 | 21.33 | 172.3 | 56.6 | 261.8 | 59.8 | 615 | 135 | 11310 |
| *PD18-01-13* | 1.78 | 77.6 | 6.9 | 50 | 8.5 | 2.81 | 24.2 | 7.5 | 94.8 | 38.8 | 191 | 45.2 | 465 | 100 | 12140 |
| *PD18-01-14* | 26.6 | 114.9 | 14.8 | 103 | 22.4 | 6.51 | 26.5 | 5.4 | 53.6 | 19.6 | 92 | 21.9 | 230 | 50.6 | 11860 |
| *PD18-01-15* | 73 | 221 | 27.1 | 154 | 47.7 | 15 | 65.3 | 14.73 | 147.9 | 51.7 | 232 | 48.4 | 463 | 96.2 | 11060 |
| *PD18-01-16* | 39.6 | 253 | 23.6 | 123 | 29.1 | 8.3 | 53.5 | 14.21 | 163.4 | 62.3 | 282 | 60.3 | 574 | 118.5 | 10630 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-01-21* | 944 | 4290 | 542 | 2730 | 550 | 137.8 | 470 | 69.9 | 479 | 125.2 | 476 | 97.5 | 917 | 183.3 | 8820 |
| *PD18-01-22* | 0.41 | 26.1 | 0.336 | 4.47 | 6.42 | 2.35 | 28.2 | 8.26 | 93.9 | 33.5 | 149.7 | 32.7 | 322 | 67.2 | 10180 |
| *PD18-01-25* | 18.4 | 117 | 9.1 | 60.4 | 16.2 | 7.14 | 30.9 | 7.88 | 82.3 | 30.6 | 143.5 | 30.8 | 300 | 65 | 10570 |
| *PD18-01-26* | 1.85 | 15.4 | 0.83 | 3.74 | 2.51 | 1.03 | 11.95 | 3.96 | 42 | 15.58 | 70.4 | 15.8 | 156.6 | 32.72 | 10780 |
| *PD18-01-36* | 83.8 | 823 | 103.8 | 704 | 144 | 71.5 | 143.4 | 25.2 | 232 | 91.7 | 514 | 131.1 | 1409 | 296 | 11630 |
| *PD18-01-38* | 22.3 | 99.9 | 11.3 | 61.9 | 17.4 | 6.06 | 58.5 | 17.7 | 203 | 73.8 | 330 | 68.4 | 611 | 120.4 | 10180 |
| *PD18-01-39* | 10.8 | 105.5 | 7.31 | 40.8 | 10.57 | 4.65 | 36.6 | 10.37 | 114.3 | 42.1 | 189.7 | 40.6 | 393 | 82.6 | 9950 |
| *PD18-01-40* | 16.8 | 67 | 8.15 | 59.5 | 14.2 | 3.71 | 36.1 | 10.53 | 122.4 | 44.8 | 205.5 | 43.1 | 422 | 85.2 | 8970 |
| *PD18-01-41* | 18.5 | 158.7 | 23.8 | 209 | 45.7 | 9.18 | 45.7 | 9.58 | 106.7 | 40 | 191.1 | 43.4 | 447 | 94.5 | 11760 |
| *PD18-01-43* | 101.1 | 389 | 51 | 270 | 72.9 | 25 | 90.6 | 15.71 | 137.3 | 44.1 | 188.4 | 40.7 | 397 | 83.5 | 12570 |
| *PD18-01-44* | 27.3 | 138 | 15.5 | 118 | 22.5 | 6.15 | 40 | 11.13 | 128.4 | 50 | 232 | 51.9 | 514 | 108.8 | 10930 |
| *PD18-01-45* | 6.95 | 61.9 | 3.72 | 28.1 | 11.08 | 7.25 | 26.4 | 6.92 | 77.7 | 30.54 | 147.5 | 34.4 | 350.6 | 78.4 | 11100 |
| *PD18-01-46* | 24.3 | 149 | 13.3 | 69.7 | 18.2 | 7.58 | 27.2 | 6.22 | 70.3 | 28.63 | 145.7 | 34.05 | 352.6 | 81 | 8990 |
| *PD18-01-47* | 100 | 374 | 55.1 | 267 | 63 | 16.6 | 77.1 | 13.95 | 130.7 | 45.9 | 213.9 | 48.6 | 505 | 112.9 | 12380 |
| | | | | | | | | | | | | | | | |
| *PD17-1-10* | 1.12 | 22.9 | 0.428 | 2.89 | 3.14 | 0.99 | 14.9 | 6.23 | 88.8 | 42.4 | 243.3 | 69.6 | 777 | 172.5 | 14020 |
| *PD17-1-11* | 0.089 | 35 | 0.47 | 7.3 | 8.8 | 3.02 | 30.3 | 8.55 | 97.9 | 38.9 | 202.5 | 56.74 | 648 | 144.2 | 13040 |
| *PD17-1-13* | 1.77 | 65 | 1.29 | 14.6 | 16.4 | 5.22 | 47.4 | 11.5 | 114.7 | 41.7 | 202.8 | 54.4 | 606 | 135.6 | 14050 |
| *PD17-1-14* | 1.32 | 60 | 0.575 | 6.81 | 10.39 | 3.93 | 43.7 | 12.21 | 130.5 | 48.2 | 222.4 | 53.9 | 544 | 118.4 | 12080 |
| *PD17-1-15* | 2.43 | 60 | 0.78 | 6.7 | 8.9 | 3.04 | 36.3 | 10.7 | 112 | 40.5 | 189.4 | 47.4 | 500 | 109.7 | 12050 |
| *PD17-1-16* | 11.8 | 84.3 | 4.35 | 25.6 | 16.4 | 1.5 | 71.1 | 24.73 | 292.5 | 112.7 | 485.3 | 99.3 | 855 | 164.1 | 10130 |
| *PD17-1-17* | 1.38 | 31.9 | 1.75 | 15.2 | 10.4 | 1.56 | 26.9 | 8.9 | 103 | 42.5 | 240.3 | 68.9 | 795 | 186.6 | 14170 |
| *PD17-1-18* | 3.59 | 47.4 | 1.47 | 14.2 | 13.1 | 4.4 | 36.8 | 10.44 | 124.4 | 50.9 | 272.3 | 76.7 | 838 | 186.1 | 14140 |
| *PD17-1-20* | 40.1 | 100 | 9.4 | 47.3 | 13 | 37 | 26.8 | 9 | 125 | 55.1 | 298 | 77 | 808 | 178 | 13950 |
| *PD17-1-21* | 28.2 | 92 | 13 | 66 | 22 | 2.66 | 37 | 10.8 | 130 | 53.8 | 300 | 88.3 | 1071 | 241 | 19150 |
| *PD17-1-31* | 7.3 | 86.1 | 1.87 | 14 | 19.7 | 3.71 | 95.1 | 34 | 397 | 151 | 661 | 137.9 | 1232 | 238.2 | 11160 |
| *PD17-1-32* | 3.46 | 31.3 | 0.891 | 5.09 | 4.97 | 1.66 | 24.6 | 9.58 | 129.3 | 56.5 | 314 | 88.1 | 999 | 216.7 | 14200 |
| *PD17-1-33* | 2.54 | 10.9 | 1.13 | 6.3 | 1.79 | 0.432 | 7.6 | 3.41 | 51.7 | 24.5 | 136.7 | 34.8 | 365 | 83.6 | 12650 |
| *PD17-1-34* | 3.9 | 23.9 | 0.78 | 4.5 | 2.79 | 1.28 | 14.39 | 6.6 | 100.7 | 47 | 264 | 75.4 | 839 | 189.6 | 15360 |
| *PD17-1-35* | 31.5 | 160 | 13.2 | 73 | 23.8 | 25.5 | 63.1 | 18 | 188 | 68 | 295.8 | 69.3 | 687 | 143.3 | 14070 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-1-37* | 1.24 | 30.3 | 0.619 | 5.43 | 6.54 | 2.17 | 25.8 | 8.21 | 99.7 | 41.5 | 219.8 | 57.5 | 623 | 138.3 | 13190 |
| *PD17-1-38* | 2.32 | 26.5 | 0.668 | 4.88 | 4.7 | 1.52 | 17.8 | 6.67 | 93.5 | 42.54 | 240.8 | 67.2 | 755 | 168.4 | 14260 |
| *PD17-1-39* | 22.8 | 70.8 | 7.27 | 36.3 | 10.5 | 7.4 | 18.2 | 5.65 | 76.6 | 35.8 | 209.7 | 60 | 687 | 155.2 | 14000 |
| *PD17-1-41* | 4 | 84.6 | 2.62 | 22.5 | 20.8 | 6.22 | 54.9 | 12.8 | 122.8 | 44.2 | 211.5 | 52.6 | 561 | 122.9 | 12380 |
| *PD17-1-42* | 0.52 | 12.4 | 0.126 | 0.76 | 0.39 | 0.169 | 5.27 | 3.21 | 57.5 | 31.34 | 195.2 | 58.2 | 676 | 158.9 | 14630 |
| *PD17-1-51* | 0.92 | 34.1 | 0.335 | 3.43 | 6.04 | 2.81 | 31.7 | 11.04 | 132.1 | 51.9 | 252 | 62.9 | 653 | 137.9 | 13880 |
| *PD17-1-52* | 0.36 | 13.91 | 0.146 | 0.75 | 0.91 | 0.106 | 7.26 | 4.26 | 76.5 | 38.5 | 237 | 67.7 | 764 | 166.3 | 14040 |
| *PD17-1-53* | 0.69 | 39.1 | 0.94 | 11.5 | 12.4 | 3.82 | 37.2 | 9.96 | 112.5 | 43.55 | 224.5 | 58.5 | 650 | 139.6 | 12700 |
| *PD17-1-54* | 620 | 910 | 65 | 253 | 46.4 | 8.2 | 73.2 | 17.88 | 177.5 | 63.7 | 311 | 80.7 | 861 | 181.6 | 13850 |
| *PD17-1-55* | 2.04 | 16.1 | 0.4 | 1.87 | 1.46 | 0.42 | 9.5 | 4.81 | 72.3 | 33.2 | 175 | 44.6 | 470 | 102.9 | 14010 |
| *PD17-1-56* | 0.707 | 11.38 | 0.096 | 0.77 | 1.29 | 0.163 | 13.9 | 9.12 | 153.9 | 74.8 | 425 | 117.8 | 1315 | 278.5 | 17610 |
| *PD17-1-58* | 5.07 | 24.7 | 1.59 | 8.7 | 1.9 | 0.55 | 5.97 | 2.98 | 51.7 | 27.03 | 164.6 | 47.5 | 530 | 116.7 | 13700 |
| *PD17-1-59* | 17.04 | 27.3 | 0.92 | 4.96 | 4.9 | 1.51 | 20.3 | 6.88 | 81.3 | 30.9 | 155.7 | 39.3 | 435 | 96.5 | 14040 |
| *PD17-1-60* | 0.076 | 11.75 | 0.019 | 0.099 | 0.47 | 0.076 | 4.92 | 2.86 | 53.6 | 28.9 | 180.4 | 52.9 | 630 | 141.9 | 14750 |
| *PD17-1-61* | 11.2 | 152.6 | 3.36 | 22.4 | 28.6 | 4.32 | 147.8 | 51.9 | 606 | 228.1 | 991 | 203.8 | 1782 | 327 | 9330 |
| | | | | | | | | | | | | | | | |
| *PD17-5-70* | 63.7 | 269.7 | 38.7 | 166.6 | 40.3 | 6.08 | 47.6 | 8.85 | 76.1 | 24.7 | 111.8 | 25.55 | 254.7 | 58.1 | 14030 |
| *PD17-5-71* | 149 | 437 | 43.2 | 221 | 52.2 | 12.16 | 66.6 | 11.13 | 91.8 | 29.68 | 127.3 | 27.81 | 279.8 | 63.8 | 14290 |
| *PD17-5-73* | 15.21 | 105.4 | 9.68 | 62.2 | 23.3 | 5.58 | 43 | 10.74 | 111.1 | 40.9 | 184.2 | 40.9 | 405 | 86.8 | 12430 |
| *PD17-5-76* | 13.4 | 93 | 10.9 | 65 | 37.2 | 7.6 | 71 | 17.2 | 157 | 50.2 | 207 | 41.4 | 376 | 73.4 | 11720 |
| *PD17-5-77* | 50.6 | 248 | 31.7 | 182 | 78 | 16.6 | 144 | 29.9 | 270 | 85.5 | 339 | 66.3 | 600 | 117 | 12170 |
| *PD17-5-78* | 8.2 | 97.8 | 9.9 | 72.2 | 38.6 | 7.91 | 81.1 | 18.32 | 172.4 | 58.5 | 241.1 | 50.3 | 463 | 93.3 | 12230 |
| *PD17-5-81* | 11.33 | 105.4 | 9.16 | 58.9 | 37.3 | 6.71 | 92.7 | 22.7 | 216 | 72.7 | 299 | 61.3 | 555 | 112.8 | 12450 |
| *PD17-5-91* | 33.9 | 184 | 26.8 | 167 | 75.9 | 10.81 | 107.9 | 18.8 | 150.8 | 46.1 | 195.1 | 41.9 | 419 | 93 | 14450 |
| *PD17-5-92* | 7.59 | 65.6 | 7.28 | 46.8 | 26.8 | 8.26 | 59.6 | 14.08 | 126.8 | 40.4 | 163.6 | 33.4 | 306 | 62.5 | 11820 |
| *PD17-5-93* | 13.6 | 76.4 | 9.69 | 60.2 | 30.2 | 5.53 | 54.9 | 11.97 | 106.3 | 34.6 | 149.1 | 32.3 | 322 | 69.1 | 13440 |
| *PD17-5-94* | 28.2 | 167.3 | 11.61 | 71.7 | 31.1 | 5.06 | 60.5 | 13.91 | 145.1 | 51.7 | 242 | 53.8 | 531 | 113.6 | 14160 |
| *PD17-5-98* | 6.88 | 60.7 | 7.91 | 59.8 | 38 | 7.56 | 75.7 | 17.1 | 160 | 53.5 | 230 | 49.5 | 487 | 102.9 | 9690 |
| *PD17-5-99* | 18.4 | 110 | 12.2 | 71 | 31.5 | 4.51 | 54.9 | 13 | 125 | 41.4 | 175 | 37.9 | 368 | 81 | 14120 |
| *PD17-5-110* | 12.4 | 107.5 | 11.4 | 75.1 | 36.7 | 7.99 | 59.2 | 11.99 | 107.7 | 35.8 | 158.4 | 34.3 | 342 | 72.8 | 12610 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-5-111* | 12 | 61 | 7.01 | 34.7 | 10.9 | 1.87 | 24.3 | 7.03 | 83.2 | 31.95 | 156 | 35.92 | 363 | 82.3 | 12300 |
| *PD17-5-113* | 47 | 177 | 24.3 | 133 | 55.3 | 9.6 | 77.9 | 16.6 | 142.3 | 46.3 | 200.3 | 43.8 | 434 | 98.2 | 14240 |
| *PD17-5-114* | 26.8 | 189 | 22.4 | 134 | 63.4 | 13.7 | 116.1 | 26.4 | 245 | 80.3 | 324 | 65.3 | 572 | 113.5 | 9960 |
| *PD17-5-115* | 18.3 | 82.2 | 9.03 | 52.3 | 23.4 | 3.77 | 55.4 | 15.48 | 169.4 | 62.2 | 275 | 57.7 | 534 | 107.7 | 12940 |
| *PD17-5-117* | 3.99 | 36.1 | 3.32 | 20.1 | 10.6 | 1.65 | 17.9 | 4.66 | 49 | 17.75 | 85.9 | 20.64 | 217.5 | 49.7 | 13860 |
| *PD17-5-118* | 7.3 | 66.4 | 3.77 | 26.5 | 17.4 | 4.18 | 53.1 | 15.07 | 161.8 | 56.8 | 238.1 | 47.9 | 417 | 81.5 | 9550 |
| | | | | | | | | | | | | | | | |
| *PD17-48-475* | 83 | 300 | 21.6 | 105 | 50.3 | 16.5 | 114 | 29.3 | 239 | 52 | 144 | 23.4 | 192.9 | 34.95 | 13110 |
| *PD17-48-476* | 127.4 | 413 | 32.6 | 153 | 62.5 | 22.6 | 162 | 43 | 372 | 86.7 | 244 | 37.5 | 279 | 46.4 | 12760 |
| *PD17-48-477* | 31.8 | 101.2 | 8.1 | 43.7 | 27.7 | 10.9 | 86.2 | 22 | 192 | 46.5 | 146.2 | 24.3 | 197.5 | 32.13 | 13690 |
| *PD17-48-478* | 8.6 | 48.5 | 2.18 | 13.71 | 17.7 | 9.2 | 80.6 | 22.09 | 199.3 | 52.7 | 166 | 26.83 | 199 | 32.79 | 12090 |
| *PD17-48-479* | 39.6 | 152 | 10.1 | 48.8 | 22.1 | 7.7 | 60 | 16.4 | 151 | 38.8 | 129 | 24 | 209.4 | 38.18 | 12850 |
| *PD17-48-480* | 0.98 | 30.9 | 0.56 | 6.34 | 12.7 | 6.49 | 63.3 | 16.85 | 147.5 | 39.2 | 125.1 | 20.02 | 152.2 | 25.4 | 10240 |
| *PD17-48-481* | 90 | 313 | 22.4 | 106.1 | 41.2 | 13.8 | 92 | 23 | 196 | 46.3 | 141 | 24 | 197.3 | 35.55 | 13100 |
| *PD17-48-482* | 241 | 868 | 68 | 359 | 163 | 55.3 | 321 | 74.7 | 617 | 125.7 | 330 | 45.3 | 306 | 48 | 13030 |
| *PD17-48-491* | 54.8 | 151.1 | 12.62 | 64.3 | 34.9 | 13 | 102.1 | 25.6 | 218 | 50.6 | 152.6 | 24.7 | 200 | 34.21 | 13020 |
| *PD17-48-492* | 50.1 | 162.3 | 12.57 | 64.4 | 34.2 | 12.9 | 101.3 | 24.9 | 214 | 51 | 145.6 | 21.7 | 158.5 | 25.2 | 11220 |
| *PD17-48-493* | 29.6 | 101 | 9.2 | 37.9 | 12.3 | 4.19 | 25 | 7.64 | 79.1 | 25.1 | 110.4 | 25.24 | 249.4 | 46 | 12750 |
| *PD17-48-494* | 73.4 | 223 | 19.31 | 94 | 45.2 | 15.6 | 106.3 | 26.3 | 218 | 49.3 | 141.8 | 23.17 | 187.1 | 32.84 | 13230 |
| *PD17-48-495* | 42.3 | 103.5 | 8.86 | 42.1 | 24.5 | 9.3 | 80 | 21.3 | 186 | 45.3 | 146.4 | 25.9 | 218.6 | 37.5 | 13210 |
| *PD17-48-496* | 47.2 | 177 | 13.1 | 69.2 | 34.5 | 15.4 | 85 | 21.3 | 175 | 40.7 | 118 | 19.6 | 170.5 | 34.99 | 15010 |
| *PD17-48-497* | 36.9 | 197 | 14.55 | 72.5 | 24.9 | 13.2 | 43.8 | 10.7 | 89.5 | 23 | 81.2 | 16.25 | 168.1 | 41 | 15160 |
| *PD17-48-498* | 49.7 | 135.4 | 12.22 | 58.6 | 24.7 | 8.93 | 66.9 | 18.66 | 172.8 | 45.2 | 150.1 | 27.42 | 238.9 | 41.94 | 13480 |
| *PD17-48-499* | 1.26 | 11.4 | 0.54 | 3.11 | 4.4 | 1.8 | 18.8 | 5.93 | 62.6 | 20.8 | 90.3 | 20.23 | 195.7 | 37 | 13450 |
| *PD17-48-500* | 66 | 196 | 21 | 124.4 | 52.8 | 88.1 | 120.2 | 26.6 | 215 | 53.5 | 160.5 | 27 | 221.1 | 39.2 | 13760 |
| *PD17-48-501* | 37.1 | 92.4 | 8.94 | 50 | 24.4 | 15.1 | 61 | 14.9 | 136 | 37.3 | 129 | 24.3 | 215 | 39.1 | 12550 |
| *PD17-48-502* | 96 | 456 | 28.7 | 147 | 52 | 18.4 | 87.6 | 20.9 | 172 | 40.5 | 126 | 21.5 | 191 | 36.3 | 13440 |
| *PD17-48-503* | 52.8 | 159.5 | 12.85 | 64.9 | 36.9 | 13.63 | 109.2 | 27.9 | 234 | 54.1 | 159.3 | 25.66 | 206.5 | 36.66 | 13140 |
| *PD17-48-512* | 36 | 106 | 6.4 | 24.5 | 10 | 3.69 | 33.8 | 9.1 | 84 | 24.6 | 91.9 | 19.2 | 183.4 | 36.11 | 13760 |
| *PD17-48-513* | 4.19 | 62.1 | 1.8 | 21.7 | 36.4 | 17.08 | 155.2 | 36.7 | 284 | 65.4 | 181 | 26.34 | 180.7 | 27.16 | 10270 |

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| *PD17-48-514* | 6.29 | 45.8 | 2.13 | 15.9 | 20 | 10 | 95.3 | 24.47 | 203.1 | 48.74 | 140 | 21.66 | 157.7 | 25.48 | 12590 |
| *PD17-48-515* | 53.3 | 420 | 15.5 | 80 | 44.2 | 18 | 142 | 35.7 | 302 | 75.7 | 227 | 33.7 | 237 | 38.4 | 11870 |
| *PD17-48-516* | 64 | 244 | 17.8 | 94 | 37.1 | 14.8 | 103 | 27.2 | 240 | 56.8 | 177.3 | 29.5 | 244 | 42.3 | 12200 |
| *PD17-48-517* | 59.4 | 151 | 14.3 | 64.9 | 31.7 | 11.8 | 95 | 23.8 | 196 | 46.4 | 139 | 22.3 | 182.7 | 31.2 | 13320 |
| *PD17-48-518* | 60.5 | 203 | 15.7 | 75.3 | 26.6 | 8.48 | 51.7 | 13.4 | 117.1 | 27.1 | 81.8 | 15.01 | 140.1 | 29.5 | 14480 |
| *PD17-48-521* | 54.3 | 521 | 20.1 | 117 | 56.7 | 32.3 | 101.2 | 20.5 | 146 | 31.3 | 90.5 | 15.31 | 133.6 | 24.83 | 13990 |
| *PD17-48-522* | 15.3 | 71 | 4.37 | 25.9 | 18.2 | 7.92 | 71.6 | 20.4 | 191 | 52.5 | 179 | 31.9 | 270 | 45.9 | 13000 |
| | | | | | | | | | | | | | | | |
| *PD17-49-531* | 14.5 | 87 | 10.8 | 84 | 54.5 | 20 | 95.1 | 18.9 | 162.1 | 48.1 | 201.9 | 45.2 | 447 | 88.2 | 13320 |
| *PD17-49-532* | 92 | 432 | 50.8 | 311 | 202 | 62.2 | 452 | 101 | 718 | 156 | 462 | 75.3 | 623 | 114.3 | 13880 |
| *PD17-49-533* | 58.9 | 298 | 37 | 230 | 133.1 | 33.4 | 262 | 57.4 | 412 | 93.5 | 321 | 62.9 | 585 | 113.8 | 12880 |
| *PD17-49-534* | 41.8 | 186 | 19.9 | 136 | 70.4 | 22.9 | 145 | 32.6 | 297 | 93.7 | 382 | 77.9 | 705 | 134.3 | 12060 |
| *PD17-49-535* | 25.5 | 144 | 16.2 | 109 | 68 | 18.6 | 132 | 31.5 | 259 | 69.2 | 267 | 57.1 | 561 | 111.2 | 12230 |
| *PD17-49-536* | 31.2 | 159 | 15.6 | 101 | 63 | 16.9 | 151 | 36.8 | 322 | 93.9 | 371 | 75.6 | 694 | 129.7 | 13660 |
| *PD17-49-537* | 20.5 | 119.8 | 10.44 | 61 | 47 | 14.7 | 134.1 | 37.3 | 334 | 99 | 375 | 71.3 | 630 | 116.1 | 12070 |
| *PD17-49-538* | 46.4 | 235 | 23.2 | 150 | 91.6 | 34.5 | 204 | 49.3 | 415 | 114 | 418 | 77.3 | 665 | 119.3 | 12190 |
| *PD17-49-539* | 109 | 199 | 18.2 | 78.7 | 28.1 | 6.59 | 66.2 | 18.8 | 200 | 67.3 | 305.4 | 67.4 | 645 | 126.2 | 14520 |
| *PD17-49-540* | 22.3 | 158.4 | 14.1 | 79.7 | 44.8 | 10.19 | 95.5 | 23.8 | 223 | 73.7 | 309 | 64 | 602 | 124.8 | 12060 |
| *PD17-49-541* | 185 | 820 | 107 | 633 | 409 | 103 | 900 | 200 | 1400 | 311 | 915 | 148.7 | 1171 | 200.1 | 14170 |
| *PD17-49-542* | 84 | 408 | 51 | 311 | 217 | 57.5 | 482 | 125 | 920 | 182 | 493 | 71.8 | 532 | 91.9 | 12570 |
| *PD17-49-551* | 150 | 573 | 86 | 443 | 311 | 87 | 690 | 219 | 1730 | 368 | 1050 | 154 | 1109 | 176 | 12660 |
| *PD17-49-552* | 6 | 24.7 | 3.49 | 26.5 | 13.3 | 3.8 | 26.5 | 8.9 | 104 | 37.6 | 186 | 45.9 | 478 | 94.7 | 14210 |
| *PD17-49-553* | 45 | 210 | 26.6 | 141 | 98 | 28.6 | 219 | 64.8 | 552 | 136 | 476 | 83.8 | 690 | 124.2 | 11750 |
| *PD17-49-554* | 176.3 | 976 | 118.1 | 769 | 546 | 148 | 1179 | 222.1 | 1326 | 247.9 | 649 | 101.1 | 822 | 149.6 | 14300 |
| *PD17-49-555* | 830 | 1230 | 118 | 487 | 164 | 34.4 | 272 | 53.8 | 412 | 108.7 | 391 | 73 | 645 | 119.5 | 11830 |
| *PD17-49-556* | 24.9 | 146.6 | 16.4 | 106.2 | 61.5 | 26.3 | 138.9 | 33.4 | 281 | 79 | 300.8 | 59.3 | 552 | 107.4 | 13040 |
| *PD17-49-557* | 72 | 181 | 16.1 | 92.8 | 50.3 | 19.7 | 113.7 | 28.5 | 266 | 78.9 | 318 | 66 | 626 | 120.7 | 13490 |
| *PD17-49-558* | 71.8 | 355 | 41.3 | 266 | 169 | 44.9 | 367 | 82.6 | 606 | 142 | 470 | 85.3 | 767 | 142.7 | 12960 |
| *PD17-49-559* | 173 | 701 | 111.7 | 565 | 390 | 104.9 | 808 | 261 | 2040 | 408 | 1135 | 165.6 | 1138 | 178.7 | 12570 |
| *PD17-49-560* | 16.8 | 87.6 | 7.09 | 35.4 | 24 | 7.28 | 74.7 | 23.97 | 253.2 | 85.8 | 361.2 | 72.5 | 659 | 122.9 | 11360 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-49-561* | 42.8 | 172 | 18.3 | 101 | 61 | 24.4 | 155 | 41.7 | 375 | 107.6 | 417 | 83.7 | 755 | 145.3 | 11980 |
| *PD17-49-562* | 24.6 | 125 | 14.7 | 87 | 52.9 | 13.4 | 127 | 32.9 | 289 | 80.1 | 300.7 | 58.3 | 517.6 | 97.3 | 12930 |
| *PD17-49-571* | 16.2 | 102.4 | 10.8 | 70.1 | 45.5 | 16.5 | 120.6 | 36.1 | 338 | 100.7 | 399 | 77.4 | 691 | 129.7 | 12550 |
| *PD17-49-572* | 154 | 778 | 109.2 | 655 | 448 | 116 | 938 | 211 | 1453 | 293 | 776 | 113.1 | 866 | 147.7 | 15080 |
| *PD17-49-573* | 66.8 | 298 | 34.9 | 204 | 140.2 | 34.3 | 327 | 87.6 | 695 | 164.8 | 532 | 89.9 | 757 | 135.6 | 12710 |
| *PD17-49-574* | 5.56 | 47.7 | 3.19 | 23 | 22.7 | 8.17 | 80.4 | 22.3 | 199.9 | 54.3 | 181.4 | 29.26 | 227.3 | 38.3 | 9510 |
| *PD17-49-575* | 36.2 | 132.5 | 15.55 | 77.7 | 41.6 | 12.97 | 99.2 | 28.6 | 248 | 69.3 | 274.6 | 57.5 | 558 | 106.9 | 14480 |
| *PD17-49-576* | 46.1 | 176 | 14.96 | 78.1 | 44.6 | 14.6 | 123.3 | 34.2 | 315 | 92.3 | 355 | 68.3 | 590 | 112.2 | 12740 |
| *PD17-49-577* | 32 | 147 | 19.9 | 116 | 73 | 16.7 | 147 | 36.9 | 287 | 68.7 | 254 | 51.4 | 465 | 92.2 | 13170 |
| *PD17-49-578* | 13.5 | 75 | 8.37 | 48.5 | 35.3 | 10.09 | 97.2 | 25.4 | 236 | 70.7 | 294 | 62.1 | 596 | 118.2 | 11930 |
| *PD17-49-579* | 12.6 | 69.5 | 6.79 | 39.1 | 30.1 | 8.02 | 87.6 | 24.9 | 233 | 68.5 | 279 | 59.2 | 572 | 111.2 | 13030 |
| *PD17-49-580* | 74.8 | 375 | 42.6 | 253 | 173 | 43 | 407 | 96.5 | 745 | 175.5 | 566 | 96.3 | 795 | 141.9 | 11570 |
| *PD17-49-581* | 123 | 435 | 43.4 | 201 | 91.9 | 23.6 | 193 | 48.9 | 404 | 104.3 | 388 | 76.2 | 683 | 130.9 | 14750 |
| | | | | | | | | | | | | | | | |
| *PD18-120 - 1* | 102.3 | 184.5 | 22 | 90.5 | 41.6 | 9.65 | 92.6 | 29.9 | 316.3 | 108.2 | 445 | 90 | 792 | 142.8 | 14560 |
| *PD18-120 - 2* | 6.7 | 57.3 | 7.5 | 43.6 | 29.8 | 7.92 | 88.9 | 30.1 | 330 | 113.2 | 473 | 94.5 | 823 | 145.5 | 11850 |
| *PD18-120 - 3* | 0.013 | 25.19 | 0.028 | 1.08 | 5.72 | 4.13 | 51.2 | 20.13 | 244.1 | 89.9 | 379.9 | 74.9 | 652 | 116.6 | 9640 |
| *PD18-120 - 4* | 0.51 | 28.38 | 0.069 | 0.87 | 7.28 | 5.07 | 80.8 | 34.92 | 447.2 | 167.5 | 712 | 138.7 | 1162 | 192.9 | 12810 |
| *PD18-120 - 5* | 3.24 | 54.2 | 3.48 | 24.3 | 22.8 | 8.25 | 73 | 19.41 | 166.8 | 45.2 | 151 | 25.37 | 198.9 | 33.09 | 7360 |
| *PD18-120 - 6* | 7.91 | 60.3 | 6.7 | 41.4 | 27 | 12.29 | 90.4 | 36.1 | 430 | 160 | 683 | 133.5 | 1119 | 188.9 | 13130 |
| *PD18-120 - 7* | 0.017 | 2.49 | Below LOD | Below LOD | 0.27 | 0.203 | 3.56 | 1.86 | 29.1 | 14.4 | 91.7 | 25.9 | 334 | 89.5 | 15130 |
| *PD18-120 - 8* | 3.74 | 18.9 | 2.57 | 14.9 | 10.4 | 2.26 | 15.9 | 4.26 | 41.7 | 15.05 | 79.6 | 21.5 | 266 | 65.8 | 14370 |
| *PD18-120 - 10* | 65.7 | 427 | 86.3 | 512 | 287 | 38.5 | 327 | 57.2 | 444 | 125 | 474 | 94.2 | 836 | 154.9 | 15840 |
| *PD18-120 - 12* | 2.15 | 18.3 | 1.56 | 8.8 | 8.6 | 3.1 | 48.3 | 21.4 | 279 | 108.6 | 486 | 98.7 | 852 | 156 | 13710 |
| *PD18-120 - 14* | 4.33 | 52.6 | 6.18 | 40.6 | 31.6 | 7.89 | 65.8 | 17.1 | 147 | 44 | 180 | 36 | 332 | 71.1 | 11100 |
| *PD18-120 - 15* | 0.61 | 6.2 | 0.47 | 2.81 | 1.63 | 0.52 | 9.5 | 3.2 | 43 | 17.6 | 94 | 23.3 | 262 | 61.9 | 13230 |
| *PD18-120 - 16* | 5.7 | 77.9 | 6.4 | 42 | 32 | 9 | 92.7 | 27.8 | 290.4 | 99.7 | 406.4 | 78.2 | 670 | 117.9 | 8580 |
| *PD18-120 - 17* | 7.69 | 60.8 | 6.89 | 41.8 | 31 | 10.19 | 74.6 | 17.55 | 144.5 | 37.2 | 128.1 | 23.23 | 190.1 | 33.6 | 9190 |
| *PD18-120 - 18* | 7.37 | 63.1 | 6.42 | 35.8 | 31 | 8.34 | 96.7 | 33.5 | 369 | 127.2 | 532 | 105.1 | 922 | 167.8 | 11210 |
| *PD18-120 - 19* | 13.3 | 76.9 | 13.9 | 89 | 57 | 11.7 | 93 | 24.2 | 274 | 98.7 | 439 | 92.8 | 827 | 156.8 | 19350 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-120 - 20* | 0.177 | 27.3 | 0.495 | 7.6 | 15.8 | 8.4 | 75.8 | 20.7 | 191 | 57 | 212 | 39.5 | 322 | 57 | 8760 |
| *PD18-120 - 21* | 73.6 | 416 | 75.9 | 470 | 290 | 53.7 | 445 | 107.9 | 769 | 171.5 | 525 | 89.8 | 708 | 116.4 | 13890 |
| *PD18-120 - 22* | 50 | 304 | 59 | 345 | 233 | 43.3 | 329 | 71 | 504 | 122.4 | 385 | 65.3 | 509 | 85.4 | 12430 |
| *PD18-120 - 23* | 1.71 | 29.73 | 1.29 | 8.59 | 9.67 | 4.27 | 48.3 | 17.91 | 206 | 72.6 | 305 | 60.9 | 529 | 95.4 | 10150 |
| *PD18-120 - 24* | 13.78 | 45 | 4.99 | 22 | 11.2 | 4.19 | 40.6 | 14.08 | 160.2 | 57.1 | 248.3 | 47.5 | 433 | 75.1 | 10500 |
| *PD18-120 - 25* | 6.01 | 38.5 | 3.9 | 22.9 | 17.9 | 5.4 | 58.6 | 22.14 | 264.5 | 100 | 427 | 86.5 | 733 | 132.1 | 11410 |
| *PD18-120 - 27* | 9.3 | 75.2 | 9.2 | 56.3 | 40.5 | 11.2 | 104.9 | 32.3 | 343.9 | 115.3 | 469 | 88.8 | 747 | 128.5 | 10180 |
| *PD18-120 - 28* | 3.19 | 26.1 | 3.18 | 20.1 | 15.8 | 3.37 | 51.6 | 21.18 | 259.6 | 97.7 | 440.9 | 91.5 | 830 | 152.7 | 15510 |
| *PD18-120 - 29* | 3.07 | 18.97 | 2.17 | 12.94 | 10.22 | 2.24 | 29 | 10.67 | 127.2 | 46.17 | 203.6 | 45.9 | 458 | 95 | 11400 |
| *PD18-120 - 30* | 1.57 | 25.63 | 1.24 | 6.5 | 6.19 | 3.08 | 33.6 | 11.94 | 138.2 | 51.7 | 223.2 | 44.1 | 388.2 | 70.1 | 8790 |
| *PD18-120 - 31* | 5.3 | 28.8 | 2.54 | 13.3 | 11.3 | 4.09 | 64.3 | 27.28 | 341.4 | 129.8 | 572 | 117.1 | 1026 | 177.8 | 15110 |
| *PD18-120 - 32* | 4.2 | 13.5 | 0.9 | 3.9 | 2 | 1.63 | 20 | 9.1 | 118 | 48.6 | 230 | 51.3 | 499 | 103.7 | 12960 |
| *PD18-120 - 33* | 6.51 | 45.5 | 5.41 | 32.5 | 24.9 | 6.82 | 100.2 | 42 | 536 | 196.7 | 855 | 169.6 | 1442 | 239.2 | 15810 |
| *PD18-120 - 34* | 15.1 | 75.1 | 12.25 | 75.3 | 59.4 | 12 | 118.2 | 32.4 | 263 | 69.6 | 253.9 | 52.3 | 456 | 83 | 13150 |
| *PD18-120 - 35* | 1.85 | 41.9 | 2.33 | 20.1 | 25.5 | 3.06 | 76 | 25.3 | 298 | 111 | 540 | 114 | 1050 | 198 | 15200 |
| *PD18-120 - 36* | 5.15 | 40 | 4.33 | 25.4 | 18.9 | 4.99 | 52.3 | 16.15 | 168.6 | 57.5 | 241.2 | 48.5 | 430 | 81.3 | 9440 |
| | | | | | | | | | | | | | | | |
| *PD18-110-119* | 374 | 750 | 92.7 | 449 | 172 | 11.9 | 251 | 63.2 | 626 | 214.5 | 900 | 190.7 | 1658 | 312 | 12430 |
| *PD18-110-121* | 112 | 291 | 25.6 | 112 | 50.9 | 13.05 | 112.9 | 25.9 | 226 | 61.6 | 224 | 41 | 329 | 58.4 | 8920 |
| *PD18-110-122* | 16.95 | 81.9 | 8.27 | 43.5 | 16.7 | 4.39 | 40.9 | 12.6 | 141.1 | 48.8 | 212 | 44.3 | 415 | 77 | 12490 |
| *PD18-110-123* | 3.87 | 27.7 | 2.76 | 18.1 | 13.1 | 4.65 | 36.9 | 9.32 | 83.8 | 24.65 | 91.5 | 18.21 | 157.6 | 31.04 | 8910 |
| *PD18-110-124* | 6.29 | 26 | 1.99 | 10.1 | 7.5 | 2.18 | 27.8 | 8.55 | 84.8 | 27.2 | 110.1 | 22.4 | 197 | 36.6 | 10700 |
| *PD18-110-126* | 89.4 | 280 | 25.1 | 80.9 | 16.4 | 4.1 | 34.1 | 9.75 | 96.7 | 31.7 | 131.6 | 27.7 | 256 | 47.8 | 11380 |
| *PD18-110-127* | 36.7 | 545 | 41.5 | 391 | 239 | 30.9 | 262 | 28.6 | 164 | 39.1 | 153 | 33.1 | 351 | 78.7 | 12960 |
| *PD18-110-133* | 16.1 | 86 | 6.24 | 28.6 | 10.8 | 7.47 | 28.6 | 8.18 | 81.6 | 26.6 | 106.5 | 21.4 | 183.7 | 32.4 | 12000 |
| *PD18-110-137* | 10.99 | 36.4 | 2.61 | 16.3 | 11.8 | 5.28 | 50.9 | 14.87 | 143.4 | 45.6 | 181.8 | 37.3 | 338.9 | 63 | 11030 |
| *PD18-110-138* | 0.8 | 9.75 | 0.345 | 2.47 | 3.14 | 1.1 | 15.7 | 5.02 | 56.5 | 18.7 | 77 | 14.5 | 130 | 23.7 | 10410 |
| *PD18-110-139* | 124 | 559 | 72.4 | 400 | 179 | 29.5 | 266 | 58.2 | 435 | 101 | 345 | 60 | 500 | 82.7 | 11490 |
| *PD18-110-140* | 460 | 1027 | 47.1 | 122.7 | 21.9 | 6.02 | 53.6 | 17.15 | 184.2 | 63.5 | 273 | 56.9 | 524 | 88.3 | 15150 |
| *PD18-110-142* | 51.1 | 306 | 44.3 | 293 | 84 | 26.8 | 94.5 | 17.41 | 146.3 | 44 | 177.3 | 36 | 324 | 61.4 | 10160 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-110-143* | 77 | 1180 | 70 | 395 | 209 | 42.3 | 277 | 43.3 | 293 | 75.3 | 280 | 56.9 | 582 | 115 | 13400 |
| *PD18-110-144* | 104.9 | 306 | 88.1 | 418 | 209 | 62.4 | 274 | 63.7 | 511 | 128.3 | 491 | 99.4 | 931 | 158.7 | 11760 |
| *PD18-110-145* | 11.4 | 57.4 | 6.27 | 36.4 | 23.1 | 4.28 | 58.8 | 15.99 | 155.3 | 47.3 | 184 | 36.8 | 316.1 | 57.6 | 10980 |
| *PD18-110-146* | 44.9 | 179.4 | 19.9 | 114 | 36.8 | 12.1 | 71.6 | 19.2 | 195.8 | 59.3 | 222 | 41.5 | 347 | 58.3 | 10650 |
| *PD18-110-147* | 6.74 | 25.3 | 0.85 | 6.06 | 8.4 | 2.73 | 42.7 | 11.5 | 121 | 36.6 | 144 | 28.7 | 264 | 49.8 | 10460 |
| *PD18-110-148* | 18.4 | 138.8 | 13.74 | 100.4 | 83.1 | 15.64 | 197 | 46.3 | 378 | 94.6 | 314 | 52.7 | 424 | 71.5 | 9260 |
| *PD18-110-149* | 12.9 | 51 | 4.9 | 28 | 9.3 | 7 | 26.6 | 7.04 | 74.1 | 25.05 | 109.9 | 24.76 | 247.5 | 49 | 11310 |
| *PD18-110-150* | 41.5 | 136 | 17 | 98 | 55.5 | 20 | 113 | 27.8 | 233 | 59.9 | 214 | 38.8 | 314 | 54.7 | 10450 |
| *PD18-110-158* | 852 | 4200 | 419 | 1877 | 513 | 80.6 | 576 | 120.8 | 783 | 153.1 | 485 | 90.9 | 806 | 136.5 | 17410 |
| *PD18-110-159* | 2.3 | 32 | 0.65 | 4.3 | 6.78 | 2.28 | 45.7 | 16.5 | 182.8 | 60.9 | 247.7 | 48.2 | 416 | 73.5 | 13890 |
| *PD18-110-160* | 2.65 | 46.1 | 1.61 | 11.5 | 16.4 | 4.61 | 70.5 | 19.8 | 201 | 62 | 237 | 44 | 372 | 64.8 | 10780 |
| *PD18-110-161* | 8.91 | 52.3 | 4.69 | 31.9 | 25.9 | 7.71 | 73.9 | 17.53 | 157.3 | 46.5 | 175.5 | 34.3 | 314.5 | 60.2 | 10310 |
| *PD18-110-162* | 0.052 | 11.84 | 0.139 | 1.94 | 4.04 | 1.67 | 20 | 6.02 | 66.5 | 22.98 | 95.1 | 18.66 | 173.3 | 32.3 | 8650 |
| *PD18-110-163* | 71.6 | 416 | 55.7 | 442 | 283 | 48.2 | 266 | 36.7 | 216 | 43.7 | 135.6 | 24.7 | 216 | 36.3 | 10140 |
| *PD18-110-164* | 50.1 | 224 | 23 | 152 | 65 | 26.8 | 104 | 19.1 | 157 | 43.6 | 168 | 34 | 329 | 62.8 | 11030 |
| *PD18-110-165* | 13.02 | 25.8 | 1.81 | 11.2 | 9.3 | 3.83 | 35.5 | 9.3 | 98.4 | 29.7 | 123.5 | 24.6 | 226 | 42 | 10530 |
| *PD18-110-166* | 38.3 | 172 | 15.7 | 75.5 | 25.1 | 7.42 | 56.3 | 14.39 | 125.3 | 36.2 | 125.3 | 24.2 | 199 | 34.8 | 11030 |
| | | | | | | | | | | | | | | | |
| *PD18-104-395* | 74.3 | 262 | 26.8 | 149 | 78.7 | 9.9 | 116.5 | 22.7 | 185.7 | 55 | 230.1 | 47.1 | 444 | 88.6 | 9830 |
| *PD18-104-397* | 110 | 678 | 67.9 | 357 | 172.4 | 21.9 | 230 | 43.6 | 306 | 76.6 | 267 | 49.8 | 443 | 87.9 | 10220 |
| *PD18-104-398* | 3.69 | 29 | 2.39 | 17.3 | 9.6 | 1.31 | 17.1 | 3.3 | 26.7 | 8.35 | 39.9 | 9.6 | 103.6 | 23.8 | 11300 |
| *PD18-104-399* | 58.5 | 515 | 35.2 | 177 | 82.8 | 9.11 | 119.6 | 28.1 | 231 | 62.4 | 249 | 46.8 | 428 | 84.6 | 9630 |
| *PD18-104-400* | 325 | 4410 | 186 | 877 | 307 | 39.9 | 330 | 63.2 | 449 | 109.2 | 381 | 71.2 | 628 | 122.4 | 10410 |
| *PD18-104-401* | 15.5 | 100 | 9.34 | 55.9 | 35.5 | 4.83 | 73.4 | 17.9 | 165 | 52.6 | 204 | 38.5 | 333 | 66.8 | 8790 |
| *PD18-104-402* | 78 | 830 | 52.1 | 275 | 124 | 15.7 | 160 | 27.5 | 192 | 48.1 | 173 | 32.3 | 295 | 56.8 | 9600 |
| *PD18-104-403* | 11.2 | 75 | 8.5 | 64 | 23.3 | 2.97 | 37.9 | 8.57 | 83.6 | 31 | 143.8 | 33.2 | 336 | 72.9 | 10150 |
| *PD18-104-404* | 36.1 | 203 | 23.6 | 140.1 | 60.3 | 7.63 | 94.3 | 19.1 | 169 | 51.8 | 220 | 45 | 418 | 85.5 | 10060 |
| *PD18-104-406* | 199.2 | 2670 | 117.3 | 569 | 195.7 | 22 | 204.5 | 40.2 | 269 | 61.4 | 216.7 | 41.1 | 384 | 78.8 | 10600 |
| *PD18-104-407* | 78 | 167 | 16.2 | 81.8 | 28.7 | 4.04 | 44.7 | 10 | 97 | 35.5 | 159 | 36.9 | 394 | 82.2 | 10220 |
| *PD18-104-408* | 24.7 | 196 | 18.4 | 114.3 | 60.2 | 7.31 | 84.6 | 14 | 107.6 | 28.1 | 109.5 | 22 | 218 | 45 | 9490 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-104-411* | 42.4 | 311 | 38.4 | 247 | 85.7 | 10.17 | 115 | 21.73 | 183.8 | 55.3 | 230.5 | 46.1 | 432 | 88.5 | 8890 |
| *PD18-104-419* | 13.2 | 130 | 9.5 | 50 | 25.1 | 2.96 | 41.3 | 10 | 100 | 34.7 | 168 | 36.7 | 394 | 81 | 10710 |
| *PD18-104-420* | 278 | 1570 | 154 | 830 | 408 | 48.1 | 559 | 111.5 | 762 | 175 | 553 | 104.5 | 852 | 154 | 11450 |
| *PD18-104-421* | 44 | 291 | 28 | 148 | 70.8 | 7.81 | 91.8 | 21.4 | 164 | 44.3 | 176 | 36.5 | 350 | 77.7 | 11210 |
| *PD18-104-423* | 448 | 3430 | 183 | 919 | 289 | 32.8 | 332 | 55.6 | 401 | 97.7 | 352 | 66 | 592 | 109.9 | 11470 |
| *PD18-104-424* | 95.2 | 929 | 58.9 | 299 | 120.8 | 14.46 | 141.1 | 28.8 | 228 | 62.7 | 248 | 50.8 | 479 | 97.7 | 11640 |
| *PD18-104-425* | 7.33 | 102.1 | 3.5 | 18.2 | 12 | 2.11 | 50.1 | 14.7 | 157 | 57.2 | 242 | 46.7 | 423 | 81.9 | 9350 |
| *PD18-104-426* | 63.7 | 1040 | 35.7 | 165 | 59.7 | 7.82 | 80.3 | 18.7 | 166 | 53.2 | 225 | 47 | 456 | 95.9 | 9980 |
| *PD18-104-427* | 16.9 | 91.6 | 8.64 | 48.5 | 27.1 | 3.28 | 49.6 | 11.83 | 113.9 | 38.9 | 181.2 | 38.5 | 394 | 80.5 | 11470 |
| *PD18-104-428* | 1.31 | 37.4 | 0.88 | 7.92 | 8.34 | 1.54 | 43 | 13.11 | 150.7 | 53.5 | 227 | 45 | 406 | 77.8 | 8890 |
| *PD18-104-429* | 20.5 | 124 | 11.9 | 76.7 | 35 | 4.54 | 57.2 | 12.67 | 123.7 | 42.8 | 193 | 42 | 412 | 84 | 10240 |
| *PD18-104-430* | 92.7 | 1378 | 54.6 | 307 | 129.6 | 18.3 | 179.9 | 33 | 253 | 70.1 | 271 | 55.2 | 511 | 103.1 | 10610 |
| *PD18-104-431* | 32.4 | 231 | 23.2 | 130.7 | 56 | 6.55 | 79.8 | 15.39 | 136.7 | 45.6 | 199.5 | 42.7 | 411 | 85.4 | 10850 |
| *PD18-104-432* | 205 | 2510 | 120.4 | 606 | 210 | 26.8 | 242 | 44.6 | 318 | 79.1 | 291 | 56.3 | 519 | 100.8 | 10560 |
| *PD18-104-434* | 221 | 1810 | 132 | 672 | 258 | 31.4 | 308 | 56.6 | 403 | 102.3 | 377 | 73.7 | 683 | 131.1 | 11140 |
| *PD18-104-442* | 10.4 | 58.5 | 5.52 | 34 | 13.6 | 1.57 | 23.7 | 5.98 | 61.9 | 23.3 | 110 | 24.2 | 260 | 54.7 | 9870 |
| *PD18-104-443* | 26.1 | 195 | 18.9 | 115 | 64 | 7.8 | 101 | 18.8 | 151 | 42.9 | 167 | 32.4 | 299 | 62.2 | 10160 |
| *PD18-104-444* | 89 | 427 | 44.4 | 248 | 132 | 15.6 | 182 | 34.1 | 248 | 64.7 | 241 | 48.4 | 447 | 90.9 | 12220 |
| *PD18-104-445* | 109.6 | 546 | 66.9 | 342 | 170.2 | 22.3 | 224.2 | 47.5 | 333 | 76.7 | 261.6 | 48.8 | 457 | 88 | 10100 |
| *PD18-104-447* | 9 | 55.8 | 5.74 | 38.6 | 22.3 | 2.79 | 38.2 | 8.83 | 79 | 28.4 | 126.5 | 29.1 | 291 | 58.6 | 10360 |
| | | | | | | | | | | | | | | | |
| *PD17-14-128* | 11.6 | 88.6 | 6.2 | 37.1 | 17.7 | 4.28 | 60.6 | 16.93 | 187.4 | 69.8 | 307.4 | 64.2 | 576 | 116.7 | 10940 |
| *PD17-14-129* | 35.6 | 179 | 15.7 | 99 | 23.6 | 6.91 | 54.1 | 16.43 | 194.2 | 75.4 | 351.5 | 75 | 699 | 143.9 | 11740 |
| *PD17-14-130* | 5.34 | 65.8 | 1.8 | 10.4 | 9.22 | 2.81 | 41 | 13.67 | 164.5 | 65.1 | 297 | 63.3 | 591 | 120.4 | 10620 |
| *PD17-14-131* | 14.1 | 57.2 | 4.21 | 24.2 | 12 | 3.01 | 33.1 | 10.73 | 124.4 | 49.9 | 237 | 51.9 | 497 | 102.8 | 12300 |
| *PD17-14-132* | 23.8 | 157 | 16.1 | 96.8 | 60.6 | 14.1 | 143.4 | 33.4 | 292 | 88.1 | 346.8 | 68.2 | 597 | 119.5 | 10550 |
| *PD17-14-133* | 9 | 58.8 | 4.5 | 19 | 7.89 | 1.9 | 21.7 | 6.81 | 82.7 | 34.5 | 172.2 | 40.3 | 401 | 90.1 | 11520 |
| *PD17-14-134* | 290 | 590 | 55.8 | 228 | 55.8 | 10.7 | 80.9 | 16.45 | 145.2 | 45.8 | 187.2 | 36.5 | 322 | 65.6 | 6670 |
| *PD17-14-135* | 299 | 503 | 47.4 | 190 | 36.4 | 6.19 | 49.7 | 10.87 | 114.3 | 41.5 | 183.9 | 38.36 | 347.8 | 72.9 | 9110 |
| *PD17-14-136* | 60.6 | 317 | 42.5 | 250 | 99.4 | 20.97 | 146.6 | 33.8 | 273.5 | 77.4 | 298.5 | 58.3 | 513 | 105.6 | 10160 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-14-137* | 8.55 | 62 | 3.31 | 18.9 | 10.68 | 2.34 | 39.5 | 12.76 | 148.1 | 56.6 | 255 | 55.4 | 531 | 114.6 | 13250 |
| *PD17-14-139* | 347 | 595 | 63.8 | 268 | 58.2 | 9.49 | 51.6 | 8.52 | 57.7 | 13.65 | 56 | 12.52 | 142.9 | 39.5 | 14980 |
| *PD17-14-148* | 11 | 170.1 | 6.85 | 49.2 | 31.6 | 7.65 | 93.3 | 25.5 | 265 | 91.1 | 386 | 78.1 | 696 | 138.3 | 11060 |
| *PD17-14-149* | 134 | 531 | 59.3 | 347 | 170.1 | 40.6 | 276 | 57.3 | 464 | 132.8 | 488 | 89.8 | 766 | 145.9 | 9170 |
| *PD17-14-150* | 29.8 | 178 | 12.7 | 63.7 | 29.2 | 5.72 | 72.7 | 20.1 | 222 | 77.8 | 341.9 | 71 | 644 | 121.6 | 10630 |
| *PD17-14-151* | 31.8 | 148.5 | 17.1 | 101 | 36.8 | 10.55 | 66.6 | 14.83 | 142.2 | 50 | 212.1 | 43.45 | 394.4 | 81.7 | 9040 |
| *PD17-14-153* | 206 | 383 | 36.4 | 161 | 36.5 | 6.82 | 50.8 | 11.1 | 106.9 | 37.7 | 170.3 | 37.4 | 365 | 79.5 | 11510 |
| *PD17-14-154* | 39 | 198.3 | 27.8 | 155.2 | 56.5 | 12.93 | 68.9 | 14.51 | 121.1 | 36.8 | 168 | 38.9 | 415.2 | 98.3 | 13180 |
| *PD17-14-155* | 15.8 | 78 | 12 | 58 | 22.3 | 4.32 | 26.4 | 6.4 | 54.5 | 16.5 | 72 | 17.3 | 191.8 | 51.8 | 12280 |
| *PD17-14-156* | 273 | 637 | 75.4 | 363 | 111.2 | 18.8 | 155.2 | 36.2 | 336 | 107 | 434.3 | 84.8 | 738 | 142.1 | 11590 |
| *PD17-14-157* | 95.4 | 483 | 62.4 | 341 | 148.6 | 29.2 | 207.7 | 47.2 | 377 | 105.1 | 402 | 79 | 728 | 148 | 11680 |
| *PD17-14-158* | 6.52 | 106.3 | 4.94 | 33.1 | 20.3 | 5.13 | 60.6 | 17.4 | 184 | 63.5 | 265 | 53.3 | 474 | 92.2 | 9350 |
| *PD17-14-159* | 34.7 | 196.5 | 22.7 | 154.5 | 58.8 | 10.54 | 85.5 | 22.2 | 220 | 73.8 | 315 | 64.6 | 582 | 111.6 | 12880 |
| *PD17-14-168* | 48.8 | 282 | 29.2 | 145 | 45.2 | 10.64 | 73.6 | 16.49 | 158.7 | 54.3 | 232.6 | 47.6 | 442 | 88.3 | 9180 |
| *PD17-14-169* | 375 | 650 | 68.6 | 276 | 51.6 | 8.31 | 48.5 | 7.4 | 54.6 | 16.1 | 73 | 16.5 | 190 | 49.8 | 14220 |
| *PD17-14-170* | 31.1 | 219 | 22.6 | 157 | 76.2 | 22.6 | 109.7 | 21.26 | 178.1 | 54.1 | 218.7 | 44.14 | 408 | 84.2 | 13500 |
| *PD17-14-171* | 7.57 | 43.3 | 3.46 | 20.1 | 11.6 | 3.09 | 36.9 | 9.86 | 103 | 35.9 | 156.8 | 32.8 | 303 | 61.5 | 11130 |
| *PD17-14-172* | 1080 | 1910 | 182 | 762 | 155 | 24.6 | 176 | 35 | 318 | 104.8 | 441 | 88.7 | 802 | 156.8 | 10210 |
| *PD17-14-173* | 100.1 | 480 | 70 | 425 | 163 | 30.4 | 212 | 42.5 | 294 | 71.3 | 251 | 50.6 | 484 | 112.3 | 14070 |
| *PD17-14-174* | 590 | 1330 | 159 | 869 | 291 | 58 | 376 | 71.5 | 484 | 121.2 | 404 | 72 | 634 | 125.7 | 12250 |
| *PD17-14-175* | 53.5 | 376 | 44.8 | 271.6 | 117.7 | 22.33 | 149.8 | 28.48 | 218.6 | 57.9 | 228 | 46.5 | 436 | 93.9 | 12450 |
| *PD17-14-176* | 78.5 | 270 | 30.1 | 162 | 48 | 10.5 | 71.4 | 15.6 | 126 | 38.6 | 155 | 31.6 | 309 | 70.3 | 13100 |
| *PD17-14-177* | 180 | 629 | 78.7 | 397 | 164 | 32.9 | 222 | 51.4 | 424 | 118 | 457 | 89.6 | 796 | 159 | 11980 |
| | | | | | | | | | | | | | | | |
| *PD17-56-590* | 4.98 | 38.5 | 2.34 | 17 | 15.9 | 5.06 | 56.5 | 17.8 | 205 | 74.3 | 330 | 70.1 | 670 | 142.6 | 10840 |
| *PD17-56-591* | 0.68 | 4.2 | 0.424 | 2.16 | 1.4 | 0.51 | 3.88 | 1.61 | 26.4 | 14.76 | 103.2 | 32.9 | 458 | 154.4 | 12890 |
| *PD17-56-592* | 0.09 | 14.75 | 0.288 | 5.11 | 10.5 | 4.04 | 66.5 | 22.87 | 278.3 | 106.8 | 467.9 | 92.5 | 815 | 161.1 | 10150 |
| *PD17-56-594* | 9.91 | 53 | 5.7 | 34.9 | 19.5 | 7.06 | 49.4 | 13.77 | 135.7 | 45.3 | 203.7 | 44.4 | 471.1 | 120.6 | 12740 |
| *PD17-56-595* | 1.62 | 18.8 | 0.98 | 7.8 | 10.19 | 3.64 | 52.1 | 17.84 | 216.7 | 83.7 | 369 | 75.7 | 694 | 137.8 | 9820 |
| *PD17-56-596* | 2.45 | 17.9 | 1.4 | 8.4 | 8.61 | 3.23 | 37.9 | 13.24 | 159.7 | 61 | 276.3 | 56.9 | 536 | 109.3 | 10620 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-56-597* | 15.6 | 67.1 | 8.9 | 52.2 | 28.5 | 9.3 | 63.3 | 16.4 | 158 | 52.3 | 236 | 50.5 | 520 | 134.8 | 12110 |
| *PD17-56-598* | 8.2 | 32.9 | 4.8 | 28.4 | 17.6 | 5.6 | 34.3 | 9.5 | 92.3 | 31.8 | 171 | 45.2 | 548 | 160.7 | 13690 |
| *PD17-56-599* | 3.35 | 26.9 | 1.87 | 11.8 | 8.32 | 2.35 | 28.2 | 9.68 | 112 | 44.4 | 218.8 | 50.7 | 524.1 | 122.6 | 11470 |
| *PD17-56-600* | 0.0114 | 12.88 | 0.152 | 2.97 | 7.4 | 2.78 | 46.4 | 16.58 | 211.2 | 82.5 | 372.8 | 75.1 | 677 | 135.4 | 10210 |
| *PD17-56-601* | 0.057 | 76.6 | 0.467 | 9.07 | 23.29 | 6.8 | 173.8 | 62 | 776 | 294.6 | 1273 | 248.2 | 2147 | 407.1 | 9760 |
| *PD17-56-610* | 0.55 | 16.62 | 0.51 | 5.84 | 10.01 | 4.06 | 62.9 | 21.54 | 269.3 | 105 | 466.5 | 92.3 | 827 | 163.8 | 9790 |
| *PD17-56-611* | 1.49 | 33.6 | 0.777 | 6.94 | 9.91 | 3.13 | 56.1 | 20.09 | 252.5 | 98 | 433 | 87.4 | 793 | 153.8 | 10760 |
| *PD17-56-612* | 0.074 | 11.18 | 0.129 | 2.47 | 5.97 | 2.29 | 41.2 | 14.88 | 185.4 | 72 | 323.8 | 65.3 | 600 | 120.5 | 10100 |
| *PD17-56-613* | 4.99 | 35 | 2.85 | 18.3 | 16.44 | 5.93 | 64.2 | 20.4 | 239 | 91.1 | 421 | 89.1 | 870 | 194.6 | 12000 |
| *PD17-56-615* | 4.6 | 30.5 | 3.07 | 21.5 | 18.3 | 5.58 | 68.9 | 22.14 | 258.9 | 95.2 | 431 | 86.2 | 782 | 157.3 | 10830 |
| *PD17-56-616* | 4.49 | 38 | 2.56 | 20.7 | 22.8 | 7.67 | 114.5 | 37.9 | 453 | 171.6 | 761 | 147.2 | 1335 | 256.6 | 10120 |
| *PD17-56-617* | 55 | 199 | 23.4 | 135 | 88.2 | 28.4 | 251 | 73.6 | 764 | 251 | 1028 | 195 | 1655 | 307 | 8810 |
| *PD17-56-618* | 82.8 | 176.1 | 17.02 | 82.1 | 31.1 | 14 | 85.7 | 22.7 | 232.2 | 81 | 347 | 70.2 | 638 | 135 | 11030 |
| *PD17-56-619* | 6.69 | 36.4 | 3.45 | 23.2 | 15.74 | 5.96 | 55.8 | 16.51 | 187 | 70.9 | 327 | 70.1 | 690 | 152.2 | 11310 |
| *PD17-56-620* | 0.502 | 38.9 | 0.764 | 11.65 | 26.1 | 8.68 | 173.4 | 59.2 | 735 | 272.3 | 1196 | 230.3 | 2012 | 380 | 9670 |
| *PD17-56-621* | 2.17 | 25.86 | 1.582 | 13.18 | 15.88 | 5.83 | 86.6 | 30.6 | 364 | 138.4 | 615 | 121.3 | 1118 | 229.2 | 10460 |
| *PD17-56-630* | 0.443 | 26.2 | 0.531 | 7.16 | 14 | 4.52 | 93 | 32.4 | 404 | 155 | 682 | 136 | 1230 | 244 | 10900 |
| *PD17-56-631* | 1.18 | 47.5 | 0.842 | 9.69 | 21.6 | 8.39 | 165 | 57.7 | 686 | 250 | 1057 | 203 | 1760 | 336 | 9280 |
| *PD17-56-632* | 2.01 | 12.16 | 0.968 | 6.38 | 5.31 | 1.99 | 20.67 | 7.34 | 88.5 | 34.4 | 162.5 | 36.2 | 359.7 | 82.9 | 12090 |
| *PD17-56-633* | 1.51 | 23.87 | 0.701 | 6.09 | 9.43 | 3.63 | 63.1 | 22.49 | 281.8 | 108.4 | 490 | 97.9 | 877 | 172.9 | 10310 |
| *PD17-56-634* | 11.1 | 50.1 | 3.77 | 22 | 17.1 | 5.16 | 66.4 | 21.42 | 253.4 | 95.7 | 435.2 | 91.7 | 849 | 173.6 | 10350 |
| *PD17-56-635* | 66 | 86 | 6.2 | 22.8 | 6.99 | 2.69 | 28 | 9.62 | 121.1 | 48.4 | 222.7 | 46.6 | 442 | 89.9 | 10350 |
| *PD17-56-636* | 70 | 124 | 9.6 | 40.1 | 17.3 | 5.68 | 83.9 | 27.5 | 336 | 130.3 | 579 | 113.5 | 1016 | 199.6 | 9620 |
| *PD17-56-637* | 0.51 | 21.49 | 0.552 | 6.67 | 11.27 | 4.34 | 82.6 | 28.82 | 363.3 | 141.7 | 626 | 125.3 | 1116 | 221.6 | 9850 |
| *PD17-56-639* | 121 | 240 | 28.1 | 145 | 52.5 | 13.08 | 137.6 | 38.65 | 442.7 | 164.6 | 713 | 136.8 | 1191 | 228.2 | 9740 |
| *PD17-56-640* | 1.47 | 21.66 | 0.998 | 10.4 | 15.5 | 5.39 | 83 | 29.12 | 354.9 | 136 | 596 | 116.6 | 1019 | 199.1 | 10030 |
| *PD17-56-641* | 1.72 | 15.39 | 0.94 | 6.63 | 7.04 | 2.89 | 37 | 13 | 159.9 | 62.8 | 288.8 | 60.2 | 570 | 121.7 | 10810 |
| *PD17-56-642* | 0.042 | 18.9 | 0.175 | 3.31 | 8.14 | 3.07 | 55.2 | 20.93 | 261.3 | 102.4 | 461.7 | 92.4 | 845 | 166.7 | 9680 |
| *PD17-56-651* | 11 | 85.6 | 5.78 | 36.3 | 26.8 | 9.93 | 80.1 | 24.54 | 270.4 | 95.3 | 435 | 92.4 | 900 | 192 | 11520 |
| *PD17-56-652* | 63.5 | 149 | 16.9 | 86.4 | 30.2 | 9.7 | 80.8 | 24.66 | 291.6 | 111.9 | 492 | 99.1 | 908 | 181.6 | 10500 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-56-653* | 2.98 | 51.6 | 1.92 | 17.37 | 26.5 | 8.88 | 157 | 54.3 | 650 | 242.4 | 1048 | 203.7 | 1769 | 336 | 9370 |
| | | | | | | | | | | | | | | | |
| *PD18-101-351* | 12.9 | 43.7 | 3.6 | 23.4 | 6.1 | 1.41 | 10.6 | 2.6 | 29.3 | 12.42 | 63.8 | 15.12 | 164.8 | 37.5 | 12100 |
| *PD18-101-352* | 5.81 | 30 | 2.21 | 19.1 | 3.98 | 1.68 | 7.74 | 2.25 | 28 | 11.37 | 59.9 | 14.32 | 157.2 | 35.4 | 12160 |
| *PD18-101-353* | 62.8 | 253 | 24.5 | 157 | 24.7 | 7.59 | 41.6 | 9.72 | 103.1 | 36.9 | 166.3 | 36.1 | 351 | 75.6 | 11400 |
| *PD18-101-354* | 30.9 | 132.5 | 11.22 | 93.5 | 37.9 | 13.75 | 61.1 | 12.56 | 127.6 | 43.4 | 183 | 35.3 | 321 | 61.9 | 9240 |
| *PD18-101-355* | 34.5 | 157 | 17.9 | 125 | 27.5 | 6.37 | 33.7 | 6.38 | 62.7 | 21.7 | 100.6 | 22.1 | 225 | 49.2 | 11450 |
| *PD18-101-356* | 12 | 36.7 | 0.9 | 4.86 | 2.82 | 0.88 | 13.11 | 4.84 | 63.6 | 27.41 | 145.2 | 35.8 | 395 | 94.7 | 11920 |
| *PD18-101-357* | 45.7 | 162 | 19.1 | 124.6 | 17.4 | 4.19 | 22.2 | 3.88 | 39.9 | 15.9 | 78.4 | 18.8 | 215 | 55.2 | 11980 |
| *PD18-101-358* | 63.2 | 181 | 13.8 | 70 | 22.3 | 5.55 | 42.1 | 9.45 | 103 | 37.6 | 172.1 | 38.7 | 383 | 82.1 | 11290 |
| *PD18-101-359* | 16 | 51 | 4.2 | 28.3 | 8.3 | 2.49 | 11.5 | 2.6 | 28.8 | 12.4 | 58.9 | 14.44 | 160 | 35.2 | 12710 |
| *PD18-101-360* | 620 | 1060 | 92 | 367 | 52.8 | 9.86 | 53.7 | 11.17 | 125.3 | 49.8 | 236 | 54.2 | 506 | 105.5 | 9080 |
| *PD18-101-362* | 618 | 1043 | 78.5 | 241 | 35.9 | 8.62 | 40.9 | 6.64 | 63.9 | 23.4 | 110.6 | 25.2 | 267 | 57.9 | 11770 |
| *PD18-101-363* | 188 | 461 | 51.3 | 245 | 55.5 | 17.7 | 77.9 | 13.52 | 122.7 | 43.1 | 194.3 | 41.3 | 404 | 86.3 | 10230 |
| *PD18-101-364* | 167 | 558 | 59.5 | 324 | 46.1 | 10.13 | 52.5 | 9.21 | 91.1 | 33.5 | 154.5 | 34.7 | 353 | 76.3 | 11550 |
| *PD18-101-365* | 42 | 144 | 11.7 | 69 | 27.2 | 6.4 | 70.8 | 18.6 | 196 | 72.2 | 320 | 68.7 | 646 | 130.4 | 10150 |
| *PD18-101-373* | 44.3 | 119.9 | 9.87 | 45.3 | 16.5 | 3.33 | 37.4 | 10.13 | 111.4 | 42.3 | 196.9 | 43.6 | 444 | 95.4 | 11380 |
| *PD18-101-374* | 18.8 | 75 | 4.92 | 27.2 | 14.3 | 5.75 | 48.7 | 12.55 | 124.6 | 40 | 159.3 | 31 | 289 | 56.6 | 10660 |
| *PD18-101-375* | 4.9 | 25.3 | 1.78 | 10.1 | 3.65 | 0.89 | 8.5 | 2.67 | 34 | 14.47 | 75.8 | 18.62 | 200.2 | 46.8 | 12270 |
| *PD18-101-377* | 10.2 | 34.6 | 3.01 | 15.1 | 4.34 | 1.17 | 9.6 | 3 | 36.1 | 15.22 | 79.8 | 20.22 | 216.2 | 51.3 | 11420 |
| *PD18-101-378* | 1710 | 1410 | 87 | 176 | 14.2 | 5.1 | 27 | 6.56 | 68.1 | 25.5 | 119.7 | 25.9 | 259.5 | 56 | 10470 |
| *PD18-101-379* | 18.3 | 96.6 | 6.3 | 51.7 | 27.4 | 9.23 | 86.7 | 21.7 | 224 | 73.9 | 297 | 57.9 | 536 | 99.2 | 10240 |
| *PD18-101-380* | 3.01 | 24.4 | 1.33 | 5.3 | 2.26 | 0.8 | 9.16 | 3.24 | 40 | 16.8 | 86.8 | 20.9 | 218 | 48.6 | 12330 |
| *PD18-101-381* | 1370 | 1920 | 147 | 420 | 28.5 | 4.35 | 43.9 | 12.3 | 138 | 51 | 229 | 51.9 | 509 | 102.9 | 10710 |
| *PD18-101-382* | 5.9 | 96.5 | 2.45 | 19.7 | 17.83 | 5.37 | 68.4 | 19.2 | 203 | 73 | 314 | 63.4 | 575 | 112.3 | 9050 |
| *PD18-101-383* | 780 | 1340 | 127 | 599 | 77 | 14.9 | 71 | 10.31 | 96.2 | 34.7 | 163 | 36 | 358 | 76.8 | 12980 |
| *PD18-101-384* | 10.8 | 47.1 | 3.83 | 20.9 | 4.95 | 1.14 | 11.12 | 3.51 | 42.6 | 18.3 | 93 | 22.8 | 245 | 58.1 | 11790 |
| *PD18-101-385* | 8.4 | 44.6 | 3.33 | 17.2 | 3.1 | 1.05 | 10.4 | 3.5 | 43.6 | 18.5 | 94.6 | 22.5 | 244 | 55.7 | 12670 |
| *PD18-101-386* | 47.5 | 215 | 18.4 | 100.2 | 19.4 | 7.57 | 28.6 | 7.06 | 82.9 | 32.8 | 153.9 | 32.7 | 339 | 68.7 | 10290 |
| *PD18-101-387* | 0.012 | 16.35 | 0.062 | 1.4 | 3.22 | 0.96 | 18.6 | 6.45 | 74.6 | 30 | 134.5 | 30.2 | 291 | 62.7 | 10810 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-105-449* | 16.7 | 82.5 | 6.47 | 25.5 | 14.9 | 1.31 | 82.2 | 31.1 | 399 | 155.1 | 698 | 145 | 1366 | 247 | 11210 |
| *PD18-105-450* | 15.3 | 84.7 | 5.04 | 26.5 | 16.9 | 1.29 | 97.9 | 35.7 | 455 | 177.6 | 807 | 164.1 | 1460 | 280.7 | 10470 |
| *PD18-105-451* | 95.9 | 359 | 42.1 | 193 | 51.1 | 3.33 | 119.2 | 38 | 382 | 130.7 | 565 | 115.2 | 1080 | 206.3 | 13730 |
| *PD18-105-452* | 21 | 104 | 11.1 | 75.5 | 76.9 | 3.32 | 241 | 63.1 | 587 | 190.4 | 774 | 150 | 1338 | 244.1 | 8610 |
| *PD18-105-453* | 0.542 | 32.6 | 0.245 | 4.75 | 15.54 | 1.26 | 111.1 | 40.8 | 524 | 203.9 | 931 | 189 | 1663 | 309 | 11060 |
| *PD18-105-454* | 15.9 | 84.5 | 6.49 | 41.7 | 34 | 2.36 | 130.4 | 41.1 | 416 | 142.5 | 580 | 113.7 | 1016 | 186 | 8740 |
| *PD18-105-455* | 12.74 | 58.2 | 7.14 | 40.7 | 37.1 | 1.04 | 131.8 | 43.1 | 416 | 121.5 | 467 | 90.9 | 829 | 156.4 | 13460 |
| *PD18-105-456* | 7.76 | 82.4 | 8.46 | 73.8 | 37.4 | 7.69 | 102.2 | 28.44 | 298 | 98.6 | 420 | 81.8 | 718 | 138.5 | 9140 |
| *PD18-105-457* | 65.2 | 196 | 23.9 | 155 | 96.2 | 24.5 | 279 | 55.1 | 508 | 162.7 | 688 | 142.1 | 1269 | 241 | 10700 |
| *PD18-105-459* | 5.35 | 45.9 | 1.55 | 11.79 | 17.9 | 1.03 | 90.9 | 33.71 | 393 | 147.5 | 657 | 132.5 | 1208 | 227.6 | 10050 |
| *PD18-105-460* | 87.1 | 177 | 16.5 | 58.7 | 25.7 | 1.1 | 92.4 | 32.4 | 359 | 129.4 | 556 | 113 | 1016 | 196.9 | 11620 |
| *PD18-105-461* | 74.4 | 352 | 40.4 | 281 | 196 | 28.2 | 440 | 101.7 | 900 | 261 | 1028 | 199.5 | 1711 | 321 | 9310 |
| *PD18-105-469* | 12.1 | 64.7 | 5.42 | 36.1 | 28.5 | 1.13 | 119.1 | 39.8 | 425 | 143.8 | 593 | 120.7 | 1026 | 197.9 | 10800 |
| *PD18-105-470* | 21.4 | 112 | 12.2 | 74.3 | 56.6 | 2.54 | 183.4 | 57.8 | 625 | 206.8 | 846 | 165.4 | 1480 | 271 | 10690 |
| *PD18-105-471* | 76 | 819 | 106 | 490 | 119.7 | 8.38 | 214 | 55.9 | 486 | 142 | 559 | 114 | 1083 | 214 | 11030 |
| *PD18-105-472* | 106.2 | 160 | 25.4 | 83.2 | 30.4 | 1.52 | 121.4 | 44.9 | 500 | 182.3 | 777 | 160.3 | 1410 | 271.6 | 9830 |
| *PD18-105-473* | 133 | 1710 | 69.8 | 368 | 210 | 4.45 | 380 | 85.9 | 737 | 215.9 | 848 | 168.7 | 1430 | 269.3 | 11190 |
| *PD18-105-474* | 160 | 385 | 51.6 | 217 | 111 | 3.29 | 208 | 57.9 | 526 | 168.3 | 693 | 136.2 | 1228 | 224.4 | 10880 |
| *PD18-105-475* | 76.5 | 375 | 52.2 | 297 | 138 | 42.3 | 197 | 44.5 | 358 | 90.8 | 333 | 63.7 | 570 | 97.9 | 9850 |
| *PD18-105-476* | 5.17 | 72.5 | 5.63 | 38.8 | 19.1 | 1.4 | 70.7 | 23.9 | 281.1 | 109.8 | 490 | 99.6 | 899 | 171.5 | 10300 |
| *PD18-105-477* | 10.83 | 91.4 | 6.77 | 37.1 | 27.5 | 1.93 | 126.4 | 43.1 | 473 | 166.1 | 706 | 140 | 1233 | 231.7 | 10300 |
| *PD18-105-478* | 96.8 | 232 | 18.01 | 68.7 | 41.5 | 6.04 | 164 | 51.5 | 598 | 218.4 | 928 | 181.3 | 1562 | 288.5 | 9570 |
| *PD18-105-479* | 217 | 786 | 107.3 | 540 | 352 | 10.16 | 1130 | 364 | 3190 | 698 | 2140 | 345 | 2540 | 393 | 10160 |
| *PD18-105-480* | 394 | 731 | 69.1 | 252 | 55.5 | 1.56 | 105.2 | 33.9 | 388 | 143.5 | 621 | 125.3 | 1108 | 211.8 | 10840 |
| *PD18-105-481* | 17.9 | 102.3 | 11.5 | 68.5 | 52.3 | 1.82 | 159.3 | 50.1 | 457 | 134.8 | 528 | 104.1 | 940 | 180.6 | 11000 |
| *PD18-105-482* | 32 | 115 | 15.1 | 71 | 29.2 | 1.03 | 98.2 | 31.8 | 381 | 142.8 | 621 | 128.4 | 1128 | 214.1 | 10750 |
| *PD18-105-483* | 27 | 116 | 16.3 | 67 | 44.7 | 3.1 | 126 | 33.1 | 333 | 109.8 | 456 | 89 | 780 | 144.6 | 9010 |
| *PD18-105-493* | 1059 | 489 | 76.6 | 231 | 40.2 | 4.48 | 137.9 | 45.3 | 509 | 181.1 | 796 | 162.8 | 1421 | 274 | 9980 |
| *PD18-105-494* | 99.4 | 283.4 | 26.65 | 101.5 | 40.7 | 1.78 | 111.9 | 34.9 | 356 | 118.9 | 513 | 107.6 | 962 | 191.5 | 11900 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-105-495* | 21.61 | 197.5 | 22.1 | 154.4 | 60 | 7.46 | 121.4 | 34.2 | 323 | 102.3 | 429 | 85.7 | 750 | 148.4 | 11110 |
| *PD18-105-496* | 95 | 303.7 | 34.3 | 171 | 90.8 | 4.62 | 246.3 | 70.9 | 718 | 222.9 | 896 | 175.7 | 1483 | 275.1 | 10600 |
| *PD18-105-497* | 41.9 | 79.6 | 3.13 | 17.5 | 22.3 | 2.52 | 125.3 | 43.1 | 521 | 201.7 | 908 | 187.8 | 1663 | 319.3 | 9810 |
| *PD18-105-498* | 44.8 | 78.5 | 8.37 | 40.7 | 29.8 | 1.64 | 124.6 | 40.3 | 432 | 143.1 | 574 | 112.2 | 1001 | 191.2 | 14430 |
| *PD18-105-499* | 0.743 | 9.96 | 0.682 | 6.74 | 10.95 | 1.79 | 64 | 21.4 | 242.4 | 90.2 | 389.8 | 76.5 | 661 | 127.7 | 8140 |
| *PD18-105-500* | 250 | 600 | 58.5 | 219 | 66.4 | 7.66 | 119.1 | 34.7 | 360 | 127.7 | 568 | 122.4 | 1156 | 224.2 | 13570 |
| *PD18-105-501* | 8.7 | 33.5 | 2.88 | 21.7 | 15.7 | 0.95 | 53.9 | 17.9 | 213 | 77.1 | 345 | 73.5 | 679 | 123.2 | 10230 |
| *PD18-105-503* | 18.4 | 83.9 | 6.71 | 38 | 34.5 | 2.62 | 147 | 48 | 550 | 198 | 846 | 164 | 1434 | 262 | 9920 |
| | | | | | | | | | | | | | | | |
| *PD18-111-167* | 229.3 | 3120 | 248.8 | 1498 | 562 | 113.4 | 730 | 121.4 | 871 | 231.8 | 882 | 179.1 | 1609 | 304 | 13710 |
| *PD18-111-168* | 19 | 144 | 14.17 | 102.5 | 60.2 | 13.14 | 105.3 | 21.7 | 183.4 | 60.7 | 259 | 55.2 | 527 | 111.2 | 9920 |
| *PD18-111-169* | 14.1 | 152.9 | 13.95 | 85.2 | 39.6 | 9.11 | 73.2 | 14.91 | 130.2 | 41.9 | 190.3 | 40.5 | 396 | 82.5 | 12060 |
| *PD18-111-170* | 6.65 | 53.4 | 4.14 | 28 | 24 | 4.74 | 64.3 | 15.2 | 159 | 59.6 | 283 | 61.5 | 618 | 128.2 | 12650 |
| *PD18-111-171* | 13.2 | 167 | 15.7 | 124.3 | 86.4 | 17.6 | 150 | 22 | 166.7 | 46.9 | 196.6 | 40.8 | 409 | 83.8 | 10920 |
| *PD18-111-172* | 61.7 | 503 | 47.1 | 285 | 152 | 35.4 | 216 | 36.3 | 267 | 79.3 | 321 | 67.5 | 649 | 131.5 | 12420 |
| *PD18-111-180* | 2.84 | 25.7 | 2.35 | 15.9 | 12.2 | 3.19 | 36 | 9.76 | 116.2 | 46.1 | 226.9 | 51.7 | 510 | 111.2 | 11010 |
| *PD18-111-181* | 75.5 | 1370 | 82.7 | 512 | 201 | 44.8 | 236 | 40.4 | 298 | 83.8 | 335 | 71.1 | 682 | 137.5 | 13380 |
| *PD18-111-182* | 5.63 | 49.1 | 4 | 29.2 | 17.4 | 3.89 | 35 | 7.66 | 69.4 | 24.8 | 118.6 | 27.6 | 295 | 65.3 | 11500 |
| *PD18-111-184* | 98.8 | 1094 | 99 | 555 | 231 | 47.1 | 265 | 44.1 | 305 | 79.2 | 318 | 70.9 | 729 | 155.3 | 16860 |
| *PD18-111-185* | 5.75 | 40.9 | 6.87 | 50 | 28.6 | 5.56 | 43.9 | 7.13 | 63.1 | 23.44 | 114.6 | 26.09 | 263.5 | 58.3 | 11770 |
| *PD18-111-186* | 7.01 | 65 | 5.1 | 43.9 | 21.5 | 4.2 | 37 | 8.43 | 86.5 | 31.6 | 151 | 33.6 | 337 | 74.6 | 8150 |
| *PD18-111-187* | 9.26 | 134.1 | 9.44 | 77 | 72.7 | 12.2 | 122.1 | 18.82 | 163.1 | 57.3 | 258.9 | 56 | 528 | 105.2 | 8330 |
| *PD18-111-188* | 8.7 | 66.6 | 7.2 | 44.6 | 22.7 | 5.02 | 40.7 | 8.58 | 75.3 | 25.02 | 115.9 | 26.5 | 264.3 | 58.2 | 7880 |
| *PD18-111-189* | 7.01 | 81.7 | 6.03 | 39.6 | 18.1 | 4.15 | 32.4 | 7.13 | 67.4 | 24.47 | 119.2 | 26.51 | 273.2 | 60 | 8990 |
| *PD18-111-190* | 10 | 64.7 | 5.3 | 31.1 | 17.6 | 3.27 | 33.3 | 7.4 | 72.9 | 26.7 | 124.1 | 29.6 | 295 | 64.7 | 9600 |
| *PD18-111-191* | 9.61 | 110.1 | 7.79 | 43.5 | 21.4 | 5.49 | 39.4 | 8.96 | 80.7 | 27.7 | 129.8 | 29.1 | 292.1 | 65.6 | 9140 |
| *PD18-111-192* | 11.1 | 96.6 | 8.49 | 70.6 | 52.1 | 11.15 | 78.2 | 13.43 | 111.9 | 36.2 | 167.8 | 37.8 | 366 | 81.1 | 8990 |
| *PD18-111-193* | 28.6 | 471 | 24.5 | 133.6 | 65.1 | 16.6 | 100.3 | 17.55 | 142 | 46.6 | 203 | 44.1 | 422 | 86.9 | 9100 |
| *PD18-111-194* | 50.1 | 268 | 27.8 | 139.2 | 46.6 | 8.38 | 82.3 | 20.87 | 236.6 | 94.7 | 453 | 100.4 | 947 | 195.6 | 10960 |
| *PD18-111-202* | 24.9 | 254 | 20.9 | 110 | 56.5 | 13.8 | 110.8 | 31.1 | 329 | 122.8 | 547 | 116.2 | 1073 | 205.8 | 10570 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-111-203* | 19.1 | 198 | 19.3 | 182 | 82.8 | 14.2 | 114.8 | 21.4 | 194.7 | 68.3 | 303 | 63.9 | 606 | 122.7 | 10460 |
| *PD18-111-204* | 7.84 | 60.2 | 5.57 | 37.2 | 18 | 3.9 | 40.2 | 9.29 | 90 | 33.16 | 154.3 | 35.5 | 359.3 | 78.9 | 9560 |
| *PD18-111-205* | 4.7 | 43.5 | 3.74 | 30.3 | 22 | 4.14 | 47.4 | 12.08 | 128.2 | 49.3 | 231.5 | 52.7 | 511 | 106.8 | 10060 |
| *PD18-111-206* | 19.1 | 230 | 20.6 | 200 | 120 | 22.6 | 141 | 21.9 | 167.3 | 49.1 | 209 | 44.7 | 432 | 91.5 | 11140 |
| *PD18-111-207* | 71.3 | 628 | 58.9 | 422 | 108.3 | 21.5 | 150.2 | 28.1 | 245 | 83.1 | 353 | 76.3 | 719 | 140.7 | 11930 |
| *PD18-111-208* | 8.5 | 80 | 8.3 | 61 | 41.1 | 8.83 | 79.9 | 15.7 | 144.1 | 50.1 | 213.5 | 43.9 | 404 | 79.9 | 10870 |

## Appendix 2.3 Zircon Lu–Hf isotopic data – Granitoids of the Dharwar Craton

| Analysis N | Hf176/ Hf177 | 2 S.E. | Lu176/ Hf177 | U/Pb AGE (grain) | 2 S.E. | Age rock | 2 S.E. rock | Hf Chur (t) | Hf DM (t) | Hf NC(t) | $Hf_i$ | eHf | 2SE | TDMc | TNCc | Above DM line? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-1-16 | 0.280992 | 4.99E-05 | 0.001564 | 2618 | 19 | 2562 | 11 | 0.281104 | 0.281329 | 0.281267 | 0.280913 | -6.77 | 1.764941 | 3.49 | 3.360889 | No |
| PD17-1-20 | 0.281123 | 4.44E-05 | 0.002242 | 2593 | 22 | 2562 | 11 | 0.281120 | 0.281347 | 0.281285 | 0.281012 | -3.87 | 1.568781 | 3.30 | 3.16965 | No |
| PD17-1-33 | 0.280752 | 2.55E-05 | 0.001009 | 3323 | 25 | 3323 | 25 | 0.280637 | 0.280795 | 0.280741 | 0.280688 | 1.82 | 0.902255 | 3.54 | 3.433734 | No |
| PD17-1-42 | 0.281067 | 3.5E-05 | 0.001308 | 2472 | 19 | 2562 | 11 | 0.281200 | 0.281438 | 0.281375 | 0.281006 | -6.90 | 1.238859 | 3.38 | 3.250921 | No |
| PD17-1-51 | 0.281091 | 3.94E-05 | 0.001725 | 2553 | 19 | 2562 | 11 | 0.281146 | 0.281377 | 0.281315 | 0.281007 | -4.97 | 1.392693 | 3.33 | 3.202564 | No |
| PD17-1-55 | 0.281073 | 3.26E-05 | 0.001451 | 2529 | 22 | 2562 | 11 | 0.281162 | 0.281395 | 0.281332 | 0.281003 | -5.68 | 1.151457 | 3.36 | 3.224915 | No |
| PD17-1-58 | 0.281063 | 3.27E-05 | 0.001134 | 2542 | 26 | 2562 | 11 | 0.281154 | 0.281386 | 0.281323 | 0.281008 | -5.19 | 1.155469 | 3.34 | 3.206534 | No |
| PD17-1-60 | 0.281096 | 2.92E-05 | 0.001675 | 2525 | 19 | 2562 | 11 | 0.281165 | 0.281398 | 0.281335 | 0.281015 | -5.33 | 1.031285 | 3.33 | 3.201124 | No |
| PD17-21-206 | 0.280966 | 3.13E-05 | 0.002177 | 3031 | 24 | 2991 | 13 | 0.280831 | 0.281017 | 0.280960 | 0.280839 | 0.30 | 1.105245 | 3.40 | 3.282359 | No |
| PD17-21-227 | 0.280934 | 3.42E-05 | 0.001911 | 2973 | 20 | 2991 | 13 | 0.280869 | 0.281061 | 0.281003 | 0.280825 | -1.57 | 1.210061 | 3.46 | 3.343988 | No |
| PD17-21-215 | 0.280936 | 4.65E-05 | 0.001485 | 2960 | 22 | 2991 | 13 | 0.280878 | 0.281071 | 0.281013 | 0.280852 | -0.94 | 1.644495 | 3.42 | 3.296263 | No |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-21-218 | 0.280989 | 4.35E-05 | 0.001682 | 2960 | 27 | 2991 | 13 | 0.280878 | 0.281071 | 0.281013 | 0.280893 | 0.54 | 1.538686 | 3.33 | 3.209911 | No |
| PD17-21-213 | 0.280967 | 7.13E-05 | 0.00233 | 2952 | 21 | 2991 | 13 | 0.280883 | 0.281077 | 0.281019 | 0.280835 | -1.72 | 2.519772 | 3.46 | 3.335714 | No |
| PD17-21-236 | 0.280914 | 4.02E-05 | 0.00103 | 2905 | 23 | 2991 | 13 | 0.280914 | 0.281112 | 0.281054 | 0.280857 | -2.04 | 1.420201 | 3.44 | 3.315933 | No |
| PD17-27-471 | 0.280981 | 3.34E-05 | 0.001762 | 2989 | 37 | 3000 | 14 | 0.280859 | 0.281049 | 0.280991 | 0.280880 | 0.77 | 1.181034 | 3.34 | 3.21997 | No |
| PD17-27-451 | 0.280966 | 3.91E-05 | 0.001618 | 2988 | 33 | 3000 | 14 | 0.280859 | 0.281049 | 0.280992 | 0.280873 | 0.50 | 1.381661 | 3.36 | 3.235221 | No |
| PD17-27-435 | 0.280925 | 6.32E-05 | 0.001897 | 2985 | 42 | 3000 | 14 | 0.280861 | 0.281052 | 0.280994 | 0.280817 | -1.59 | 2.234034 | 3.47 | 3.355113 | No |
| PD17-27-436 | 0.280878 | 3.74E-05 | 0.00112 | 2977 | 41 | 3000 | 14 | 0.280867 | 0.281058 | 0.281000 | 0.280814 | -1.87 | 1.321301 | 3.48 | 3.364485 | No |
| PD17-27-438 | 0.280963 | 5.28E-05 | 0.00201 | 2975 | 33 | 3000 | 14 | 0.280868 | 0.281059 | 0.281001 | 0.280848 | -0.72 | 1.868046 | 3.42 | 3.295655 | No |
| PD17-32-249 | 0.281188 | 3.88E-05 | 0.002444 | 3214 | 25 | 3217 | 10 | 0.280709 | 0.280878 | 0.280823 | 0.281037 | 11.67 | 1.371862 | 2.88 | 2.766858 | Yes |
| PD17-32-277 | 0.280976 | 4.67E-05 | 0.002413 | 3214 | 20 | 3217 | 10 | 0.280709 | 0.280878 | 0.280823 | 0.280827 | 4.19 | 1.649712 | 3.32 | 3.205722 | No |
| PD17-32-266 | 0.280912 | 2.94E-05 | 0.001451 | 3200 | 26 | 3217 | 10 | 0.280719 | 0.280889 | 0.280833 | 0.280823 | 3.70 | 1.039244 | 3.34 | 3.222545 | No |
| PD17-32-288 | 0.281038 | 5.38E-05 | 0.002294 | 3195 | 19 | 3217 | 10 | 0.280722 | 0.280892 | 0.280837 | 0.280897 | 6.23 | 1.900918 | 3.19 | 3.070289 | Yes |
| PD17-32-276 | 0.280954 | 4.1E-05 | 0.002452 | 3187 | 22 | 3217 | 10 | 0.280727 | 0.280898 | 0.280843 | 0.280804 | 2.74 | 1.448914 | 3.38 | 3.268018 | No |
| *PD17-32-267* | 0.280896 | 2.61E-05 | 0.001428 | 3170 | 29 | 3217 | 10 | 0.280739 | 0.280911 | 0.280856 | 0.280809 | 2.50 | 0.923748 | 3.38 | 3.267652 | No |
| *PD17-32-252* | 0.280929 | 2.8E-05 | 0.00208 | 3041 | 27 | 3217 | 10 | 0.280824 | 0.281009 | 0.280952 | 0.280808 | -0.59 | 0.99157 | 3.46 | 3.342157 | No |
| *PD17-38-354* | 0.280843 | 3.15E-05 | 0.000855 | 3170 | 19 | 3170 | 19 | 0.280739 | 0.280911 | 0.280856 | 0.280791 | 1.85 | 1.114698 | 3.42 | 3.305655 | No |
| *PD17-38-335* | 0.280784 | 4.05E-05 | 0.001042 | 3138 | 21 | 3138 | 21 | 0.280760 | 0.280936 | 0.280880 | 0.280721 | -1.39 | 1.43066 | 3.58 | 3.468524 | No |
| *PD17-38-330* | 0.280873 | 3.28E-05 | 0.001039 | 3129 | 17 | 3129 | 17 | 0.280766 | 0.280942 | 0.280887 | 0.280810 | 1.58 | 1.160422 | 3.40 | 3.28807 | No |
| *PD17-38-334* | 0.280836 | 1.94E-05 | 0.000949 | 3112 | 18 | 3112 | 18 | 0.280777 | 0.280955 | 0.280899 | 0.280779 | 0.06 | 0.687367 | 3.48 | 3.362593 | No |
| *PD17-38-333* | 0.280886 | 3.9E-05 | 0.001417 | 3058 | 28 | 3058 | 28 | 0.280813 | 0.280996 | 0.280940 | 0.280803 | -0.35 | 1.379488 | 3.46 | 3.342477 | No |
| *PD17-38-312* | 0.280895 | 3.91E-05 | 0.001404 | 3056 | 20 | 3056 | 20 | 0.280814 | 0.280998 | 0.280941 | 0.280812 | -0.07 | 1.380911 | 3.44 | 3.324113 | No |
| *PD17-38-307* | 0.280867 | 3.02E-05 | 0.000963 | 3052 | 20 | 3052 | 20 | 0.280817 | 0.281001 | 0.280944 | 0.280810 | -0.24 | 1.067211 | 3.45 | 3.330697 | No |
| *PD17-44-392* | 0.280855 | 4.58E-05 | 0.002315 | 3200 | 19 | 3190 | 21 | 0.280719 | 0.280889 | 0.280833 | 0.280712 | -0.23 | 1.618006 | 3.57 | 3.451649 | No |
| *PD17-44-414* | 0.280797 | 4.62E-05 | 0.001369 | 3198 | 21 | 3190 | 21 | 0.280720 | 0.280890 | 0.280835 | 0.280713 | -0.25 | 1.633265 | 3.57 | 3.451261 | No |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-44-385* | 0.280844 | 3.62E-05 | 0.002009 | 3176 | 23 | 3190 | 21 | 0.280735 | 0.280907 | 0.280851 | 0.280722 | -0.47 | 1.281791 | 3.56 | 3.445701 | No |
| *PD17-44-369* | 0.280778 | 2.4E-05 | 0.000697 | 3162 | 17 | 3190 | 21 | 0.280744 | 0.280917 | 0.280862 | 0.280736 | -0.29 | 0.849042 | 3.54 | 3.424211 | No |
| *PD17-44-405* | 0.280820 | 4.09E-05 | 0.001428 | 3145 | 19 | 3190 | 21 | 0.280755 | 0.280930 | 0.280875 | 0.280734 | -0.77 | 1.44582 | 3.55 | 3.437917 | No |
| *PD17-44-423* | 0.280831 | 4.78E-05 | 0.002063 | 3123 | 22 | 3190 | 21 | 0.280770 | 0.280947 | 0.280891 | 0.280707 | -2.25 | 1.690467 | 3.62 | 3.505912 | No |
| *PD17-48-514* | 0.280757 | 3.44E-05 | 0.000333 | 3178 | 29 | 3174 | 11 | 0.280733 | 0.280905 | 0.280850 | 0.280737 | 0.13 | 1.217051 | 3.53 | 3.41243 | No |
| *PD17-48-478* | 0.280800 | 3.5E-05 | 0.000451 | 3172 | 28 | 3174 | 11 | 0.280737 | 0.280910 | 0.280854 | 0.280772 | 1.25 | 1.236355 | 3.46 | 3.342512 | No |
| *PD17-48-480* | 0.280743 | 4.12E-05 | 0.00054 | 3171 | 31 | 3174 | 11 | 0.280738 | 0.280911 | 0.280855 | 0.280710 | -1.00 | 1.45783 | 3.59 | 3.472709 | No |
| *PD17-48-513* | 0.280790 | 3.75E-05 | 0.000326 | 3171 | 30 | 3174 | 11 | 0.280738 | 0.280911 | 0.280855 | 0.280770 | 1.13 | 1.32521 | 3.46 | 3.348749 | No |
| *PD17-48-498* | 0.280762 | 4.17E-05 | 0.000525 | 3160 | 29 | 3174 | 11 | 0.280745 | 0.280919 | 0.280863 | 0.280730 | -0.54 | 1.473931 | 3.55 | 3.437056 | No |
| *PD17-48-499* | 0.280767 | 3.45E-05 | 0.000539 | 3152 | 30 | 3174 | 11 | 0.280751 | 0.280925 | 0.280869 | 0.280735 | -0.56 | 1.220052 | 3.55 | 3.43163 | No |
| *PD17-48-479* | 0.280756 | 4.11E-05 | 0.000495 | 3151 | 29 | 3174 | 11 | 0.280751 | 0.280926 | 0.280870 | 0.280726 | -0.90 | 1.452597 | 3.57 | 3.450224 | No |
| *PD17-49-574* | 0.280752 | 3.05E-05 | 0.000459 | 3254 | 32 | 3191 | 17 | 0.280683 | 0.280847 | 0.280793 | 0.280723 | 1.43 | 1.077636 | 3.51 | 3.399547 | No |
| *PD17-49-560* | 0.280832 | 3.58E-05 | 0.001138 | 3159 | 31 | 3191 | 17 | 0.280746 | 0.280920 | 0.280864 | 0.280763 | 0.59 | 1.265908 | 3.49 | 3.370171 | No |
| *PD17-49-579* | 0.280831 | 4.97E-05 | 0.001032 | 3143 | 31 | 3191 | 17 | 0.280757 | 0.280932 | 0.280876 | 0.280769 | 0.45 | 1.757909 | 3.48 | 3.365495 | No |
| *PD17-49-577* | 0.280740 | 0.000425 | 0.001218 | 3116 | 44 | 3191 | 17 | 0.280775 | 0.280952 | 0.280896 | 0.280667 | -3.84 | 15.03684 | 3.71 | 3.592756 | No |
| *PD17-56-601* | 0.281011 | 6.74E-05 | 0.005719 | 3337 | 30 | 3302 | 12 | 0.280627 | 0.280784 | 0.280731 | 0.280644 | 0.57 | 2.382965 | 3.63 | 3.517538 | No |
| *PD17-56-620* | 0.280882 | 3.62E-05 | 0.002266 | 3334 | 37 | 3302 | 12 | 0.280629 | 0.280787 | 0.280733 | 0.280737 | 3.82 | 1.279131 | 3.44 | 3.326695 | No |
| *PD17-56-635* | 0.280800 | 3.67E-05 | 0.001846 | 3315 | 47 | 3302 | 12 | 0.280642 | 0.280801 | 0.280747 | 0.280682 | 1.42 | 1.29682 | 3.56 | 3.450516 | No |
| *PD17-56-592* | 0.280784 | 3.7E-05 | 0.001974 | 3309 | 37 | 3302 | 12 | 0.280646 | 0.280806 | 0.280752 | 0.280658 | 0.43 | 1.307813 | 3.61 | 3.502701 | No |
| *PD17-56-642* | 0.280841 | 3.96E-05 | 0.002353 | 3286 | 39 | 3302 | 12 | 0.280661 | 0.280823 | 0.280769 | 0.280692 | 1.09 | 1.400498 | 3.56 | 3.445439 | No |
| *PD17-56-630* | 0.280986 | 7.06E-05 | 0.004922 | 3267 | 33 | 3302 | 12 | 0.280674 | 0.280838 | 0.280783 | 0.280676 | 0.08 | 2.498263 | 3.60 | 3.48845 | No |
| *PD17-56-641* | 0.280868 | 5.08E-05 | 0.001729 | 3198 | 38 | 3302 | 12 | 0.280720 | 0.280890 | 0.280835 | 0.280762 | 1.50 | 1.795948 | 3.46 | 3.349526 | No |
| *PD17-56-641-2* | 0.281229 | 7.52E-05 | 0.002184 | 3198 | 38 | 3302 | 12 | 0.280720 | 0.280890 | 0.280835 | 0.281094 | 13.33 | 2.657565 | 2.77 | 2.655254 | Yes |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-01-16* | 0.281186 | 3.28E-05 | 0.001333 | 2685 | 21 | 2613 | 24 | 0.281060 | 0.281278 | 0.281217 | 0.281118 | 2.08 | 1.158428 | 3.02 | 2.893708 | No |
| *PD18-01-47* | 0.281186 | 3.09E-05 | 0.001335 | 2628 | 19 | 2613 | 24 | 0.281097 | 0.281321 | 0.281259 | 0.281119 | 0.79 | 1.091339 | 3.05 | 2.923035 | No |
| *PD18-01-22* | 0.281246 | 4.76E-05 | 0.001195 | 2589 | 24 | 2613 | 24 | 0.281123 | 0.281350 | 0.281288 | 0.281186 | 2.26 | 1.683139 | 2.94 | 2.80392 | No |
| *PD18-01-45* | 0.281192 | 2.5E-05 | 0.000922 | 2551 | 22 | 2613 | 24 | 0.281148 | 0.281379 | 0.281316 | 0.281147 | -0.03 | 0.882346 | 3.04 | 2.908677 | No |
| *PD18-101-354* | 0.281003 | 3.2E-05 | 0.000888 | 2578 | 36 | 2545 | 16 | 0.281130 | 0.281359 | 0.281296 | 0.280959 | -6.08 | 1.133155 | 3.42 | 3.287791 | No |
| *PD18-101-359* | 0.281010 | 2.76E-05 | 0.000522 | 2540 | 37 | 2545 | 16 | 0.281155 | 0.281387 | 0.281324 | 0.280985 | -6.06 | 0.974645 | 3.39 | 3.256321 | No |
| *PD18-101-375* | 0.280999 | 2.76E-05 | 0.000686 | 2538 | 34 | 2545 | 16 | 0.281156 | 0.281389 | 0.281326 | 0.280966 | -6.78 | 0.974319 | 3.43 | 3.296793 | No |
| *PD18-101-374* | 0.281000 | 2.45E-05 | 0.000649 | 2514 | 40 | 2545 | 16 | 0.281172 | 0.281407 | 0.281344 | 0.280968 | -7.24 | 0.866044 | 3.44 | 3.30484 | No |
| *PD18-101-352* | 0.281045 | 2.88E-05 | 0.000693 | 2499 | 36 | 2545 | 16 | 0.281182 | 0.281418 | 0.281355 | 0.281012 | -6.03 | 1.020028 | 3.35 | 3.221534 | No |
| *PD18-104-425* | 0.280784 | 3.64E-05 | 0.001163 | 3342 | 33 | 3301 | 22 | 0.280624 | 0.280780 | 0.280727 | 0.280709 | 3.04 | 1.287794 | 3.49 | 3.378667 | No |
| *PD18-104-447* | 0.280788 | 2.26E-05 | 0.001039 | 3310 | 36 | 3301 | 22 | 0.280645 | 0.280805 | 0.280751 | 0.280722 | 2.72 | 0.79881 | 3.48 | 3.370358 | No |
| *PD18-104-427* | 0.280761 | 3.49E-05 | 0.00101 | 3306 | 31 | 3301 | 22 | 0.280648 | 0.280808 | 0.280754 | 0.280696 | 1.72 | 1.233466 | 3.54 | 3.425538 | No |
| *PD18-104-428* | 0.280794 | 3.36E-05 | 0.00127 | 3303 | 32 | 3301 | 22 | 0.280650 | 0.280810 | 0.280756 | 0.280714 | 2.26 | 1.189358 | 3.50 | 3.39133 | No |
| *PD18-104-403* | 0.280775 | 2.84E-05 | 0.001058 | 3297 | 35 | 3301 | 22 | 0.280654 | 0.280815 | 0.280761 | 0.280708 | 1.92 | 1.005512 | 3.52 | 3.406187 | No |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-105-503* | 0.281226 | 4.53E-05 | 0.002619 | 2689 | 34 | 2600 | 18 | 0.281057 | 0.281275 | 0.281214 | 0.281092 | 1.23 | 1.600601 | 3.08 | 2.947134 | No |
| *PD18-105-453* | 0.281257 | 4.03E-05 | 0.001898 | 2624 | 33 | 2600 | 18 | 0.281100 | 0.281324 | 0.281262 | 0.281162 | 2.20 | 1.424681 | 2.97 | 2.836618 | No |
| *PD18-105-497* | 0.281367 | 4.35E-05 | 0.00394 | 2583 | 29 | 2600 | 18 | 0.281127 | 0.281355 | 0.281292 | 0.281172 | 1.61 | 1.536833 | 2.97 | 2.837571 | No |
| *PD18-105-460* | 0.281247 | 6.39E-05 | 0.003216 | 2550 | 33 | 2600 | 18 | 0.281148 | 0.281380 | 0.281317 | 0.281090 | -2.06 | 2.259596 | 3.16 | 3.028232 | No |
| *PD18-105-459* | 0.281285 | 9.4E-05 | 0.002755 | 2526 | 38 | 2600 | 18 | 0.281164 | 0.281398 | 0.281335 | 0.281152 | -0.42 | 3.322894 | 3.04 | 2.911803 | No |
| *PD18-108-83* | 0.280782 | 3.17E-05 | 0.001234 | 3285 | 49 | 3232 | 32 | 0.280662 | 0.280824 | 0.280770 | 0.280704 | 1.51 | 1.119526 | 3.53 | 3.42049 | No |
| *PD18-108-76* | 0.280845 | 2.77E-05 | 0.000789 | 3266 | 50 | 3232 | 32 | 0.280675 | 0.280838 | 0.280784 | 0.280795 | 4.29 | 0.978815 | 3.36 | 3.242679 | No |
| *PD18-108-99* | 0.280851 | 4.88E-05 | 0.000959 | 3256 | 49 | 3232 | 32 | 0.280681 | 0.280846 | 0.280791 | 0.280791 | 3.92 | 1.725815 | 3.37 | 3.256041 | No |
| *PD18-108-106* | 0.280790 | 3.34E-05 | 0.000645 | 3228 | 49 | 3232 | 32 | 0.280700 | 0.280867 | 0.280812 | 0.280750 | 1.76 | 1.182046 | 3.47 | 3.358625 | No |
| *PD18-108-96* | 0.280888 | 5.97E-05 | 0.001254 | 3205 | 50 | 3232 | 32 | 0.280715 | 0.280885 | 0.280830 | 0.280811 | 3.40 | 2.109726 | 3.36 | 3.24425 | No |
| *PD18-108-77* | 0.280818 | 2.13E-05 | 0.000446 | 3169 | 53 | 3232 | 32 | 0.280739 | 0.280912 | 0.280857 | 0.280791 | 1.85 | 0.752502 | 3.42 | 3.305193 | No |
| *PD18-110-138* | 0.280892 | 3.84E-05 | 0.000533 | 3197 | 46 | 3197 | 46 | 0.280721 | 0.280891 | 0.280836 | 0.280859 | 4.94 | 1.35727 | 3.26 | 3.147472 | Yes |
| *PD18-110-160* | 0.280834 | 3.88E-05 | 0.000988 | 3089 | 49 | 3079 | 22 | 0.280792 | 0.280973 | 0.280916 | 0.280776 | -0.60 | 1.371531 | 3.50 | 3.382138 | No |
| *PD18-110-162* | 0.280863 | 3.05E-05 | 0.000725 | 3215 | 50 | 3215 | 50 | 0.280709 | 0.280877 | 0.280822 | 0.280818 | 3.91 | 1.07813 | 3.34 | 3.222957 | No |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-110-165* | 0.280823 | 3.5E-05 | 0.000716 | 3049 | 48 | 3079 | 22 | 0.280819 | 0.281003 | 0.280946 | 0.280781 | -1.36 | 1.23805 | 3.51 | 3.393744 | No |
| *PD18-111-172* | 0.280870 | 3.31E-05 | 0.001455 | 3250 | 48 | 3221 | 16 | 0.280685 | 0.280850 | 0.280796 | 0.280779 | 3.33 | 1.170218 | 3.40 | 3.285574 | No |
| *PD18-111-191* | 0.280846 | 3.75E-05 | 0.001246 | 3221 | 48 | 3221 | 16 | 0.280705 | 0.280873 | 0.280818 | 0.280769 | 2.29 | 1.324847 | 3.44 | 3.321971 | No |
| *PD18-111-190* | 0.280857 | 3.06E-05 | 0.001259 | 3219 | 50 | 3221 | 16 | 0.280706 | 0.280874 | 0.280819 | 0.280779 | 2.61 | 1.080911 | 3.42 | 3.30199 | No |
| *PD18-111-186* | 0.280890 | 4.07E-05 | 0.001568 | 3209 | 50 | 3221 | 16 | 0.280713 | 0.280882 | 0.280827 | 0.280794 | 2.89 | 1.439877 | 3.39 | 3.277525 | No |
| *PD18-111-206* | 0.280823 | 2.41E-05 | 0.000822 | 3181 | 50 | 3221 | 16 | 0.280731 | 0.280903 | 0.280848 | 0.280773 | 1.48 | 0.853764 | 3.45 | 3.3362 | No |
| *PD18-111-188* | 0.280846 | 2.64E-05 | 0.000713 | 3177 | 54 | 3221 | 16 | 0.280734 | 0.280906 | 0.280851 | 0.280802 | 2.42 | 0.933829 | 3.39 | 3.278198 | No |
| *PD18-116-15* | 0.280866 | 3.02E-05 | 0.001163 | 3209 | 26 | 3211 | 11 | 0.280713 | 0.280882 | 0.280827 | 0.280795 | 2.92 | 1.067944 | 3.39 | 3.275494 | No |
| *PD18-116-22* | 0.280892 | 3.31E-05 | 0.001179 | 3199 | 16 | 3211 | 11 | 0.280719 | 0.280889 | 0.280834 | 0.280820 | 3.58 | 1.168874 | 3.34 | 3.228964 | No |
| *PD18-116-5* | 0.280845 | 2.48E-05 | 0.000638 | 3199 | 21 | 3211 | 11 | 0.280719 | 0.280889 | 0.280834 | 0.280806 | 3.08 | 0.878005 | 3.37 | 3.25817 | No |
| *PD18-116-20* | 0.280885 | 3.19E-05 | 0.001627 | 3186 | 16 | 3211 | 11 | 0.280728 | 0.280899 | 0.280844 | 0.280785 | 2.04 | 1.128044 | 3.42 | 3.308093 | No |
| *PD18-116-1* | 0.280889 | 3.45E-05 | 0.001233 | 3174 | 14 | 3211 | 11 | 0.280736 | 0.280908 | 0.280853 | 0.280814 | 2.77 | 1.21968 | 3.37 | 3.255242 | No |
| *PD18-116-12* | 0.280885 | 4.49E-05 | 0.001679 | 3171 | 20 | 3211 | 11 | 0.280738 | 0.280911 | 0.280855 | 0.280782 | 1.58 | 1.58633 | 3.44 | 3.322145 | No |
| *PD18-116-7* | 0.280890 | 5.11E-05 | 0.00136 | 3127 | 26 | 3211 | 11 | 0.280767 | 0.280944 | 0.280888 | 0.280808 | 1.47 | 1.807275 | 3.41 | 3.292654 | No |
| *PD18-116-17* | 0.280836 | 2.86E-05 | 0.001071 | 3125 | 17 | 3211 | 11 | 0.280769 | 0.280945 | 0.280890 | 0.280772 | 0.12 | 1.011494 | 3.49 | 3.369968 | No |
| *PD18-118-25* | 0.280953 | 3.79E-05 | 0.002948 | 3329 | 56 | 3284 | 10 | 0.280633 | 0.280790 | 0.280737 | 0.280764 | 4.68 | 1.338907 | 3.38 | 3.272145 | Yes |
| *PD18-118-3* | 0.280895 | 3.63E-05 | 0.002375 | 3304 | 36 | 3284 | 10 | 0.280649 | 0.280809 | 0.280756 | 0.280744 | 3.38 | 1.282791 | 3.44 | 3.327056 | No |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-118-18* | 0.281032 | 5.61E-05 | 0.004142 | 3303 | 51 | 3284 | 10 | 0.280650 | 0.280810 | 0.280756 | 0.280768 | 4.21 | 1.984767 | 3.39 | 3.277858 | No |
| *PD18-118-20* | 0.280966 | 4.47E-05 | 0.003378 | 3294 | 48 | 3284 | 10 | 0.280656 | 0.280817 | 0.280763 | 0.280752 | 3.41 | 1.579465 | 3.43 | 3.317129 | No |
| *PD18-118-26* | 0.280938 | 4.17E-05 | 0.002947 | 3287 | 64 | 3284 | 10 | 0.280661 | 0.280822 | 0.280768 | 0.280752 | 3.25 | 1.474729 | 3.43 | 3.320696 | No |
| *PD18-118-9* | 0.280954 | 4.95E-05 | 0.003113 | 3276 | 52 | 3284 | 10 | 0.280668 | 0.280831 | 0.280777 | 0.280757 | 3.18 | 1.749684 | 3.43 | 3.31572 | No |
| *PD18-118-14* | 0.280981 | 4.54E-05 | 0.003811 | 3264 | 53 | 3284 | 10 | 0.280676 | 0.280840 | 0.280785 | 0.280742 | 2.33 | 1.605941 | 3.47 | 3.355128 | No |
| *PD18-120-29* | 0.280873 | 2.6E-05 | 0.00098 | 3169 | 14 | 3153.7 | 9 | 0.280739 | 0.280912 | 0.280857 | 0.280814 | 2.65 | 0.920109 | 3.37 | 3.258148 | No |
| *PD18-120-5* | 0.280876 | 2.45E-05 | 0.001103 | 3160 | 13 | 3153.7 | 9 | 0.280745 | 0.280919 | 0.280863 | 0.280809 | 2.26 | 0.868029 | 3.39 | 3.273446 | No |
| *PD18-120-20* | 0.280858 | 4.73E-05 | 0.00112 | 3155 | 13 | 3153.7 | 9 | 0.280749 | 0.280923 | 0.280867 | 0.280790 | 1.48 | 1.671751 | 3.43 | 3.315164 | No |
| *PD18-120-14* | 0.280858 | 3.44E-05 | 0.001001 | 3149 | 11 | 3153.7 | 9 | 0.280753 | 0.280927 | 0.280872 | 0.280797 | 1.58 | 1.216939 | 3.42 | 3.304079 | No |
| *PD18-120-27* | 0.280879 | 4.23E-05 | 0.001125 | 3149 | 8 | 3153.7 | 9 | 0.280753 | 0.280927 | 0.280872 | 0.280810 | 2.06 | 1.497155 | 3.39 | 3.276164 | No |
| *PD18-120-23* | 0.280898 | 3.39E-05 | 0.001445 | 3144 | 11 | 3153.7 | 9 | 0.280756 | 0.280931 | 0.280875 | 0.280811 | 1.94 | 1.198757 | 3.39 | 3.278902 | No |
| *PD18-126-35* | 0.280791 | 2.88E-05 | 0.000946 | 3083 | 45 | 3087 | 25 | 0.280796 | 0.280977 | 0.280921 | 0.280735 | -2.18 | 1.019247 | 3.59 | 3.469143 | No |
| *PD18-126-19* | 0.280829 | 4.27E-05 | 0.000867 | 3066 | 23 | 3087 | 25 | 0.280808 | 0.280990 | 0.280934 | 0.280778 | -1.05 | 1.508485 | 3.51 | 3.389346 | No |
| *PD18-126-11* | 0.280816 | 3.05E-05 | 0.000518 | 3046 | 38 | 3087 | 25 | 0.280821 | 0.281005 | 0.280948 | 0.280786 | -1.24 | 1.077302 | 3.50 | 3.384264 | No |
| *PD18-126-9* | 0.280788 | 4.98E-05 | 0.000895 | 3027 | 15 | 3087 | 25 | 0.280834 | 0.281020 | 0.280963 | 0.280736 | -3.46 | 1.760028 | 3.62 | 3.498197 | No |
| *PD18-126-5* | 0.280799 | 5.78E-05 | 0.001077 | 2983 | 14 | 3087 | 25 | 0.280863 | 0.281053 | 0.280995 | 0.280738 | -4.46 | 2.044396 | 3.64 | 3.520506 | No |
| *PD18-126-14* | 0.280801 | 6.11E-05 | 0.00087 | 2949 | 22 | 3087 | 25 | 0.280885 | 0.281079 | 0.281021 | 0.280752 | -4.75 | 2.160845 | 3.63 | 3.51008 | No |
| *PD18-27-113* | 0.281053 | 7.4E-05 | 0.000683 | 2717 | 13 | 2722 | 20 | 0.281039 | 0.281254 | 0.281193 | 0.281018 | -0.73 | 2.615795 | 3.21 | 3.085917 | No |
| *PD18-27-134* | 0.281064 | 3.19E-05 | 0.000545 | 2691 | 16 | 2722 | 20 | 0.281056 | 0.281274 | 0.281213 | 0.281036 | -0.69 | 1.126864 | 3.19 | 3.062299 | No |
| *PD18-34-183* | 0.280886 | 3.38E-05 | 0.001779 | 2996 | 23 | 2972 | 50 | 0.280854 | 0.281043 | 0.280986 | 0.280783 | -2.52 | 1.194084 | 3.54 | 3.418027 | No |
| *PD18-34-182* | 0.280931 | 4.03E-05 | 0.001802 | 2995 | 24 | 2972 | 50 | 0.280855 | 0.281044 | 0.280987 | 0.280828 | -0.97 | 1.424082 | 3.45 | 3.326888 | No |
| *PD18-34-192* | 0.280944 | 3.5E-05 | 0.001102 | 2925 | 21 | 2972 | 50 | 0.280901 | 0.281097 | 0.281039 | 0.280882 | -0.68 | 1.23913 | 3.37 | 3.252623 | No |
| *PD18-37-205* | 0.281042 | 2.96E-05 | 0.000559 | 2747 | 20 | 2747 | 20 | 0.281019 | 0.281231 | 0.281171 | 0.281012 | -0.23 | 1.046252 | 3.21 | 3.080552 | No |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-37-236* | 0.281133 | 3.03E-05 | 0.000567 | 2584 | 23 | 2566 | 16 | 0.281126 | 0.281354 | 0.281292 | 0.281105 | -0.76 | 1.071947 | 3.11 | 2.979061 | No |
| *PD18-37-203* | 0.281055 | 3.29E-05 | 0.000581 | 2573 | 24 | 2566 | 16 | 0.281133 | 0.281362 | 0.281300 | 0.281026 | -3.80 | 1.164597 | 3.28 | 3.149581 | No |
| *PD18-37-215* | 0.281062 | 2.94E-05 | 0.000615 | 2564 | 25 | 2566 | 16 | 0.281139 | 0.281369 | 0.281307 | 0.281032 | -3.81 | 1.040248 | 3.27 | 3.142738 | No |
| *PD18-37-199* | 0.281053 | 2E-05 | 0.000176 | 2536 | 24 | 2566 | 16 | 0.281158 | 0.281390 | 0.281327 | 0.281045 | -4.01 | 0.708678 | 3.26 | 3.132163 | No |
| *PD18-37-200* | 0.281104 | 4.92E-05 | 0.000775 | 2525 | 22 | 2566 | 16 | 0.281165 | 0.281398 | 0.281335 | 0.281067 | -3.50 | 1.740489 | 3.23 | 3.092896 | No |
| *PD18-37-196* | 0.281077 | 2.62E-05 | 0.000325 | 2524 | 19 | 2566 | 16 | 0.281166 | 0.281399 | 0.281336 | 0.281061 | -3.71 | 0.927093 | 3.24 | 3.104746 | No |
| *PD18-39-432* | 0.281072 | 6.71E-05 | 0.002178 | 2679 | 36 | 2682 | 29 | 0.281064 | 0.281283 | 0.281221 | 0.280961 | -3.66 | 2.373373 | 3.36 | 3.227376 | No |
| *PD18-39-461* | 0.281066 | 3.53E-05 | 0.00136 | 2678 | 25 | 2682 | 29 | 0.281064 | 0.281283 | 0.281222 | 0.280996 | -2.43 | 1.248901 | 3.28 | 3.154192 | No |
| *PD18-39-434* | 0.281069 | 3.59E-05 | 0.00095 | 2666 | 23 | 2682 | 29 | 0.281072 | 0.281292 | 0.281231 | 0.281021 | -1.83 | 1.270213 | 3.24 | 3.109192 | No |
| *PD18-44-376* | 0.280942 | 2.86E-05 | 0.000847 | 2689 | 34 | 2665 | 22 | 0.281057 | 0.281275 | 0.281214 | 0.280898 | -5.66 | 1.012551 | 3.48 | 3.352526 | No |
| *PD18-44-402* | 0.280964 | 2.73E-05 | 0.000828 | 2668 | 35 | 2665 | 22 | 0.281071 | 0.281291 | 0.281230 | 0.280921 | -5.32 | 0.96508 | 3.44 | 3.315759 | No |
| *PD18-44-382* | 0.280943 | 3.44E-05 | 0.001076 | 2656 | 21 | 2665 | 22 | 0.281079 | 0.281300 | 0.281238 | 0.280888 | -6.79 | 1.215145 | 3.52 | 3.392138 | No |
| *PD18-44-373* | 0.280966 | 3.94E-05 | 0.001513 | 2647 | 52 | 2665 | 22 | 0.281085 | 0.281307 | 0.281245 | 0.280889 | -6.96 | 1.392341 | 3.52 | 3.395304 | No |
| *PD18-44-374* | 0.280953 | 3.03E-05 | 0.001157 | 2640 | 44 | 2665 | 22 | 0.281089 | 0.281312 | 0.281250 | 0.280895 | -6.91 | 1.072665 | 3.52 | 3.386607 | No |
| *PD18-45-334* | 0.281017 | 2.71E-05 | 0.001114 | 2662 | 25 | 2676 | 17 | 0.281075 | 0.281295 | 0.281234 | 0.280960 | -4.08 | 0.957274 | 3.37 | 3.238429 | No |
| *PD18-45-352* | 0.281030 | 3.04E-05 | 0.000887 | 2653 | 20 | 2676 | 17 | 0.281081 | 0.281302 | 0.281241 | 0.280985 | -3.39 | 1.075016 | 3.32 | 3.190215 | No |
| *PD18-45-332* | 0.281013 | 3.76E-05 | 0.001695 | 2645 | 17 | 2676 | 17 | 0.281086 | 0.281308 | 0.281247 | 0.280928 | -5.63 | 1.328692 | 3.44 | 3.315649 | No |
| *PD18-45-336* | 0.281029 | 2.97E-05 | 0.001058 | 2637 | 20 | 2676 | 17 | 0.281091 | 0.281314 | 0.281253 | 0.280976 | -4.11 | 1.05055 | 3.35 | 3.219471 | No |
| *PD18-45-333* | 0.280990 | 2.47E-05 | 0.001047 | 2625 | 26 | 2676 | 17 | 0.281099 | 0.281323 | 0.281261 | 0.280937 | -5.76 | 0.875087 | 3.44 | 3.307195 | No |
| *PD18-47-292* | 0.281206 | 2.33E-05 | 0.000113 | 2627 | 38 | 2620 | 23 | 0.281098 | 0.281322 | 0.281260 | 0.281201 | 3.66 | 0.823657 | 2.88 | 2.752016 | No |
| *PD18-47-295* | 0.281231 | 7.3E-05 | 0.000728 | 2563 | 28 | 2620 | 23 | 0.281140 | 0.281370 | 0.281307 | 0.281195 | 1.97 | 2.582347 | 2.93 | 2.79977 | No |
| *PD18-47-306* | 0.281236 | 5.87E-05 | 0.000794 | 2548 | 29 | 2620 | 23 | 0.281150 | 0.281381 | 0.281318 | 0.281198 | 1.70 | 2.074982 | 2.94 | 2.803858 | No |
| *PD18-47-293* | 0.281263 | 3.86E-05 | 0.000885 | 2503 | 22 | 2620 | 23 | 0.281179 | 0.281415 | 0.281352 | 0.281220 | 1.46 | 1.363561 | 2.92 | 2.781394 | No |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-54-271* | 0.281274 | 3.54E-05 | 0.001225 | 2646 | 18 | 2627 | 20 | 0.281085 | 0.281308 | 0.281246 | 0.281212 | 4.50 | 1.253516 | 2.85 | 2.717853 | No |
| *PD18-54-287* | 0.281258 | 3.13E-05 | 0.000844 | 2628 | 19 | 2627 | 20 | 0.281097 | 0.281321 | 0.281259 | 0.281215 | 4.21 | 1.106105 | 2.85 | 2.720457 | No |
| *PD18-54-242* | 0.281249 | 5.22E-05 | 0.001086 | 2596 | 16 | 2627 | 20 | 0.281118 | 0.281345 | 0.281283 | 0.281195 | 2.75 | 1.846356 | 2.91 | 2.780832 | No |

## Appendix 3.1 Detrital Zircon U–Pb data – Detrital Record of the Dharwar Craton

| ***Comments*** | $^{207}Pb/^{235}U$ | 2σ | $^{206}Pb/^{238}U$ | 2σ | Error Correlation (ρ) | $^{207}Pb/^{235}U$ Age (Ma) | Age Error 2σ | $^{206}Pb/^{238}U$ Age (Ma) | Age Error 2σ | $^{207}Pb/^{206}Pb$ Age (Ma) | Age 2σ | ***FInal_U_Th_Ratio*** | ***Th/U*** | ***Discordance*** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-42-654* | 7.28 | 0.24 | 0.277 | 0.0085 | 0.9108 | 2144 | 31 | 1575 | 43 | 2732 | 34 | 3.067 | 0.326 | 42.350 |
| *PD17-42-655* | 18.55 | 0.48 | 0.566 | 0.014 | 0.7147 | 3017 | 25 | 2888 | 58 | 3095 | 38 | 1.894 | 0.528 | 6.688 |
| *PD17-42-656* | 24.06 | 0.62 | 0.656 | 0.014 | 0.7836 | 3269 | 25 | 3250 | 56 | 3271 | 33 | 3.56 | 0.281 | 0.642 |
| *PD17-42-657* | 20.5 | 1.3 | 0.519 | 0.025 | 0.8686 | 3099 | 60 | 2690 | 110 | 3360 | 40 | 1.716 | 0.583 | 19.940 |
| *PD17-42-658* | 14.64 | 0.38 | 0.498 | 0.012 | 0.8561 | 2791 | 25 | 2604 | 51 | 2919 | 33 | 2.116 | 0.473 | 10.791 |
| *PD17-42-659* | 24.17 | 0.66 | 0.653 | 0.015 | 0.6323 | 3273 | 27 | 3236 | 59 | 3285 | 39 | 1.563 | 0.640 | 1.492 |
| *PD17-42-660* | 22.45 | 0.62 | 0.646 | 0.015 | 0.6555 | 3201 | 27 | 3209 | 57 | 3185 | 38 | 2.477 | 0.404 | -0.754 |
| *PD17-42-661* | 27.58 | 0.85 | 0.684 | 0.021 | 0.6241 | 3402 | 30 | 3355 | 79 | 3434 | 39 | 5.32 | 0.188 | 2.301 |
| *PD17-42-662* | 10.08 | 0.35 | 0.3419 | 0.0095 | 0.8230 | 2439 | 32 | 1894 | 46 | 2921 | 38 | 2.29 | 0.437 | 35.159 |
| *PD17-42-663* | 20.09 | 0.61 | 0.588 | 0.015 | 0.8736 | 3093 | 30 | 2978 | 61 | 3161 | 32 | 2.25 | 0.444 | 5.789 |
| *PD17-42-672* | 12.47 | 0.38 | 0.413 | 0.01 | 0.8042 | 2638 | 28 | 2228 | 47 | 2960 | 38 | 1.61 | 0.621 | 24.730 |
| *PD17-42-673* | 26.07 | 0.63 | 0.6542 | 0.0083 | 0.7707 | 3348 | 24 | 3244 | 32 | 3405 | 30 | 2.319 | 0.431 | 4.728 |
| *PD17-42-674* | 14.84 | 0.44 | 0.433 | 0.01 | 0.5707 | 2804 | 29 | 2318 | 45 | 3322 | 43 | 3.57 | 0.280 | 30.223 |
| *PD17-42-674-2* | 10.14 | 0.44 | 0.377 | 0.016 | 0.7924 | 2443 | 40 | 2058 | 74 | 2773 | 50 | 2.52 | 0.397 | 25.784 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-42-675* | 14.13 | 0.57 | 0.455 | 0.016 | 0.8750 | 2756 | 39 | 2417 | 72 | 3007 | 40 | 2.47 | 0.405 | 19.621 |
| *PD17-42-676* | 19.06 | 0.55 | 0.519 | 0.01 | 0.6641 | 3043 | 28 | 2695 | 42 | 3270 | 36 | 2.007 | 0.498 | 17.584 |
| *PD17-42-677* | 11 | 0.75 | 0.326 | 0.019 | 0.9641 | 2507 | 65 | 1813 | 94 | 3137 | 38 | 0.651 | 1.536 | 42.206 |
| *PD17-42-678* | 20.82 | 0.52 | 0.5473 | 0.0083 | 0.8259 | 3128 | 24 | 2812 | 35 | 3328 | 29 | 4.54 | 0.220 | 15.505 |
| *PD17-42-679* | 8.59 | 0.21 | 0.3488 | 0.0059 | 0.7887 | 2294 | 22 | 1928 | 28 | 2627 | 32 | 2.987 | 0.335 | 26.608 |
| *PD17-42-680* | 17.78 | 0.57 | 0.479 | 0.011 | 0.7888 | 2974 | 32 | 2519 | 50 | 3288 | 39 | 2.447 | 0.409 | 23.388 |
| *PD17-42-681* | 7.9 | 0.19 | 0.2641 | 0.005 | 0.5649 | 2219 | 22 | 1510 | 25 | 2954 | 34 | 0.783 | 1.277 | 48.883 |
| *PD17-42-682* | 20.41 | 0.51 | 0.5738 | 0.0087 | 0.6743 | 3109 | 24 | 2922 | 36 | 3220 | 32 | 2.86 | 0.350 | 9.255 |
| *PD17-42-683* | 21.3 | 0.54 | 0.5677 | 0.009 | 0.4884 | 3155 | 27 | 2897 | 37 | 3310 | 38 | 8.19 | 0.122 | 12.477 |
| *PD17-42-692* | 20.81 | 0.89 | 0.569 | 0.021 | 0.8009 | 3125 | 41 | 2900 | 86 | 3269 | 46 | 1.213 | 0.824 | 11.288 |
| *PD17-42-693* | 27.83 | 0.73 | 0.688 | 0.014 | 0.5294 | 3410 | 26 | 3372 | 53 | 3419 | 39 | 1.42 | 0.704 | 1.375 |
| *PD17-42-694* | 14.89 | 0.4 | 0.4668 | 0.0084 | 0.8330 | 2807 | 26 | 2468 | 37 | 3048 | 33 | 8.06 | 0.124 | 19.029 |
| *PD17-42-695* | 13.03 | 0.39 | 0.3636 | 0.0088 | 0.8512 | 2677 | 29 | 1997 | 41 | 3231 | 32 | 1.504 | 0.665 | 38.193 |
| *PD17-42-695-2* | 11.59 | 0.35 | 0.3153 | 0.0077 | 0.7883 | 2570 | 29 | 1766 | 38 | 3272 | 35 | 1.253 | 0.798 | 46.027 |
| *PD17-42-696* | 14.44 | 0.52 | 0.369 | 0.01 | 0.6899 | 2777 | 34 | 2023 | 49 | 3373 | 46 | 1.282 | 0.780 | 40.024 |
| *PD17-42-697* | 16.59 | 0.42 | 0.478 | 0.0087 | 0.7719 | 2909 | 24 | 2516 | 38 | 3185 | 32 | 1.829 | 0.547 | 21.005 |
| *PD17-42-698* | 10.94 | 0.38 | 0.341 | 0.01 | 0.8057 | 2515 | 34 | 1890 | 50 | 3056 | 38 | 1.185 | 0.844 | 38.154 |
| *PD17-42-699* | 9.06 | 0.25 | 0.3288 | 0.0063 | 0.7103 | 2343 | 25 | 1832 | 30 | 2816 | 37 | 1.701 | 0.588 | 34.943 |
| *PD17-42-699-2* | 23.26 | 0.66 | 0.643 | 0.015 | 0.7818 | 3237 | 28 | 3197 | 59 | 3249 | 35 | 4.66 | 0.215 | 1.600 |
| *PD17-42-700* | 25.46 | 0.77 | 0.671 | 0.018 | 0.6913 | 3325 | 29 | 3310 | 69 | 3325 | 41 | 2.93 | 0.341 | 0.451 |
| *PD17-42-701* | 12.85 | 0.33 | 0.3789 | 0.0064 | 0.7413 | 2667 | 24 | 2070 | 30 | 3145 | 34 | 0.978 | 1.022 | 34.181 |
| *PD17-42-702* | 12.75 | 0.37 | 0.398 | 0.011 | 0.7753 | 2659 | 28 | 2159 | 53 | 3056 | 40 | 1.405 | 0.712 | 29.352 |
| *PD17-42-703* | 12.18 | 0.31 | 0.3803 | 0.0069 | 0.8207 | 2616 | 24 | 2076 | 32 | 3052 | 31 | 3.63 | 0.275 | 31.979 |
| *PD17-42-712* | 24.47 | 0.57 | 0.667 | 0.0093 | 0.8157 | 3288 | 22 | 3293 | 36 | 3270 | 29 | 3.566 | 0.280 | -0.703 |
| *PD17-42-713* | 10.26 | 0.25 | 0.3202 | 0.0055 | 0.6132 | 2457 | 23 | 1790 | 27 | 3055 | 35 | 0.822 | 1.217 | 41.408 |
| *PD17-42-714* | 16.18 | 0.4 | 0.4777 | 0.0091 | 0.7487 | 2887 | 24 | 2516 | 39 | 3144 | 34 | 1.32 | 0.758 | 19.975 |
| *PD17-42-715* | 27.95 | 0.67 | 0.697 | 0.011 | 0.5738 | 3416 | 24 | 3406 | 40 | 3407 | 32 | 1.082 | 0.924 | 0.029 |
| *PD17-42-716* | 19.92 | 0.51 | 0.565 | 0.01 | 0.8251 | 3086 | 25 | 2886 | 42 | 3206 | 31 | 3.18 | 0.314 | 9.981 |
| *PD17-42-717* | 18 | 0.57 | 0.54 | 0.011 | 0.5282 | 2987 | 31 | 2780 | 46 | 3118 | 42 | 1.972 | 0.507 | 10.840 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-42-718* | 21.93 | 0.6 | 0.635 | 0.011 | 0.5622 | 3179 | 26 | 3166 | 45 | 3168 | 39 | 2.237 | 0.447 | 0.063 |
| *PD17-42-719* | 19.6 | 0.55 | 0.535 | 0.011 | 0.8331 | 3071 | 27 | 2763 | 45 | 3264 | 32 | 5.84 | 0.171 | 15.349 |
| *PD17-42-720* | 15.43 | 0.64 | 0.433 | 0.016 | 0.8280 | 2840 | 40 | 2316 | 72 | 3229 | 41 | 1.86 | 0.538 | 28.275 |
| *PD17-42-722* | 27.62 | 0.69 | 0.688 | 0.01 | 0.6466 | 3404 | 24 | 3373 | 39 | 3410 | 32 | 1.815 | 0.551 | 1.085 |
| *PD17-42-723* | 14.57 | 0.39 | 0.4478 | 0.0088 | 0.6370 | 2787 | 26 | 2385 | 39 | 3079 | 37 | 2.63 | 0.380 | 22.540 |
| *PD17-42-732* | 22.4 | 0.55 | 0.5987 | 0.0078 | 0.5623 | 3200 | 24 | 3024 | 31 | 3299 | 33 | 7.75 | 0.129 | 8.336 |
| *PD17-42-733* | 19.44 | 0.6 | 0.564 | 0.015 | 0.6806 | 3062 | 30 | 2883 | 63 | 3171 | 43 | 1.805 | 0.554 | 9.082 |
| *PD17-42-734* | 12.83 | 0.35 | 0.4386 | 0.0099 | 0.7606 | 2666 | 26 | 2343 | 45 | 2915 | 35 | 2.474 | 0.404 | 19.623 |
| *PD17-42-735* | 25.1 | 0.82 | 0.662 | 0.017 | 0.3558 | 3308 | 32 | 3268 | 68 | 3330 | 54 | 1.424 | 0.702 | 1.862 |
| *PD17-42-736* | 12.99 | 0.46 | 0.3284 | 0.0086 | 0.8055 | 2675 | 33 | 1829 | 42 | 3386 | 38 | 2.683 | 0.373 | 45.983 |
| *PD17-42-737* | 5.82 | 0.22 | 0.2515 | 0.0081 | 0.8681 | 1944 | 33 | 1445 | 42 | 2676 | 39 | 3.09 | 0.324 | 46.001 |
| *PD17-42-738* | 17.14 | 0.42 | 0.5075 | 0.0092 | 0.8089 | 2940 | 24 | 2644 | 39 | 3141 | 31 | 2.78 | 0.360 | 15.823 |
| *PD17-42-739* | 16.02 | 0.55 | 0.465 | 0.015 | 0.9305 | 2876 | 33 | 2462 | 64 | 3174 | 33 | 1.75 | 0.571 | 22.432 |
| *PD17-42-740* | 7.74 | 0.31 | 0.272 | 0.011 | 0.8549 | 2197 | 36 | 1548 | 53 | 2866 | 43 | 1.333 | 0.750 | 45.987 |
| *PD17-42-741* | 11.21 | 0.3 | 0.3973 | 0.0074 | 0.7248 | 2539 | 25 | 2156 | 34 | 2849 | 34 | 3.007 | 0.333 | 24.324 |
| *PD17-42-742* | 5.17 | 0.27 | 0.1994 | 0.0064 | 0.4819 | 1840 | 49 | 1171 | 35 | 2894 | 41 | 1.891 | 0.529 | 59.537 |
| *PD17-42-743* | 7.42 | 0.2 | 0.3252 | 0.0084 | 0.8146 | 2161 | 25 | 1822 | 38 | 2734 | 35 | 1.82 | 0.549 | 33.358 |
| *PD17-42-752* | 10.94 | 0.34 | 0.3842 | 0.0094 | 0.6702 | 2515 | 29 | 2094 | 44 | 2862 | 37 | 2.675 | 0.374 | 26.834 |
| *PD17-42-753* | 19.1 | 0.7 | 0.54 | 0.014 | 0.7301 | 3044 | 35 | 2784 | 58 | 3210 | 42 | 1.578 | 0.634 | 13.271 |
| *PD17-42-754* | 16.5 | 0.5 | 0.464 | 0.011 | 0.8474 | 2904 | 30 | 2457 | 47 | 3220 | 33 | 0.977 | 1.024 | 23.696 |
| *PD17-42-755* | 22.88 | 0.55 | 0.605 | 0.01 | 0.6117 | 3220 | 23 | 3046 | 40 | 3321 | 32 | 1.243 | 0.805 | 8.281 |
| *PD17-42-757* | 19.48 | 0.56 | 0.551 | 0.012 | 0.7678 | 3064 | 28 | 2826 | 50 | 3215 | 36 | 2.093 | 0.478 | 12.100 |
| *PD17-42-757-2* | 9.64 | 0.32 | 0.3957 | 0.0074 | 0.6263 | 2398 | 30 | 2149 | 34 | 2607 | 44 | 16.2 | 0.062 | 17.568 |
| *PD17-42-758* | 24.08 | 0.82 | 0.634 | 0.018 | 0.8292 | 3269 | 34 | 3162 | 72 | 3326 | 38 | 2.12 | 0.472 | 4.931 |
| *PD17-42-759* | 19.8 | 0.66 | 0.574 | 0.013 | 0.7671 | 3079 | 32 | 2923 | 55 | 3175 | 39 | 2.184 | 0.458 | 7.937 |
| *PD17-42-760* | 15.26 | 0.35 | 0.5285 | 0.0088 | 0.6437 | 2832 | 22 | 2735 | 37 | 2888 | 37 | 9.36 | 0.107 | 5.298 |
| *PD17-42-761* | 22.5 | 0.53 | 0.6445 | 0.0087 | 0.5044 | 3205 | 23 | 3206 | 34 | 3191 | 33 | 1.917 | 0.522 | -0.470 |
| *PD17-42-762* | 6.9 | 0.26 | 0.2196 | 0.0058 | 0.9217 | 2092 | 33 | 1278 | 31 | 3019 | 34 | 1.152 | 0.868 | 57.668 |
| *PD17-42-763* | 19.36 | 0.6 | 0.565 | 0.013 | 0.7306 | 3058 | 30 | 2900 | 48 | 3162 | 37 | 2.35 | 0.426 | 8.286 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-42-772* | 25.3 | 0.6 | 0.6668 | 0.0097 | 0.6059 | 3321 | 22 | 3292 | 38 | 3323 | 32 | 2.15 | 0.465 | 0.933 |
| *PD17-42-773* | 17.1 | 0.48 | 0.517 | 0.011 | 0.8801 | 2937 | 27 | 2683 | 45 | 3107 | 31 | 2.99 | 0.334 | 13.647 |
| *PD17-42-774* | 23.33 | 0.63 | 0.613 | 0.011 | 0.5503 | 3238 | 26 | 3081 | 43 | 3326 | 39 | 1.351 | 0.740 | 7.366 |
| *PD17-42-775* | 14.04 | 0.67 | 0.459 | 0.019 | 0.9305 | 2748 | 44 | 2430 | 82 | 3126 | 36 | 5.36 | 0.187 | 22.265 |
| *PD17-42-776* | 15.77 | 0.62 | 0.474 | 0.014 | 0.8104 | 2860 | 38 | 2500 | 59 | 3115 | 41 | 1.431 | 0.699 | 19.743 |
| *PD17-42-777* | 19.26 | 0.54 | 0.582 | 0.011 | 0.5367 | 3054 | 27 | 2954 | 47 | 3108 | 41 | 1.273 | 0.786 | 4.955 |
| *PD17-42-778* | 16.36 | 0.42 | 0.494 | 0.01 | 0.7840 | 2896 | 24 | 2585 | 44 | 3108 | 33 | 1.697 | 0.589 | 16.828 |
| *PD17-42-779* | 15.74 | 0.39 | 0.4452 | 0.0086 | 0.5291 | 2860 | 24 | 2373 | 38 | 3219 | 39 | 1.512 | 0.661 | 26.281 |
| *PD17-42-780* | 19.7 | 0.46 | 0.527 | 0.0091 | 0.7745 | 3076 | 23 | 2728 | 39 | 3299 | 32 | 2.074 | 0.482 | 17.308 |
| *PD17-42-781* | 19.19 | 0.64 | 0.562 | 0.015 | 0.8320 | 3049 | 33 | 2874 | 61 | 3157 | 37 | 0.592 | 1.689 | 8.964 |
| *PD17-42-782* | 15.36 | 0.73 | 0.43 | 0.016 | 0.9195 | 2831 | 45 | 2303 | 73 | 3225 | 38 | 1.399 | 0.715 | 28.589 |
| *PD17-42-783* | 15.09 | 0.49 | 0.4462 | 0.0082 | 0.6403 | 2818 | 31 | 2377 | 36 | 3136 | 43 | 1.401 | 0.714 | 24.203 |
| *PD17-42-792* | 15.5 | 0.34 | 0.5419 | 0.007 | 0.6311 | 2846 | 21 | 2795 | 28 | 2874 | 32 | 5.13 | 0.195 | 2.749 |
| *PD17-42-793* | 15.74 | 0.45 | 0.505 | 0.011 | 0.9213 | 2858 | 27 | 2632 | 46 | 3011 | 31 | 3.42 | 0.292 | 12.587 |
| *PD17-42-794* | 13.81 | 0.52 | 0.527 | 0.017 | 0.5672 | 2735 | 35 | 2727 | 72 | 2737 | 54 | 27.3 | 0.037 | 0.365 |
| *PD17-42-795* | 19.33 | 0.55 | 0.569 | 0.012 | 0.7250 | 3056 | 27 | 2902 | 49 | 3147 | 35 | 1.646 | 0.608 | 7.785 |
| *PD17-42-796* | 16.89 | 0.44 | 0.5144 | 0.0093 | 0.8484 | 2927 | 25 | 2674 | 40 | 3093 | 30 | 2.163 | 0.462 | 13.547 |
| *PD17-42-797* | 23.06 | 0.57 | 0.643 | 0.011 | 0.5160 | 3229 | 24 | 3199 | 43 | 3235 | 36 | 1.274 | 0.785 | 1.113 |
| *PD17-42-798* | 21.01 | 0.56 | 0.612 | 0.013 | 0.7731 | 3138 | 26 | 3077 | 53 | 3165 | 34 | 2.337 | 0.428 | 2.780 |
| *PD17-42-799* | 20.42 | 0.5 | 0.5971 | 0.0096 | 0.7308 | 3110 | 24 | 3016 | 39 | 3159 | 32 | 1.906 | 0.525 | 4.527 |
| *PD17-42-800* | 29.21 | 0.66 | 0.7016 | 0.0085 | 0.6354 | 3460 | 22 | 3425 | 32 | 3464 | 30 | 2.405 | 0.416 | 1.126 |
| *PD17-42-801* | 17.26 | 0.4 | 0.5081 | 0.0084 | 0.7695 | 2948 | 22 | 2647 | 36 | 3150 | 32 | 3.1 | 0.323 | 15.968 |
| *PD17-42-802* | 19.97 | 0.52 | 0.596 | 0.011 | 0.7639 | 3088 | 25 | 3014 | 45 | 3124 | 33 | 2.393 | 0.418 | 3.521 |
| *PD17-42-803* | 21.74 | 0.53 | 0.6123 | 0.0093 | 0.5108 | 3170 | 24 | 3077 | 37 | 3219 | 35 | 2.69 | 0.372 | 4.411 |
| *PD17-42-812* | 8.76 | 0.22 | 0.3214 | 0.005 | 0.6576 | 2311 | 23 | 1796 | 24 | 2791 | 36 | 2.842 | 0.352 | 35.650 |
| *PD17-42-813* | 26.49 | 0.63 | 0.665 | 0.013 | 0.7006 | 3363 | 23 | 3282 | 52 | 3401 | 32 | 1.825 | 0.548 | 3.499 |
| *PD17-42-814* | 18.93 | 0.62 | 0.502 | 0.014 | 0.7795 | 3036 | 31 | 2622 | 59 | 3302 | 33 | 2.214 | 0.452 | 20.594 |
| *PD17-42-815* | 22.58 | 0.51 | 0.6228 | 0.0084 | 0.7098 | 3208 | 22 | 3119 | 34 | 3252 | 30 | 1.293 | 0.773 | 4.090 |
| *PD17-42-816* | 20.31 | 0.64 | 0.534 | 0.016 | 0.5479 | 3103 | 31 | 2755 | 67 | 3333 | 39 | 0.779 | 1.284 | 17.342 |
| *PD17-42-817* | 19.31 | 0.68 | 0.561 | 0.019 | 0.8566 | 3053 | 34 | 2867 | 77 | 3171 | 38 | 2.093 | 0.478 | 9.587 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-42-818* | 24.95 | 0.64 | 0.662 | 0.012 | 0.5850 | 3305 | 25 | 3271 | 48 | 3315 | 33 | 2.778 | 0.360 | 1.327 |
| *PD17-42-819* | 18.39 | 0.68 | 0.514 | 0.018 | 0.8960 | 3007 | 35 | 2673 | 79 | 3235 | 37 | 1.138 | 0.879 | 17.372 |
| *PD17-42-820* | 20.17 | 0.51 | 0.59 | 0.01 | 0.8161 | 3098 | 24 | 2989 | 42 | 3157 | 31 | 1.874 | 0.534 | 5.322 |
| *PD17-42-821* | 21.62 | 0.8 | 0.617 | 0.022 | 0.7956 | 3164 | 36 | 3095 | 88 | 3202 | 45 | 1.679 | 0.596 | 3.342 |
| *PD17-42-822* | 17.76 | 0.49 | 0.507 | 0.011 | 0.7959 | 2976 | 26 | 2642 | 47 | 3200 | 36 | 7.46 | 0.134 | 17.438 |
| *PD17-42-823* | 16.1 | 0.56 | 0.497 | 0.018 | 0.8619 | 2879 | 33 | 2597 | 79 | 3080 | 41 | 7.7 | 0.130 | 15.682 |
| *PD17-42-823-2* | 13.59 | 0.38 | 0.4413 | 0.0099 | 0.8116 | 2720 | 26 | 2355 | 44 | 2987 | 33 | 4.38 | 0.228 | 21.158 |
| *PD17-42-832* | 21.18 | 0.51 | 0.624 | 0.01 | 0.7126 | 3148 | 25 | 3125 | 41 | 3151 | 34 | 2.478 | 0.404 | 0.825 |
| *PD17-42-833* | 18.42 | 0.63 | 0.562 | 0.017 | 0.8831 | 3009 | 33 | 2870 | 69 | 3090 | 34 | 1.645 | 0.608 | 7.120 |
| *PD17-42-834* | 16.1 | 0.77 | 0.485 | 0.019 | 0.7570 | 2878 | 45 | 2548 | 84 | 3107 | 54 | 2.34 | 0.427 | 17.992 |
| *PD17-42-835* | 8.31 | 0.24 | 0.2982 | 0.0078 | 0.8016 | 2264 | 26 | 1681 | 38 | 2828 | 40 | 1.494 | 0.669 | 40.559 |
| | | | | | | | | | | | | | | |
| *PD17-61-1000* | 20.59 | 0.58 | 0.5397 | 0.0099 | 0.6296 | 3118 | 28 | 2781 | 42 | 3331 | 37 | 2.25 | 0.444 | 16.512 |
| *PD17-61-1001* | 20.76 | 0.6 | 0.5671 | 0.0099 | 0.7749 | 3132 | 24 | 2895 | 41 | 3264 | 34 | 5.11 | 0.196 | 11.305 |
| *PD17-61-1001-2* | 17.65 | 0.44 | 0.4821 | 0.0083 | 0.7161 | 2970 | 24 | 2536 | 36 | 3266 | 33 | 5.46 | 0.183 | 22.352 |
| *PD17-61-1002* | 16.48 | 0.5 | 0.45 | 0.011 | 0.7920 | 2904 | 29 | 2392 | 49 | 3276 | 37 | 2.78 | 0.360 | 26.984 |
| *PD17-61-1003* | 26.09 | 0.61 | 0.646 | 0.0093 | 0.6898 | 3349 | 23 | 3211 | 37 | 3421 | 30 | 2.32 | 0.431 | 6.139 |
| *PD17-61-1003-2* | 24.9 | 0.78 | 0.642 | 0.012 | 0.7225 | 3303 | 31 | 3194 | 49 | 3361 | 37 | 44 | 0.023 | 4.969 |
| *PD17-61-1004* | 19.95 | 0.68 | 0.527 | 0.017 | 0.9033 | 3085 | 34 | 2726 | 71 | 3319 | 32 | 8.83 | 0.113 | 17.867 |
| *PD17-61-1013* | 13.99 | 0.38 | 0.4102 | 0.009 | 0.8305 | 2747 | 26 | 2214 | 41 | 3159 | 31 | 0.881 | 1.135 | 29.915 |
| *PD17-61-1014* | 13.54 | 0.46 | 0.402 | 0.0099 | 0.8945 | 2716 | 33 | 2177 | 46 | 3131 | 34 | 2.8 | 0.357 | 30.469 |
| *PD17-61-1015* | 27.8 | 0.74 | 0.688 | 0.016 | 0.6837 | 3413 | 28 | 3372 | 60 | 3420 | 34 | 1.71 | 0.585 | 1.404 |
| *PD17-61-1016* | 14.25 | 0.47 | 0.405 | 0.012 | 0.8408 | 2764 | 31 | 2192 | 54 | 3202 | 39 | 1.369 | 0.730 | 31.543 |
| *PD17-61-1017* | 22.56 | 0.9 | 0.628 | 0.023 | 0.8363 | 3203 | 39 | 3137 | 91 | 3247 | 36 | 1.392 | 0.718 | 3.388 |
| *PD17-61-1018* | 24.67 | 0.72 | 0.633 | 0.013 | 0.7626 | 3293 | 29 | 3158 | 52 | 3368 | 35 | 1.975 | 0.506 | 6.235 |
| *PD17-61-1019* | 23.09 | 0.6 | 0.5989 | 0.0099 | 0.6733 | 3229 | 25 | 3023 | 40 | 3340 | 35 | 1.893 | 0.528 | 9.491 |
| *PD17-61-1020* | 17.89 | 0.53 | 0.5 | 0.013 | 0.8375 | 2980 | 29 | 2612 | 57 | 3230 | 34 | 1.556 | 0.643 | 19.133 |
| *PD17-61-1021* | 29.15 | 0.71 | 0.694 | 0.011 | 0.7795 | 3457 | 24 | 3397 | 44 | 3475 | 29 | 1.298 | 0.770 | 2.245 |
| *PD17-61-1022* | 30.36 | 0.72 | 0.693 | 0.012 | 0.7421 | 3500 | 22 | 3394 | 45 | 3544 | 30 | 1.841 | 0.543 | 4.233 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-61-1023* | 24.63 | 0.61 | 0.647 | 0.012 | 0.7440 | 3293 | 24 | 3213 | 48 | 3328 | 32 | 2.816 | 0.355 | 3.456 |
| *PD17-61-1024* | 22.32 | 0.64 | 0.579 | 0.011 | 0.8027 | 3196 | 27 | 2944 | 47 | 3343 | 33 | 1.874 | 0.534 | 11.935 |
| *PD17-61-1025* | 25.21 | 0.72 | 0.626 | 0.015 | 0.7758 | 3314 | 28 | 3133 | 59 | 3416 | 35 | 4.05 | 0.247 | 8.285 |
| *PD17-61-1026* | 9.83 | 0.34 | 0.322 | 0.01 | 0.7091 | 2417 | 32 | 1800 | 49 | 2973 | 45 | 3.04 | 0.329 | 39.455 |
| *PD17-61-1027* | 14.7 | 0.39 | 0.4106 | 0.0081 | 0.8390 | 2794 | 25 | 2216 | 37 | 3228 | 30 | 1.605 | 0.623 | 31.351 |
| *PD17-61-1028* | 20.95 | 0.53 | 0.584 | 0.011 | 0.7503 | 3134 | 25 | 2963 | 44 | 3235 | 32 | 0.891 | 1.122 | 8.408 |
| *PD17-61-837* | 14.56 | 0.4 | 0.462 | 0.012 | 0.7564 | 2786 | 26 | 2449 | 53 | 3194 | 38 | 4.97 | 0.201 | 23.325 |
| *PD17-61-838* | 9.98 | 0.34 | 0.322 | 0.01 | 0.9086 | 2429 | 33 | 1798 | 51 | 3002 | 36 | 1.57 | 0.637 | 40.107 |
| *PD17-61-839* | 26.91 | 0.71 | 0.681 | 0.013 | 0.8550 | 3378 | 26 | 3344 | 51 | 3387 | 30 | 17.87 | 0.056 | 1.270 |
| *PD17-61-840* | 18.82 | 0.59 | 0.52 | 0.012 | 0.8715 | 3031 | 30 | 2699 | 52 | 3245 | 35 | 2.505 | 0.399 | 16.826 |
| *PD17-61-841* | 17.16 | 0.52 | 0.473 | 0.013 | 0.8647 | 2941 | 30 | 2496 | 56 | 3252 | 33 | 2.121 | 0.471 | 23.247 |
| *PD17-61-842* | 21.64 | 0.54 | 0.5608 | 0.0099 | 0.7531 | 3166 | 25 | 2868 | 41 | 3344 | 31 | 2.91 | 0.344 | 14.234 |
| *PD17-61-843* | 25.23 | 0.74 | 0.665 | 0.016 | 0.8202 | 3315 | 28 | 3282 | 61 | 3323 | 34 | 2.169 | 0.461 | 1.234 |
| *PD17-61-852* | 26.81 | 0.66 | 0.673 | 0.013 | 0.7150 | 3375 | 24 | 3315 | 48 | 3398 | 33 | 1.846 | 0.542 | 2.443 |
| *PD17-61-853* | 12.5 | 0.32 | 0.3464 | 0.0062 | 0.8485 | 2641 | 24 | 1916 | 30 | 3244 | 30 | 4.75 | 0.211 | 40.937 |
| *PD17-61-854* | 21.27 | 0.54 | 0.563 | 0.014 | 0.6056 | 3150 | 25 | 2876 | 58 | 3323 | 39 | 2.33 | 0.429 | 13.452 |
| *PD17-61-854-2* | 23.55 | 0.65 | 0.598 | 0.015 | 0.6400 | 3248 | 27 | 3018 | 59 | 3390 | 34 | 2.729 | 0.366 | 10.973 |
| *PD17-61-855* | 10.99 | 0.34 | 0.353 | 0.011 | 0.8880 | 2519 | 29 | 1948 | 52 | 3006 | 34 | 1.757 | 0.569 | 35.196 |
| *PD17-61-856* | 18.37 | 0.52 | 0.491 | 0.013 | 0.8365 | 3007 | 27 | 2573 | 57 | 3301 | 35 | 2.98 | 0.336 | 22.054 |
| *PD17-61-857* | 28.73 | 0.71 | 0.68 | 0.013 | 0.7617 | 3443 | 24 | 3342 | 51 | 3490 | 32 | 3.34 | 0.299 | 4.241 |
| *PD17-61-858* | 24.22 | 0.62 | 0.629 | 0.012 | 0.7143 | 3276 | 25 | 3145 | 45 | 3346 | 33 | 3.7 | 0.270 | 6.007 |
| *PD17-61-859* | 10.82 | 0.41 | 0.353 | 0.012 | 0.8608 | 2504 | 35 | 1949 | 59 | 2983 | 39 | 3.56 | 0.281 | 34.663 |
| *PD17-61-860* | 17.03 | 0.48 | 0.474 | 0.011 | 0.8109 | 2933 | 27 | 2498 | 48 | 3238 | 34 | 1.315 | 0.760 | 22.854 |
| *PD17-61-861* | 12.74 | 0.4 | 0.402 | 0.012 | 0.8809 | 2656 | 30 | 2173 | 55 | 3041 | 35 | 6.46 | 0.155 | 28.543 |
| *PD17-61-862* | 10.94 | 0.33 | 0.3024 | 0.008 | 0.8959 | 2514 | 28 | 1701 | 40 | 3248 | 32 | 3.61 | 0.277 | 47.629 |
| *PD17-61-863* | 11.03 | 0.32 | 0.3761 | 0.009 | 0.7956 | 2522 | 27 | 2056 | 42 | 2914 | 39 | 6.01 | 0.166 | 29.444 |
| *PD17-61-872* | 14.67 | 0.41 | 0.415 | 0.011 | 0.8300 | 2792 | 27 | 2236 | 48 | 3212 | 35 | 0.717 | 1.395 | 30.386 |
| *PD17-61-873* | 12 | 0.31 | 0.3822 | 0.0083 | 0.7405 | 2602 | 24 | 2084 | 39 | 3021 | 35 | 1.435 | 0.697 | 31.016 |
| *PD17-61-874* | 23.25 | 0.85 | 0.617 | 0.023 | 0.8799 | 3233 | 36 | 3093 | 91 | 3312 | 38 | 7.48 | 0.134 | 6.612 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-61-875* | 30.33 | 0.76 | 0.722 | 0.012 | 0.7325 | 3495 | 25 | 3500 | 46 | 3483 | 31 | 1.989 | 0.503 | -0.488 |
| *PD17-61-876* | 30.12 | 0.82 | 0.733 | 0.016 | 0.7706 | 3491 | 26 | 3542 | 60 | 3447 | 34 | 3.072 | 0.326 | -2.756 |
| *PD17-61-877* | 25.82 | 0.76 | 0.646 | 0.017 | 0.8524 | 3336 | 29 | 3207 | 66 | 3405 | 33 | 1.324 | 0.755 | 5.815 |
| *PD17-61-878* | 25.16 | 0.63 | 0.65 | 0.013 | 0.6804 | 3314 | 25 | 3225 | 53 | 3354 | 37 | 4.6 | 0.217 | 3.846 |
| *PD17-61-879* | 21.51 | 0.57 | 0.566 | 0.011 | 0.6488 | 3161 | 25 | 2889 | 45 | 3327 | 35 | 5.22 | 0.192 | 13.165 |
| *PD17-61-880* | 13.02 | 0.44 | 0.381 | 0.012 | 0.8954 | 2678 | 33 | 2077 | 58 | 3160 | 35 | 1.389 | 0.720 | 34.272 |
| *PD17-61-881* | 14.17 | 0.49 | 0.402 | 0.015 | 0.8344 | 2758 | 33 | 2176 | 71 | 3207 | 44 | 0.823 | 1.215 | 32.148 |
| *PD17-61-882* | 20.87 | 0.67 | 0.553 | 0.016 | 0.8555 | 3129 | 32 | 2832 | 67 | 3316 | 35 | 1.226 | 0.816 | 14.596 |
| *PD17-61-883* | 14.27 | 0.47 | 0.421 | 0.013 | 0.9158 | 2764 | 32 | 2262 | 60 | 3146 | 33 | 9.23 | 0.108 | 28.099 |
| *PD17-61-884* | 25.32 | 0.81 | 0.6 | 0.017 | 0.8430 | 3317 | 31 | 3025 | 68 | 3492 | 36 | 1.527 | 0.655 | 13.373 |
| *PD17-61-892* | 15.48 | 0.58 | 0.436 | 0.015 | 0.8625 | 2842 | 36 | 2330 | 69 | 3217 | 39 | 0.44 | 2.273 | 27.572 |
| *PD17-61-893* | 15.46 | 0.48 | 0.438 | 0.013 | 0.8045 | 2845 | 28 | 2338 | 60 | 3210 | 38 | 1.045 | 0.957 | 27.165 |
| *PD17-61-894* | 18.53 | 0.53 | 0.454 | 0.01 | 0.8399 | 3016 | 28 | 2412 | 45 | 3435 | 32 | 1.269 | 0.788 | 29.782 |
| *PD17-61-895* | 15.03 | 0.48 | 0.431 | 0.012 | 0.8798 | 2813 | 31 | 2305 | 56 | 3191 | 33 | 1.499 | 0.667 | 27.766 |
| *PD17-61-896* | 26.02 | 0.67 | 0.67 | 0.013 | 0.8327 | 3345 | 25 | 3303 | 52 | 3356 | 30 | 1.55 | 0.645 | 1.579 |
| *PD17-61-897* | 24.06 | 0.64 | 0.601 | 0.013 | 0.8149 | 3269 | 26 | 3032 | 52 | 3407 | 32 | 1.319 | 0.758 | 11.007 |
| *PD17-61-898* | 18.72 | 0.55 | 0.495 | 0.013 | 0.8536 | 3024 | 29 | 2588 | 54 | 3319 | 33 | 1.253 | 0.798 | 22.025 |
| *PD17-61-899* | 17.48 | 0.42 | 0.5079 | 0.0081 | 0.3574 | 2961 | 23 | 2647 | 35 | 3311 | 37 | 0.958 | 1.044 | 20.054 |
| *PD17-61-900* | 13.56 | 0.37 | 0.419 | 0.0085 | 0.8398 | 2717 | 27 | 2254 | 39 | 3299 | 31 | 1.035 | 0.966 | 31.676 |
| *PD17-61-901* | 24.43 | 1.1 | 0.666 | 0.025 | 0.8674 | 3283 | 43 | 3289 | 97 | 3270 | 42 | 1.171 | 0.854 | -0.581 |
| *PD17-61-902* | 31.58 | 0.82 | 0.722 | 0.017 | 0.8018 | 3536 | 26 | 3501 | 62 | 3536 | 33 | 2.357 | 0.424 | 0.990 |
| *PD17-61-903* | 5.73 | 0.24 | 0.2028 | 0.008 | 0.9516 | 1933 | 36 | 1189 | 43 | 2855 | 35 | 3.76 | 0.266 | 58.354 |
| *PD17-61-912* | 19.01 | 0.7 | 0.508 | 0.015 | 0.7684 | 3038 | 37 | 2644 | 65 | 3299 | 44 | 1.71 | 0.585 | 19.855 |
| *PD17-61-913* | 22.21 | 0.66 | 0.587 | 0.018 | 0.8120 | 3191 | 29 | 2973 | 72 | 3322 | 38 | 2.55 | 0.392 | 10.506 |
| *PD17-61-914* | 13.33 | 0.39 | 0.411 | 0.0096 | 0.8727 | 2699 | 28 | 2217 | 44 | 3076 | 32 | 1.128 | 0.887 | 27.926 |
| *PD17-61-915* | 18.98 | 0.66 | 0.546 | 0.018 | 0.8241 | 3035 | 34 | 2803 | 75 | 3184 | 39 | 1.205 | 0.830 | 11.966 |
| *PD17-61-916* | 25.89 | 0.66 | 0.674 | 0.012 | 0.7966 | 3340 | 25 | 3319 | 48 | 3338 | 30 | 1.625 | 0.615 | 0.569 |
| *PD17-61-917* | 9.2 | 0.29 | 0.2838 | 0.0081 | 0.8500 | 2355 | 29 | 1609 | 41 | 3075 | 36 | 0.767 | 1.304 | 47.675 |
| *PD17-61-918* | 24.63 | 0.69 | 0.607 | 0.013 | 0.8472 | 3290 | 28 | 3053 | 52 | 3429 | 31 | 2.319 | 0.431 | 10.965 |
| *PD17-61-919* | 16.21 | 0.47 | 0.466 | 0.012 | 0.8425 | 2887 | 28 | 2464 | 53 | 3185 | 33 | 1.223 | 0.818 | 22.637 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-61-920* | 27.6 | 0.89 | 0.647 | 0.02 | 0.8728 | 3402 | 32 | 3213 | 78 | 3504 | 34 | 13.53 | 0.074 | 8.305 |
| *PD17-61-921* | 19.42 | 0.76 | 0.553 | 0.019 | 0.8431 | 3059 | 39 | 2833 | 80 | 3200 | 40 | 0.99 | 1.010 | 11.469 |
| *PD17-61-922* | 21.7 | 0.65 | 0.581 | 0.013 | 0.8189 | 3167 | 29 | 2959 | 56 | 3286 | 33 | 0.663 | 1.508 | 9.951 |
| *PD17-61-923* | 22.02 | 0.59 | 0.56 | 0.012 | 0.7805 | 3183 | 26 | 2863 | 50 | 3382 | 32 | 1.112 | 0.899 | 15.346 |
| *PD17-61-932* | 11.06 | 0.29 | 0.3288 | 0.0072 | 0.8625 | 2526 | 24 | 1831 | 35 | 3128 | 31 | 0.936 | 1.068 | 41.464 |
| *PD17-61-933* | 17.28 | 0.5 | 0.455 | 0.01 | 0.8631 | 2946 | 28 | 2416 | 46 | 3318 | 32 | 1.29 | 0.775 | 27.185 |
| *PD17-61-934* | 27.05 | 0.88 | 0.649 | 0.017 | 0.6496 | 3383 | 32 | 3220 | 67 | 3467 | 42 | 1.86 | 0.538 | 7.124 |
| *PD17-61-935* | 10.04 | 0.35 | 0.341 | 0.01 | 0.7787 | 2434 | 32 | 1891 | 48 | 3077 | 39 | 1.045 | 0.957 | 38.544 |
| *PD17-61-936* | 18.68 | 0.69 | 0.53 | 0.018 | 0.8761 | 3022 | 37 | 2740 | 76 | 3204 | 39 | 1.411 | 0.709 | 14.482 |
| *PD17-61-937* | 9.57 | 0.32 | 0.2847 | 0.0082 | 0.7982 | 2390 | 32 | 1613 | 41 | 3130 | 38 | 2.245 | 0.445 | 48.466 |
| *PD17-61-938* | 21.07 | 0.6 | 0.53 | 0.014 | 0.8382 | 3138 | 28 | 2737 | 57 | 3397 | 33 | 1.113 | 0.898 | 19.429 |
| *PD17-61-940* | 18.07 | 0.52 | 0.538 | 0.014 | 0.8440 | 2990 | 28 | 2768 | 60 | 3361 | 34 | 12.9 | 0.078 | 17.644 |
| *PD17-61-941* | 27.09 | 0.76 | 0.684 | 0.016 | 0.8024 | 3384 | 28 | 3354 | 62 | 3390 | 34 | 2.329 | 0.429 | 1.062 |
| *PD17-61-942* | 22.45 | 0.6 | 0.5763 | 0.0099 | 0.6503 | 3202 | 26 | 2933 | 40 | 3349 | 30 | 1.905 | 0.525 | 12.422 |
| *PD17-61-943* | 19.06 | 0.54 | 0.519 | 0.015 | 0.8465 | 3042 | 28 | 2692 | 64 | 3274 | 37 | 2.152 | 0.465 | 17.776 |
| *PD17-61-952* | 21.37 | 1 | 0.607 | 0.032 | 0.7782 | 3149 | 46 | 3050 | 130 | 3205 | 54 | 1.818 | 0.550 | 4.836 |
| *PD17-61-955* | 19.94 | 0.48 | 0.582 | 0.01 | 0.8018 | 3087 | 24 | 2952 | 42 | 3317 | 30 | 3 | 0.333 | 11.004 |
| *PD17-61-956* | 27.61 | 0.83 | 0.681 | 0.019 | 0.7654 | 3405 | 31 | 3340 | 71 | 3430 | 37 | 2.143 | 0.467 | 2.624 |
| *PD17-61-957* | 24.31 | 0.59 | 0.63 | 0.01 | 0.8851 | 3280 | 23 | 3149 | 39 | 3347 | 30 | 1.275 | 0.784 | 5.916 |
| *PD17-61-958* | 16.52 | 0.57 | 0.476 | 0.015 | 0.7983 | 2902 | 34 | 2507 | 65 | 3180 | 39 | 1.004 | 0.996 | 21.164 |
| *PD17-61-959* | 18 | 0.67 | 0.511 | 0.018 | 0.8582 | 2987 | 36 | 2656 | 79 | 3347 | 38 | 1.808 | 0.553 | 20.645 |
| *PD17-61-960* | 27.5 | 0.74 | 0.668 | 0.017 | 0.7622 | 3399 | 26 | 3293 | 67 | 3452 | 36 | 1.113 | 0.898 | 4.606 |
| *PD17-61-961* | 25.41 | 0.64 | 0.659 | 0.014 | 0.8106 | 3322 | 25 | 3261 | 53 | 3354 | 32 | 2.71 | 0.369 | 2.773 |
| *PD17-61-962* | 25.71 | 0.92 | 0.635 | 0.021 | 0.7984 | 3331 | 36 | 3163 | 85 | 3424 | 40 | 2.026 | 0.494 | 7.623 |
| *PD17-61-963* | 13.27 | 0.39 | 0.3844 | 0.0098 | 0.8090 | 2697 | 28 | 2095 | 46 | 3175 | 35 | 7.39 | 0.135 | 34.016 |
| *PD17-61-964* | 24.43 | 0.82 | 0.623 | 0.018 | 0.8307 | 3282 | 33 | 3116 | 72 | 3374 | 36 | 3.817 | 0.262 | 7.647 |
| *PD17-61-973* | 21.06 | 0.64 | 0.538 | 0.015 | 0.8762 | 3137 | 30 | 2768 | 62 | 3374 | 33 | 2.387 | 0.419 | 17.961 |
| *PD17-61-974* | 13.17 | 0.44 | 0.429 | 0.013 | 0.8737 | 2688 | 32 | 2299 | 60 | 3178 | 35 | 1.027 | 0.974 | 27.659 |
| *PD17-61-975* | 12.25 | 0.48 | 0.413 | 0.018 | 0.8511 | 2621 | 38 | 2226 | 81 | 3170 | 46 | 1.03 | 0.971 | 29.779 |
| *PD17-61-976* | 18.91 | 0.47 | 0.5198 | 0.0093 | 0.7986 | 3036 | 24 | 2697 | 39 | 3250 | 31 | 1.565 | 0.639 | 17.015 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-61-977* | 23.2 | 0.54 | 0.636 | 0.01 | 0.7748 | 3234 | 23 | 3171 | 41 | 3262 | 30 | 1.683 | 0.594 | 2.790 |
| *PD17-61-978* | 21.54 | 0.59 | 0.591 | 0.016 | 0.8786 | 3161 | 27 | 2988 | 64 | 3422 | 33 | 1.737 | 0.576 | 12.683 |
| *PD17-61-979* | 19.28 | 0.55 | 0.528 | 0.014 | 0.8212 | 3053 | 28 | 2729 | 58 | 3263 | 34 | 1.106 | 0.904 | 16.365 |
| *PD17-61-980* | 15.03 | 0.45 | 0.442 | 0.011 | 0.8799 | 2820 | 27 | 2359 | 50 | 3148 | 34 | 1.825 | 0.548 | 25.064 |
| *PD17-61-981* | 22 | 0.95 | 0.639 | 0.032 | 0.9029 | 3180 | 42 | 3180 | 130 | 3174 | 46 | 0.841 | 1.189 | -0.189 |
| *PD17-61-982* | 17.38 | 0.47 | 0.4311 | 0.0087 | 0.6812 | 2955 | 26 | 2310 | 39 | 3415 | 35 | 1.01 | 0.990 | 32.357 |
| *PD17-61-983* | 15.7 | 0.42 | 0.4523 | 0.0088 | 0.8200 | 2855 | 26 | 2410 | 41 | 3177 | 32 | 2.594 | 0.386 | 24.142 |
| *PD17-61-984* | 11.59 | 0.27 | 0.3561 | 0.0057 | 0.7503 | 2574 | 24 | 1963 | 27 | 3086 | 31 | 3.72 | 0.269 | 36.390 |
| *PD17-61-993* | 23.76 | 0.73 | 0.646 | 0.016 | 0.8493 | 3255 | 30 | 3208 | 65 | 3273 | 34 | 1.228 | 0.814 | 1.986 |
| *PD17-61-994* | 27.15 | 0.79 | 0.6567 | 0.0085 | 0.7326 | 3387 | 28 | 3253 | 33 | 3456 | 35 | 2.293 | 0.436 | 5.874 |
| *PD17-61-994-2* | 21.5 | 0.89 | 0.581 | 0.025 | 0.7138 | 3157 | 41 | 2950 | 100 | 3286 | 50 | 3.51 | 0.285 | 10.225 |
| *PD17-61-995* | 23.39 | 0.69 | 0.6 | 0.017 | 0.7650 | 3240 | 29 | 3023 | 68 | 3367 | 38 | 1.884 | 0.531 | 10.217 |
| *PD17-61-996* | 27.1 | 0.69 | 0.672 | 0.013 | 0.7482 | 3385 | 25 | 3308 | 51 | 3424 | 31 | 1.93 | 0.518 | 3.388 |
| *PD17-61-997* | 22.7 | 0.66 | 0.587 | 0.014 | 0.8295 | 3211 | 28 | 2984 | 59 | 3340 | 32 | 1.503 | 0.665 | 10.659 |
| *PD17-61-998* | 18.26 | 0.49 | 0.491 | 0.011 | 0.5273 | 3003 | 26 | 2575 | 48 | 3297 | 40 | 2.688 | 0.372 | 21.899 |
| *PD17-61-999* | 18.31 | 0.53 | 0.498 | 0.011 | 0.8361 | 3005 | 29 | 2604 | 47 | 3276 | 34 | 4.88 | 0.205 | 20.513 |
| | | | | | | | | | | | | | | |
| *PD18-117-10* | 7.57 | 0.26 | 0.2459 | 0.0084 | 0.7046 | 2181 | 15 | 1417 | 22 | 3004 | 21 | 1.013 | 0.987 | 52.830 |
| *PD18-117-100* | 6.78 | 0.22 | 0.2248 | 0.007 | 0.6562 | 2083 | 14 | 1307 | 18 | 2971 | 22 | 1.23 | 0.813 | 56.008 |
| *PD18-117-102* | 17.5 | 0.49 | 0.5832 | 0.013 | 0.5452 | 2963 | 14 | 2962 | 27 | 2963 | 20 | 2.097 | 0.477 | 0.034 |
| *PD18-117-103* | 17.44 | 0.51 | 0.577 | 0.015 | 0.7309 | 2959 | 14 | 2936 | 31 | 2975 | 17 | 2.055 | 0.487 | 1.311 |
| *PD18-117-104* | 10.62 | 0.4 | 0.3075 | 0.011 | 0.7392 | 2490 | 18 | 1728 | 27 | 3188 | 21 | 1.513 | 0.661 | 45.797 |
| *PD18-117-105* | 6.86 | 0.28 | 0.1921 | 0.012 | 0.7073 | 2094 | 18 | 1133 | 32 | 3241 | 35 | 0.497 | 2.012 | 65.042 |
| *PD18-117-106* | 9.51 | 0.28 | 0.35 | 0.0088 | 0.7902 | 2389 | 14 | 1935 | 21 | 2802 | 15 | 3.86 | 0.259 | 30.942 |
| *PD18-117-107* | 23.28 | 1.1 | 0.561 | 0.025 | 0.7839 | 3239 | 23 | 2871 | 52 | 3475 | 24 | 1.269 | 0.788 | 17.381 |
| *PD18-117-108* | 20.85 | 0.67 | 0.561 | 0.015 | 0.6540 | 3132 | 16 | 2871 | 31 | 3303 | 20 | 1.732 | 0.577 | 13.079 |
| *PD18-117-109* | 20.15 | 0.67 | 0.564 | 0.017 | 0.7821 | 3099 | 16 | 2883 | 35 | 3241 | 17 | 1.524 | 0.656 | 11.046 |
| *PD18-117-11* | 9.13 | 0.38 | 0.2695 | 0.011 | 0.6508 | 2351 | 19 | 1538 | 28 | 3157 | 28 | 1.115 | 0.897 | 51.283 |
| *PD18-117-119* | 5.194 | 0.14 | 0.1685 | 0.0036 | 0.3836 | 1852 | 12 | 1004 | 10 | 3007 | 22 | 0.895 | 1.117 | 66.611 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-117-12* | 9.56 | 0.29 | 0.3198 | 0.0079 | 0.4151 | 2393 | 14 | 1789 | 19 | 2957 | 25 | 1.81 | 0.552 | 39.499 |
| *PD18-117-120* | 17.25 | 0.49 | 0.588 | 0.016 | 0.5169 | 2949 | 14 | 2981 | 33 | 2927 | 22 | 1.008 | 0.992 | -1.845 |
| *PD18-117-121* | 7.74 | 1 | 0.2278 | 0.024 | 0.6333 | 2201 | 58 | 1323 | 63 | 3162 | 82 | 0.521 | 1.919 | 58.159 |
| *PD18-117-122* | 7.41 | 0.32 | 0.2514 | 0.0097 | 0.5230 | 2162 | 19 | 1446 | 25 | 2934 | 33 | 1.502 | 0.666 | 50.716 |
| *PD18-117-123* | 8.94 | 0.43 | 0.2753 | 0.012 | 0.7874 | 2332 | 22 | 1568 | 30 | 3090 | 24 | 0.83 | 1.205 | 49.256 |
| *PD18-117-124* | 10.67 | 0.34 | 0.3244 | 0.0089 | 0.6949 | 2495 | 15 | 1811 | 22 | 3110 | 19 | 1.326 | 0.754 | 41.768 |
| *PD18-117-125* | 5.242 | 0.13 | 0.2108 | 0.0046 | 0.5987 | 1859 | 11 | 1233 | 12 | 2656 | 18 | 2.749 | 0.364 | 53.577 |
| *PD18-117-126* | 22.26 | 0.69 | 0.626 | 0.019 | 0.6336 | 3195 | 15 | 3134 | 38 | 3234 | 21 | 1.85 | 0.541 | 3.092 |
| *PD18-117-127* | 10.07 | 0.36 | 0.3013 | 0.011 | 0.7159 | 2441 | 17 | 1698 | 27 | 3136 | 22 | 0.801 | 1.248 | 45.855 |
| *PD18-117-13* | 7.6 | 0.6 | 0.2249 | 0.017 | 0.8822 | 2185 | 35 | 1308 | 45 | 3153 | 30 | 1.13 | 0.885 | 58.516 |
| *PD18-117-135* | 18.47 | 0.54 | 0.487 | 0.014 | 0.6636 | 3015 | 14 | 2558 | 30 | 3335 | 19 | 1.006 | 0.994 | 23.298 |
| *PD18-117-136* | 9.6 | 0.32 | 0.2933 | 0.0088 | 0.5166 | 2397 | 15 | 1658 | 22 | 3103 | 25 | 1.36 | 0.735 | 46.568 |
| *PD18-117-137* | 9.77 | 0.28 | 0.3002 | 0.0082 | 0.7491 | 2413 | 13 | 1692 | 20 | 3093 | 16 | 1.493 | 0.670 | 45.296 |
| *PD18-117-138* | 20.14 | 0.61 | 0.623 | 0.017 | 0.5964 | 3098 | 15 | 3122 | 34 | 3083 | 21 | 2.38 | 0.420 | -1.265 |
| *PD18-117-139* | 9.73 | 0.39 | 0.3004 | 0.011 | 0.4731 | 2410 | 19 | 1693 | 27 | 3086 | 32 | 0.844 | 1.185 | 45.139 |
| *PD18-117-14* | 9.05 | 0.34 | 0.302 | 0.011 | 0.7691 | 2343 | 17 | 1701 | 27 | 2961 | 21 | 1.222 | 0.818 | 42.553 |
| *PD18-117-140* | 21.02 | 0.58 | 0.5959 | 0.014 | 0.6398 | 3140 | 14 | 3013 | 28 | 3221 | 18 | 1.954 | 0.512 | 6.458 |
| *PD18-117-142* | 19.44 | 0.53 | 0.5674 | 0.013 | 0.4462 | 3064 | 13 | 2897 | 27 | 3175 | 21 | 2.223 | 0.450 | 8.756 |
| *PD18-117-143* | 3.195 | 0.27 | 0.1327 | 0.0068 | 0.2036 | 1456 | 33 | 803 | 19 | 2602 | 75 | 2.837 | 0.352 | 69.139 |
| *PD18-117-144* | 13.02 | 0.5 | 0.442 | 0.016 | 0.7305 | 2681 | 18 | 2360 | 36 | 2933 | 22 | 1.348 | 0.742 | 19.536 |
| *PD18-117-145* | 17.47 | 0.79 | 0.497 | 0.022 | 0.7966 | 2961 | 22 | 2601 | 47 | 3216 | 23 | 0.696 | 1.437 | 19.123 |
| *PD18-117-15* | 7.22 | 0.41 | 0.2321 | 0.013 | 0.5905 | 2139 | 25 | 1345 | 34 | 3021 | 41 | 0.833 | 1.200 | 55.478 |
| *PD18-117-153* | 15.45 | 0.88 | 0.441 | 0.024 | 0.5350 | 2843 | 27 | 2355 | 54 | 3210 | 43 | 0.972 | 1.029 | 26.636 |
| *PD18-117-154* | 18.48 | 0.62 | 0.599 | 0.016 | 0.4640 | 3015 | 16 | 3026 | 32 | 3008 | 26 | 2.467 | 0.405 | -0.598 |
| *PD18-117-155* | 19.3 | 0.78 | 0.556 | 0.022 | 0.5142 | 3057 | 20 | 2850 | 46 | 3196 | 31 | 2.75 | 0.364 | 10.826 |
| *PD18-117-156* | 9.9 | 0.34 | 0.314 | 0.011 | 0.6365 | 2426 | 16 | 1760 | 27 | 3043 | 24 | 1.56 | 0.641 | 42.162 |
| *PD18-117-157* | 18.11 | 0.52 | 0.49 | 0.012 | 0.4836 | 2996 | 14 | 2571 | 26 | 3295 | 22 | 2.104 | 0.475 | 21.973 |
| *PD18-117-158* | 11.78 | 0.42 | 0.3835 | 0.013 | 0.7109 | 2587 | 17 | 2093 | 30 | 3001 | 22 | 2.109 | 0.474 | 30.257 |
| *PD18-117-16* | 8.01 | 0.32 | 0.2444 | 0.0097 | 0.6249 | 2232 | 18 | 1410 | 25 | 3105 | 28 | 0.684 | 1.462 | 54.589 |
| *PD18-117-160* | 11.56 | 0.46 | 0.3471 | 0.013 | 0.5288 | 2569 | 19 | 1921 | 31 | 3130 | 30 | 2.23 | 0.448 | 38.626 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-117-161* | 12.58 | 0.41 | 0.3906 | 0.011 | 0.6075 | 2649 | 15 | 2126 | 26 | 3077 | 22 | 1.027 | 0.974 | 30.907 |
| *PD18-117-162* | 7.57 | 0.45 | 0.2363 | 0.012 | 0.8390 | 2181 | 27 | 1367 | 31 | 3068 | 26 | 0.598 | 1.672 | 55.443 |
| *PD18-117-17* | 25.07 | 0.62 | 0.5904 | 0.014 | 0.8711 | 3311 | 12 | 2991 | 28 | 3511 | 10 | 2.166 | 0.462 | 14.811 |
| *PD18-117-18* | 17.78 | 0.57 | 0.574 | 0.015 | 0.5968 | 2978 | 16 | 2924 | 31 | 3014 | 22 | 1.138 | 0.879 | 2.986 |
| *PD18-117-19* | 9.78 | 0.54 | 0.3274 | 0.013 | 0.6056 | 2414 | 25 | 1826 | 32 | 2956 | 36 | 2.024 | 0.494 | 38.227 |
| *PD18-117-27* | 5.19 | 0.25 | 0.1614 | 0.0056 | 0.6387 | 1851 | 21 | 965 | 16 | 3074 | 30 | 0.972 | 1.029 | 68.608 |
| *PD18-117-28* | 5.38 | 0.16 | 0.206 | 0.005 | 0.6804 | 1882 | 13 | 1207 | 13 | 2737 | 19 | 1.516 | 0.660 | 55.901 |
| *PD18-117-29* | 10.08 | 0.29 | 0.3133 | 0.0093 | 0.6832 | 2442 | 13 | 1757 | 23 | 3075 | 19 | 1.091 | 0.917 | 42.862 |
| *PD18-117-30* | 10.87 | 1.4 | 0.3368 | 0.028 | 0.6812 | 2512 | 60 | 1871 | 68 | 3080 | 75 | 0.953 | 1.049 | 39.253 |
| *PD18-117-31* | 11.18 | 0.55 | 0.3217 | 0.015 | 0.4631 | 2538 | 23 | 1798 | 37 | 3198 | 39 | 0.917 | 1.091 | 43.777 |
| *PD18-117-32* | 9.68 | 0.41 | 0.318 | 0.013 | 0.8286 | 2405 | 20 | 1780 | 32 | 2986 | 20 | 1.174 | 0.852 | 40.388 |
| *PD18-117-33* | 7.32 | 0.31 | 0.2583 | 0.01 | 0.5099 | 2151 | 19 | 1481 | 26 | 2871 | 33 | 1.712 | 0.584 | 48.415 |
| *PD18-117-34* | 8.08 | 0.31 | 0.2474 | 0.008 | 0.7496 | 2240 | 17 | 1425 | 21 | 3099 | 21 | 0.758 | 1.319 | 54.017 |
| *PD18-117-35* | 14.46 | 0.49 | 0.4179 | 0.012 | 0.7026 | 2780 | 16 | 2251 | 27 | 3191 | 20 | 0.655 | 1.527 | 29.458 |
| *PD18-117-36* | 6.56 | 0.44 | 0.2004 | 0.012 | 0.7639 | 2054 | 30 | 1177 | 32 | 3103 | 35 | 0.816 | 1.225 | 62.069 |
| *PD18-117-37* | 12.65 | 0.61 | 0.3826 | 0.017 | 0.8790 | 2654 | 23 | 2088 | 40 | 3119 | 19 | 1.111 | 0.900 | 33.055 |
| *PD18-117-45* | 22.8 | 1 | 0.613 | 0.026 | 0.7769 | 3218 | 21 | 3082 | 52 | 3305 | 23 | 0.812 | 1.232 | 6.747 |
| *PD18-117-47* | 23.83 | 0.66 | 0.636 | 0.016 | 0.5689 | 3261 | 14 | 3173 | 32 | 3316 | 20 | 15 | 0.067 | 4.312 |
| *PD18-117-48* | 24.06 | 0.68 | 0.664 | 0.018 | 0.5333 | 3271 | 14 | 3283 | 35 | 3264 | 21 | 1.226 | 0.816 | -0.582 |
| *PD18-117-49* | 18.5 | 0.44 | 0.5945 | 0.013 | 0.4707 | 3016 | 12 | 3008 | 26 | 3022 | 19 | 2.067 | 0.484 | 0.463 |
| *PD18-117-50* | 14.7 | 0.43 | 0.4135 | 0.011 | 0.5057 | 2796 | 14 | 2231 | 25 | 3234 | 22 | 1.107 | 0.903 | 31.014 |
| *PD18-117-51* | 18.82 | 0.55 | 0.605 | 0.014 | 0.6796 | 3033 | 14 | 3050 | 28 | 3021 | 18 | 1.48 | 0.676 | -0.960 |
| *PD18-117-52* | 9.16 | 0.27 | 0.2432 | 0.0064 | 0.6182 | 2354 | 14 | 1403 | 17 | 3324 | 20 | 0.924 | 1.082 | 57.792 |
| *PD18-117-53* | 5.2 | 0.2 | 0.1699 | 0.0061 | 0.5551 | 1853 | 16 | 1012 | 17 | 2995 | 28 | 0.687 | 1.456 | 66.210 |
| *PD18-117-54* | 6.19 | 0.2 | 0.2134 | 0.0054 | 0.4628 | 2003 | 14 | 1247 | 14 | 2908 | 25 | 0.985 | 1.015 | 57.118 |
| *PD18-117-55* | 9.39 | 0.65 | 0.2658 | 0.018 | 0.7102 | 2377 | 32 | 1519 | 46 | 3224 | 41 | 0.692 | 1.445 | 52.885 |
| *PD18-117-63* | 11.09 | 0.4 | 0.3885 | 0.012 | 0.6808 | 2531 | 17 | 2116 | 28 | 2882 | 22 | 1.069 | 0.935 | 26.579 |
| *PD18-117-64* | 14.06 | 0.76 | 0.452 | 0.023 | 0.8649 | 2754 | 26 | 2404 | 51 | 3021 | 22 | 2.97 | 0.337 | 20.424 |
| *PD18-117-65* | 20.13 | 0.55 | 0.607 | 0.016 | 0.4909 | 3098 | 13 | 3058 | 32 | 3123 | 22 | 1.184 | 0.845 | 2.081 |
| *PD18-117-66* | 13.07 | 0.4 | 0.3625 | 0.01 | 0.6917 | 2685 | 15 | 1994 | 24 | 3256 | 18 | 1.268 | 0.789 | 38.759 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-117-67* | 8.55 | 0.22 | 0.2427 | 0.0061 | 0.6998 | 2291 | 12 | 1401 | 16 | 3219 | 16 | 0.575 | 1.739 | 56.477 |
| *PD18-117-68* | 17.5 | 0.56 | 0.584 | 0.018 | 0.7370 | 2963 | 15 | 2965 | 37 | 2961 | 19 | 2.631 | 0.380 | -0.135 |
| *PD18-117-69* | 5.38 | 0.17 | 0.2202 | 0.0055 | 0.7251 | 1882 | 14 | 1283 | 15 | 2627 | 18 | 1.248 | 0.801 | 51.161 |
| *PD18-117-70* | 8.45 | 4 | 0.29 | 0.068 | 0.6052 | 2281 | 215 | 1642 | 170 | 2916 | 308 | 0.927 | 1.079 | 43.690 |
| *PD18-117-71* | 8.53 | 0.6 | 0.2596 | 0.0099 | 0.8693 | 2289 | 32 | 1488 | 25 | 3109 | 33 | 0.938 | 1.066 | 52.139 |
| *PD18-117-72* | 12.69 | 0.73 | 0.349 | 0.018 | 0.5518 | 2657 | 27 | 1930 | 43 | 3269 | 41 | 1.649 | 0.606 | 40.961 |
| *PD18-117-73* | 17.69 | 0.55 | 0.591 | 0.016 | 0.5742 | 2973 | 15 | 2993 | 32 | 2959 | 22 | 2.222 | 0.450 | -1.149 |
| *PD18-117-81* | 23.35 | 0.71 | 0.657 | 0.017 | 0.7227 | 3242 | 15 | 3255 | 33 | 3233 | 17 | 0.816 | 1.225 | -0.680 |
| *PD18-117-82* | 21.51 | 0.76 | 0.562 | 0.019 | 0.7118 | 3162 | 17 | 2875 | 39 | 3349 | 21 | 1.104 | 0.906 | 14.153 |
| *PD18-117-83* | 19.84 | 0.58 | 0.61 | 0.017 | 0.4067 | 3084 | 14 | 3070 | 34 | 3092 | 25 | 2.078 | 0.481 | 0.712 |
| *PD18-117-84* | 15.21 | 0.63 | 0.491 | 0.015 | 0.5579 | 2828 | 20 | 2575 | 32 | 3014 | 28 | 0.812 | 1.232 | 14.565 |
| *PD18-117-85* | 13.21 | 0.4 | 0.3686 | 0.01 | 0.6616 | 2695 | 14 | 2023 | 24 | 3246 | 19 | 0.773 | 1.294 | 37.677 |
| *PD18-117-86* | 11.06 | 0.33 | 0.3204 | 0.0082 | 0.7256 | 2528 | 14 | 1792 | 20 | 3187 | 17 | 1.384 | 0.723 | 43.772 |
| *PD18-117-87* | 18.56 | 0.55 | 0.607 | 0.014 | 0.5401 | 3019 | 14 | 3058 | 28 | 2994 | 21 | 1.874 | 0.534 | -2.138 |
| *PD18-117-88* | 8.9 | 0.3 | 0.295 | 0.0089 | 0.7305 | 2328 | 15 | 1666 | 22 | 2972 | 19 | 1.635 | 0.612 | 43.943 |
| *PD18-117-89* | 14.26 | 0.58 | 0.4463 | 0.015 | 0.6881 | 2767 | 19 | 2379 | 33 | 3064 | 24 | 1.969 | 0.508 | 22.356 |
| *PD18-117-9* | 8.97 | 0.28 | 0.2822 | 0.0079 | 0.6225 | 2335 | 14 | 1602 | 20 | 3056 | 21 | 1.106 | 0.904 | 47.579 |
| *PD18-117-90* | 4.6 | 0.15 | 0.1679 | 0.0046 | 0.7891 | 1749 | 14 | 1001 | 13 | 2816 | 17 | 1.173 | 0.853 | 64.453 |
| *PD18-117-91* | 9.92 | 0.53 | 0.25 | 0.013 | 0.8932 | 2427 | 25 | 1438 | 34 | 3406 | 19 | 1.88 | 0.532 | 57.780 |
| *PD18-117-99* | 18.05 | 0.61 | 0.585 | 0.019 | 0.6096 | 2992 | 16 | 2969 | 39 | 3008 | 24 | 2.227 | 0.449 | 1.297 |
| | | | | | | | | | | | | | | |
| *PD18-125-170* | 15.07 | 0.83 | 0.438 | 0.02 | 0.6158 | 2820 | 26 | 2342 | 45 | 3182 | 36 | 4.85 | 0.206 | 26.398 |
| *PD18-125-171* | 17.24 | 0.5 | 0.456 | 0.011 | 0.5179 | 2948 | 14 | 2422 | 24 | 3330 | 21 | 0.802 | 1.247 | 27.267 |
| *PD18-125-172* | 14.47 | 0.61 | 0.429 | 0.014 | 0.7373 | 2781 | 20 | 2301 | 32 | 3150 | 23 | 1.45 | 0.690 | 26.952 |
| *PD18-125-173* | 14.53 | 0.41 | 0.4283 | 0.013 | 0.5777 | 2785 | 14 | 2298 | 29 | 3160 | 22 | 1.116 | 0.896 | 27.278 |
| *PD18-125-174* | 15.68 | 0.42 | 0.514 | 0.011 | 0.3535 | 2858 | 13 | 2674 | 23 | 2990 | 23 | 1.146 | 0.873 | 10.569 |
| *PD18-125-175* | 19.25 | 0.6 | 0.563 | 0.018 | 0.5267 | 3054 | 15 | 2879 | 37 | 3172 | 25 | 2.171 | 0.461 | 9.237 |
| *PD18-125-176* | 19.29 | 0.48 | 0.6239 | 0.013 | 0.3829 | 3056 | 12 | 3125 | 26 | 3011 | 21 | 4.302 | 0.232 | -3.786 |
| *PD18-125-177* | 13.88 | 0.49 | 0.3791 | 0.01 | 0.6864 | 2742 | 17 | 2072 | 23 | 3280 | 21 | 0.725 | 1.379 | 36.829 |
| *PD18-125-178* | 13.76 | 0.41 | 0.389 | 0.012 | 0.8033 | 2733 | 14 | 2118 | 28 | 3226 | 15 | 2.53 | 0.395 | 34.346 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-125-179* | 19.75 | 0.49 | 0.539 | 0.013 | 0.7343 | 3079 | 12 | 2779 | 27 | 3281 | 15 | 1.8 | 0.556 | 15.300 |
| *PD18-125-180* | 18.79 | 0.55 | 0.54 | 0.015 | 0.6476 | 3031 | 14 | 2783 | 31 | 3200 | 19 | 1.024 | 0.977 | 13.031 |
| *PD18-125-181* | 21.42 | 0.79 | 0.586 | 0.02 | 0.6647 | 3158 | 18 | 2973 | 41 | 3277 | 23 | 1.338 | 0.747 | 9.277 |
| *PD18-125-182* | 19.09 | 0.52 | 0.467 | 0.013 | 0.6747 | 3046 | 13 | 2470 | 29 | 3452 | 18 | 1.86 | 0.538 | 28.447 |
| *PD18-125-183* | 18.24 | 0.82 | 0.5 | 0.022 | 0.7267 | 3002 | 22 | 2614 | 47 | 3274 | 26 | 1.516 | 0.660 | 20.159 |
| *PD18-125-192* | 11.05 | 0.61 | 0.339 | 0.017 | 0.8005 | 2527 | 26 | 1882 | 41 | 3096 | 27 | 1.258 | 0.795 | 39.212 |
| *PD18-125-193* | 17.18 | 0.44 | 0.466 | 0.014 | 0.5872 | 2945 | 12 | 2466 | 31 | 3291 | 20 | 0.93 | 1.075 | 25.068 |
| *PD18-125-194* | 15.87 | 0.61 | 0.447 | 0.015 | 0.9397 | 2869 | 18 | 2382 | 33 | 3231 | 11 | 0.858 | 1.166 | 26.277 |
| *PD18-125-195* | 24.23 | 0.67 | 0.668 | 0.016 | 0.3501 | 3278 | 14 | 3298 | 31 | 3265 | 24 | 2.13 | 0.469 | -1.011 |
| *PD18-125-197* | 20 | 0.69 | 0.578 | 0.019 | 0.6909 | 3091 | 17 | 2941 | 39 | 3191 | 21 | 1.529 | 0.654 | 7.835 |
| *PD18-125-198* | 17.75 | 0.8 | 0.547 | 0.02 | 0.4718 | 2976 | 22 | 2813 | 42 | 3089 | 34 | 2.13 | 0.469 | 8.935 |
| *PD18-125-199* | 21.27 | 0.6 | 0.57 | 0.015 | 0.8287 | 3151 | 14 | 2908 | 31 | 3310 | 13 | 1.648 | 0.607 | 12.145 |
| *PD18-125-200* | 19.19 | 0.54 | 0.477 | 0.014 | 0.7524 | 3051 | 14 | 2514 | 31 | 3427 | 16 | 0.775 | 1.290 | 26.641 |
| *PD18-125-201* | 14.01 | 0.48 | 0.396 | 0.012 | 0.6853 | 2750 | 16 | 2151 | 28 | 3226 | 21 | 0.726 | 1.377 | 33.323 |
| *PD18-125-202* | 21.61 | 0.86 | 0.612 | 0.024 | 0.6780 | 3166 | 19 | 3078 | 48 | 3223 | 25 | 1.129 | 0.886 | 4.499 |
| *PD18-125-203* | 17.05 | 0.44 | 0.524 | 0.013 | 0.5978 | 2938 | 13 | 2716 | 28 | 3093 | 18 | 2.436 | 0.411 | 12.189 |
| *PD18-125-206* | 22.37 | 0.63 | 0.627 | 0.019 | 0.8348 | 3200 | 14 | 3138 | 38 | 3239 | 14 | 0.908 | 1.101 | 3.118 |
| *PD18-125-214* | 18.57 | 0.54 | 0.488 | 0.014 | 0.7636 | 3020 | 14 | 2562 | 30 | 3340 | 16 | 0.97 | 1.031 | 23.293 |
| *PD18-125-215* | 22.49 | 0.65 | 0.635 | 0.015 | 0.7466 | 3205 | 14 | 3169 | 30 | 3228 | 16 | 1.683 | 0.594 | 1.828 |
| *PD18-125-216* | 10.32 | 0.65 | 0.2806 | 0.022 | 0.3050 | 2464 | 29 | 1594 | 55 | 3287 | 66 | 1.416 | 0.706 | 51.506 |
| *PD18-125-217* | 18.7 | 0.62 | 0.5541 | 0.018 | 0.8051 | 3026 | 16 | 2842 | 37 | 3151 | 17 | 1.8 | 0.556 | 9.806 |
| *PD18-125-218* | 21.11 | 0.73 | 0.61 | 0.019 | 0.7279 | 3144 | 17 | 3070 | 38 | 3191 | 20 | 19.3 | 0.052 | 3.792 |
| *PD18-125-219* | 12.57 | 0.52 | 0.3798 | 0.018 | 0.3699 | 2648 | 20 | 2075 | 42 | 3120 | 40 | 0.844 | 1.185 | 33.494 |
| *PD18-125-220* | 13.21 | 0.41 | 0.4275 | 0.011 | 0.4407 | 2695 | 15 | 2294 | 25 | 3010 | 25 | 1.158 | 0.864 | 23.787 |
| *PD18-125-221* | 22.31 | 0.59 | 0.635 | 0.014 | 0.4039 | 3197 | 13 | 3169 | 28 | 3215 | 21 | 1.79 | 0.559 | 1.431 |
| *PD18-125-222* | 24.99 | 0.61 | 0.688 | 0.015 | 0.4149 | 3308 | 12 | 3375 | 29 | 3267 | 20 | 1.964 | 0.509 | -3.306 |
| *PD18-125-223* | 9.22 | 0.28 | 0.2703 | 0.0078 | 0.7839 | 2360 | 14 | 1542 | 20 | 3168 | 16 | 1.036 | 0.965 | 51.326 |
| *PD18-125-224* | 21.63 | 0.53 | 0.564 | 0.013 | 0.6606 | 3167 | 12 | 2883 | 27 | 3353 | 16 | 1.855 | 0.539 | 14.017 |
| *PD18-125-225* | 18.32 | 0.45 | 0.605 | 0.014 | 0.8000 | 3007 | 12 | 3050 | 28 | 2978 | 13 | 2.928 | 0.342 | -2.418 |
| *PD18-125-226* | 24.02 | 0.66 | 0.661 | 0.015 | 0.5431 | 3269 | 14 | 3271 | 29 | 3268 | 20 | 1.107 | 0.903 | -0.092 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-125-227* | 21.25 | 0.62 | 0.602 | 0.016 | 0.4072 | 3150 | 14 | 3038 | 32 | 3222 | 24 | 1.301 | 0.769 | 5.711 |
| *PD18-125-228* | 14.24 | 0.65 | 0.383 | 0.017 | 0.7152 | 2766 | 22 | 2090 | 40 | 3304 | 27 | 1.134 | 0.882 | 36.743 |
| *PD18-125-239* | 6.96 | 0.22 | 0.2095 | 0.0059 | 0.4960 | 2106 | 14 | 1226 | 16 | 3126 | 24 | 1.632 | 0.613 | 60.781 |
| *PD18-125-240* | 21.57 | 1.1 | 0.561 | 0.03 | 0.6676 | 3165 | 25 | 2871 | 62 | 3357 | 34 | 1.233 | 0.811 | 14.477 |
| *PD18-125-241* | 17.8 | 0.58 | 0.4564 | 0.016 | 0.5276 | 2979 | 16 | 2424 | 35 | 3379 | 26 | 1.302 | 0.768 | 28.263 |
| *PD18-125-242* | 8.4 | 0.57 | 0.2576 | 0.013 | 0.3369 | 2275 | 31 | 1478 | 33 | 3097 | 56 | 3.33 | 0.300 | 52.276 |
| *PD18-125-243* | 19.75 | 0.51 | 0.532 | 0.012 | 0.5229 | 3079 | 13 | 2750 | 25 | 3302 | 19 | 1.266 | 0.790 | 16.717 |
| *PD18-125-244* | 19.77 | 0.57 | 0.545 | 0.012 | 0.5724 | 3080 | 14 | 2804 | 25 | 3265 | 19 | 2.7 | 0.370 | 14.119 |
| *PD18-125-246* | 23.66 | 0.62 | 0.631 | 0.014 | 0.6518 | 3254 | 13 | 3154 | 28 | 3317 | 17 | 1.255 | 0.797 | 4.914 |
| *PD18-125-247* | 14.78 | 0.89 | 0.409 | 0.025 | 0.2440 | 2801 | 29 | 2210 | 57 | 3259 | 59 | 1.644 | 0.608 | 32.188 |
| *PD18-125-248* | 16.47 | 0.67 | 0.473 | 0.017 | 0.6872 | 2904 | 20 | 2497 | 37 | 3201 | 24 | 3.15 | 0.317 | 21.993 |
| *PD18-125-249* | 12.54 | 0.53 | 0.3625 | 0.013 | 0.5784 | 2646 | 20 | 1994 | 31 | 3190 | 29 | 1.225 | 0.816 | 37.492 |
| *PD18-125-250* | 21.63 | 0.54 | 0.6056 | 0.013 | 0.4649 | 3167 | 12 | 3052 | 26 | 3241 | 19 | 2.166 | 0.462 | 5.832 |
| *PD18-125-251* | 20.96 | 1.1 | 0.569 | 0.028 | 0.4292 | 3137 | 26 | 2904 | 58 | 3289 | 43 | 2.67 | 0.375 | 11.706 |
| *PD18-125-252* | 21.82 | 0.59 | 0.619 | 0.015 | 0.5827 | 3176 | 13 | 3106 | 30 | 3220 | 19 | 1.401 | 0.714 | 3.540 |
| *PD18-125-253* | 14.09 | 0.6 | 0.3829 | 0.016 | 0.6362 | 2756 | 20 | 2090 | 37 | 3288 | 29 | 0.722 | 1.385 | 36.436 |
| *PD18-125-261* | 16.7 | 0.42 | 0.4059 | 0.0096 | 0.5618 | 2918 | 12 | 2196 | 22 | 3462 | 18 | 0.964 | 1.037 | 36.568 |
| *PD18-125-262* | 21.77 | 0.56 | 0.633 | 0.015 | 0.3732 | 3174 | 13 | 3161 | 30 | 3181 | 22 | 1.393 | 0.718 | 0.629 |
| *PD18-125-263* | 21.32 | 0.56 | 0.593 | 0.015 | 0.8603 | 3153 | 13 | 3002 | 30 | 3251 | 11 | 1.948 | 0.513 | 7.659 |
| *PD18-125-264* | 17.04 | 0.65 | 0.477 | 0.021 | 0.5361 | 2937 | 18 | 2514 | 46 | 3241 | 32 | 1.261 | 0.793 | 22.431 |
| *PD18-125-265* | 16.93 | 0.44 | 0.4421 | 0.0094 | 0.5078 | 2931 | 13 | 2360 | 21 | 3350 | 19 | 0.773 | 1.294 | 29.552 |
| *PD18-125-266* | 10.26 | 0.39 | 0.3411 | 0.011 | 0.7883 | 2459 | 18 | 1892 | 26 | 2967 | 19 | 2.4 | 0.417 | 36.232 |
| *PD18-125-267* | 18.68 | 0.72 | 0.527 | 0.018 | 0.7970 | 3025 | 19 | 2729 | 38 | 3229 | 19 | 1.058 | 0.945 | 15.485 |
| *PD18-125-268* | 14.03 | 0.44 | 0.386 | 0.013 | 0.5919 | 2752 | 15 | 2104 | 30 | 3268 | 23 | 0.831 | 1.203 | 35.618 |
| *PD18-125-269* | 24.07 | 0.8 | 0.6387 | 0.017 | 0.5439 | 3271 | 16 | 3184 | 33 | 3325 | 23 | 9.44 | 0.106 | 4.241 |
| *PD18-125-270* | 12.59 | 0.49 | 0.361 | 0.012 | 0.6193 | 2649 | 18 | 1987 | 28 | 3203 | 25 | 0.653 | 1.531 | 37.964 |
| *PD18-125-273* | 17.04 | 0.69 | 0.444 | 0.017 | 0.5836 | 2937 | 20 | 2369 | 38 | 3354 | 28 | 1.442 | 0.693 | 29.368 |
| *PD18-125-275* | 11.27 | 0.27 | 0.3459 | 0.0084 | 0.6096 | 2546 | 11 | 1915 | 20 | 3095 | 17 | 2.534 | 0.395 | 38.126 |
| *PD18-125-283* | 5.72 | 0.2 | 0.1974 | 0.0065 | 0.6529 | 1934 | 15 | 1161 | 18 | 2907 | 23 | 2.76 | 0.362 | 60.062 |
| *PD18-125-284* | 5.02 | 0.15 | 0.1983 | 0.0051 | 0.6381 | 1823 | 13 | 1166 | 14 | 2686 | 20 | 1.601 | 0.625 | 56.590 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-125-285* | 9.57 | 0.34 | 0.2185 | 0.0081 | 0.4303 | 2394 | 16 | 1274 | 21 | 3559 | 30 | 1.188 | 0.842 | 64.203 |
| *PD18-125-286* | 20.56 | 0.52 | 0.583 | 0.012 | 0.5016 | 3118 | 12 | 2961 | 24 | 3221 | 19 | 1.074 | 0.931 | 8.072 |
| *PD18-125-287* | 10.33 | 0.33 | 0.3364 | 0.0098 | 0.6466 | 2465 | 15 | 1869 | 24 | 3000 | 21 | 2.02 | 0.495 | 37.700 |
| *PD18-125-288* | 19.55 | 0.93 | 0.542 | 0.028 | 0.7677 | 3069 | 23 | 2792 | 59 | 3256 | 27 | 1.39 | 0.719 | 14.251 |
| *PD18-125-289* | 23.09 | 0.56 | 0.6362 | 0.014 | 0.3622 | 3231 | 12 | 3174 | 28 | 3266 | 21 | 1.47 | 0.680 | 2.817 |
| *PD18-125-290* | 13.47 | 0.42 | 0.3637 | 0.011 | 0.7286 | 2713 | 15 | 2000 | 26 | 3298 | 18 | 0.878 | 1.139 | 39.357 |
| *PD18-125-291* | 22.43 | 0.63 | 0.606 | 0.015 | 0.6677 | 3203 | 14 | 3054 | 30 | 3297 | 17 | 1.47 | 0.680 | 7.370 |
| *PD18-125-292* | 22.96 | 0.83 | 0.609 | 0.022 | 0.7316 | 3225 | 18 | 3066 | 44 | 3326 | 21 | 1.249 | 0.801 | 7.817 |
| *PD18-125-293* | 14.77 | 0.42 | 0.43 | 0.01 | 0.7763 | 2801 | 14 | 2306 | 23 | 3179 | 15 | 0.938 | 1.066 | 27.461 |
| *PD18-125-294* | 13.42 | 0.37 | 0.3642 | 0.009 | 0.5955 | 2710 | 13 | 2002 | 21 | 3290 | 19 | 1.332 | 0.751 | 39.149 |
| *PD18-125-296* | 9.97 | 0.27 | 0.3135 | 0.0072 | 0.6833 | 2432 | 13 | 1758 | 18 | 3057 | 17 | 1.41 | 0.709 | 42.493 |
| *PD18-125-297* | 7.53 | 0.25 | 0.239 | 0.0083 | 0.8102 | 2177 | 15 | 1381 | 22 | 3042 | 17 | 0.614 | 1.629 | 54.602 |
| *PD18-125-305* | 18.25 | 0.98 | 0.547 | 0.03 | 0.6012 | 3003 | 26 | 2813 | 63 | 3133 | 39 | 1.473 | 0.679 | 10.214 |
| *PD18-125-306* | 19.07 | 0.53 | 0.5195 | 0.013 | 0.6848 | 3045 | 14 | 2697 | 28 | 3284 | 17 | 1.202 | 0.832 | 17.875 |
| *PD18-125-307* | 20.45 | 0.92 | 0.56 | 0.026 | 0.3405 | 3113 | 22 | 2867 | 54 | 3276 | 41 | 1.51 | 0.662 | 12.485 |
| *PD18-125-308* | 18.44 | 1.1 | 0.591 | 0.018 | 0.2941 | 3013 | 29 | 2993 | 37 | 3026 | 47 | 2.11 | 0.474 | 1.091 |
| *PD18-125-310* | 21.91 | 0.55 | 0.532 | 0.013 | 0.6044 | 3180 | 12 | 2750 | 27 | 3463 | 18 | 0.598 | 1.672 | 20.589 |
| *PD18-125-311* | 17.75 | 0.64 | 0.44 | 0.016 | 0.7759 | 2976 | 17 | 2351 | 36 | 3431 | 19 | 1.59 | 0.629 | 31.478 |
| *PD18-125-312* | 17.25 | 2.1 | 0.521 | 0.021 | 0.7824 | 2949 | 58 | 2703 | 45 | 3121 | 75 | 0.855 | 1.170 | 13.393 |
| *PD18-125-313* | 22.95 | 0.62 | 0.609 | 0.015 | 0.7719 | 3225 | 13 | 3066 | 30 | 3325 | 14 | 1.15 | 0.870 | 7.789 |
| *PD18-125-314* | 14.3 | 0.46 | 0.489 | 0.015 | 0.8056 | 2770 | 15 | 2566 | 32 | 2922 | 16 | 1.631 | 0.613 | 12.183 |
| *PD18-125-315* | 21.97 | 0.59 | 0.626 | 0.017 | 0.4575 | 3182 | 13 | 3134 | 34 | 3213 | 23 | 1.027 | 0.974 | 2.459 |
| *PD18-125-316* | 23.73 | 0.6 | 0.663 | 0.016 | 0.4919 | 3257 | 13 | 3279 | 31 | 3244 | 20 | 2.099 | 0.476 | -1.079 |
| *PD18-125-317* | 14.76 | 0.54 | 0.471 | 0.014 | 0.3510 | 2800 | 17 | 2488 | 31 | 3033 | 31 | 1.343 | 0.745 | 17.969 |
| *PD18-125-318* | 19.11 | 0.63 | 0.545 | 0.02 | 0.3072 | 3047 | 16 | 2804 | 42 | 3212 | 33 | 2.66 | 0.376 | 12.702 |
| *PD18-125-319* | 15.37 | 0.48 | 0.472 | 0.014 | 0.6195 | 2838 | 15 | 2492 | 31 | 3094 | 22 | 1.141 | 0.876 | 19.457 |
| *PD18-125-327* | 20.86 | 0.56 | 0.572 | 0.016 | 0.6204 | 3132 | 13 | 2916 | 33 | 3274 | 19 | 1.63 | 0.613 | 10.935 |
| *PD18-125-328* | 17.56 | 0.49 | 0.5312 | 0.012 | 0.4612 | 2966 | 14 | 2747 | 25 | 3118 | 21 | 1.843 | 0.543 | 11.899 |
| *PD18-125-329* | 19.07 | 0.52 | 0.484 | 0.012 | 0.3360 | 3045 | 13 | 2545 | 26 | 3395 | 24 | 0.81 | 1.235 | 25.037 |
| *PD18-125-330* | 21.18 | 0.71 | 0.602 | 0.018 | 0.6643 | 3147 | 16 | 3038 | 36 | 3217 | 21 | 1.702 | 0.588 | 5.564 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-125-331* | 18.95 | 0.54 | 0.5975 | 0.014 | 0.4600 | 3039 | 14 | 3020 | 28 | 3052 | 22 | 1.407 | 0.711 | 1.048 |
| *PD18-125-332* | 13.3 | 0.55 | 0.3719 | 0.014 | 0.7783 | 2701 | 20 | 2038 | 33 | 3243 | 21 | 1.538 | 0.650 | 37.157 |
| *PD18-125-333* | 19.3 | 0.81 | 0.5113 | 0.013 | 0.7929 | 3057 | 20 | 2662 | 28 | 3328 | 21 | 0.869 | 1.151 | 20.012 |
| *PD18-125-334* | 17 | 0.42 | 0.4481 | 0.013 | 0.4555 | 2935 | 12 | 2387 | 29 | 3336 | 22 | 1.157 | 0.864 | 28.447 |
| *PD18-125-335* | 22.06 | 0.6 | 0.629 | 0.017 | 0.7170 | 3186 | 13 | 3146 | 34 | 3212 | 17 | 1.933 | 0.517 | 2.055 |
| *PD18-125-336* | 17.19 | 0.5 | 0.486 | 0.013 | 0.6531 | 2945 | 14 | 2553 | 28 | 3226 | 19 | 1.146 | 0.873 | 20.862 |
| *PD18-125-337* | 17.4 | 0.84 | 0.477 | 0.027 | 0.9014 | 2957 | 23 | 2514 | 59 | 3274 | 20 | 1.299 | 0.770 | 23.213 |
| *PD18-125-338* | 25.82 | 0.71 | 0.689 | 0.017 | 0.5180 | 3340 | 14 | 3379 | 32 | 3316 | 21 | 1.717 | 0.582 | -1.900 |
| *PD18-125-339* | 6.84 | 0.78 | 0.2158 | 0.02 | 0.6807 | 2091 | 51 | 1260 | 53 | 3051 | 68 | 1.397 | 0.716 | 58.702 |
| *PD18-125-340* | 20.08 | 0.51 | 0.559 | 0.013 | 0.7524 | 3095 | 12 | 2862 | 27 | 3250 | 14 | 1.029 | 0.972 | 11.938 |
| *PD18-125-342* | 23.59 | 0.57 | 0.6562 | 0.014 | 0.4100 | 3252 | 12 | 3252 | 27 | 3251 | 20 | 2.178 | 0.459 | -0.031 |
| *PD18-125-343* | 18.7 | 0.73 | 0.524 | 0.016 | 0.8471 | 3026 | 19 | 2716 | 34 | 3240 | 17 | 2.72 | 0.368 | 16.173 |
| | | | | | | | | | | | | | | |
| *PD18-51-1286* | 3.127 | 0.098 | 0.0988 | 0.0031 | 0.5171 | 1438 | 27 | 607.5 | 19 | 3043 | 26 | 0.4063 | 2.461 | 80.036 |
| *PD18-51-1287* | 32.08 | 0.69 | 0.706 | 0.013 | 0.9035 | 3550 | 22 | 3443 | 50 | 3604 | 23 | 1.99 | 0.503 | 4.467 |
| *PD18-51-1288* | 23.37 | 0.41 | 0.593 | 0.0091 | 0.5597 | 3242 | 18 | 2999 | 37 | 3389 | 25 | 1.12 | 0.893 | 11.508 |
| *PD18-51-1289* | 7.42 | 0.92 | 0.251 | 0.017 | 0.8190 | 2177 | 73 | 1467 | 84 | 2928 | 50 | 18.67 | 0.054 | 49.898 |
| *PD18-51-1290* | 23.63 | 0.38 | 0.6529 | 0.0097 | 0.4323 | 3252 | 16 | 3238 | 38 | 3249 | 24 | 5.161 | 0.194 | 0.339 |
| *PD18-51-1291* | 31.71 | 0.68 | 0.713 | 0.014 | 0.4525 | 3540 | 23 | 3469 | 53 | 3578 | 21 | 3.819 | 0.262 | 3.046 |
| *PD18-51-1292* | 10.15 | 0.47 | 0.3192 | 0.011 | 0.7274 | 2446 | 37 | 1785 | 54 | 3038 | 28 | 11.16 | 0.090 | 41.244 |
| *PD18-51-1293* | 24.78 | 0.44 | 0.6523 | 0.01 | 0.8632 | 3298 | 21 | 3236 | 40 | 3330 | 24 | 1.99 | 0.503 | 2.823 |
| *PD18-51-1294* | 21.84 | 0.38 | 0.6327 | 0.0084 | 0.3707 | 3175 | 17 | 3159 | 33 | 3180 | 28 | 1.724 | 0.580 | 0.660 |
| *PD18-51-1295* | 29.61 | 1.3 | 0.701 | 0.026 | 0.6976 | 3477 | 55 | 3421 | 110 | 3508 | 30 | 0.786 | 1.272 | 2.480 |
| *PD18-51-1296* | 7.65 | 0.28 | 0.2463 | 0.0068 | 0.4748 | 2190 | 39 | 1419 | 35 | 3004 | 35 | 2.568 | 0.389 | 52.763 |
| *PD18-51-1297* | 21.11 | 0.44 | 0.5706 | 0.011 | 0.5517 | 3142 | 20 | 2909 | 44 | 3286 | 25 | 2.494 | 0.401 | 11.473 |
| *PD18-51-1305* | 32.86 | 0.65 | 0.748 | 0.014 | 0.3950 | 3574 | 19 | 3598 | 51 | 3555 | 29 | 1.274 | 0.785 | -1.210 |
| *PD18-51-1306* | 13.26 | 0.6 | 0.3899 | 0.015 | 0.7206 | 2697 | 36 | 2122 | 65 | 3156 | 25 | 0.609 | 1.642 | 32.763 |
| *PD18-51-1307* | 21.31 | 0.36 | 0.6224 | 0.01 | 0.5843 | 3152 | 16 | 3118 | 41 | 3166 | 28 | 2.225 | 0.449 | 1.516 |
| *PD18-51-1308* | 2.247 | 0.055 | 0.1268 | 0.003 | 0.1687 | 1195 | 16 | 770 | 17 | 2073 | 38 | 12.43 | 0.080 | 62.856 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-51-1309* | 32.72 | 0.86 | 0.722 | 0.017 | 0.2509 | 3570 | 28 | 3501 | 64 | 3610 | 25 | 1.484 | 0.674 | 3.019 |
| *PD18-51-1310* | 33.2 | 0.44 | 0.7533 | 0.0097 | 0.6832 | 3586.1 | 13 | 3618 | 36 | 3559 | 22 | 1.46 | 0.685 | -1.658 |
| *PD18-51-1311* | 24.98 | 1.2 | 0.574 | 0.022 | 0.8734 | 3306 | 60 | 2923 | 97 | 3535 | 30 | 1.469 | 0.681 | 17.313 |
| *PD18-51-1312* | 11.3 | 0.87 | 0.293 | 0.016 | 0.8223 | 2514 | 98 | 1650 | 81 | 3311 | 84 | 3.817 | 0.262 | 50.166 |
| *PD18-51-1313* | 30.43 | 0.66 | 0.692 | 0.015 | 0.7463 | 3500 | 23 | 3397 | 57 | 3555 | 22 | 2.77 | 0.361 | 4.444 |
| *PD18-51-1314* | 26.7 | 0.71 | 0.666 | 0.014 | 0.6432 | 3375 | 28 | 3289 | 54 | 3408 | 28 | 1.292 | 0.774 | 3.492 |
| *PD18-51-1315* | 27.62 | 0.47 | 0.6875 | 0.012 | 0.3466 | 3405 | 17 | 3372 | 46 | 3425 | 25 | 1.454 | 0.688 | 1.547 |
| *PD18-51-1316* | 10.76 | 0.46 | 0.3172 | 0.011 | 0.7898 | 2501 | 38 | 1776 | 53 | 3150 | 26 | 3.59 | 0.279 | 43.619 |
| *PD18-51-1317* | 25.9 | 0.63 | 0.637 | 0.015 | 0.6946 | 3342 | 26 | 3176 | 60 | 3441 | 22 | 1.646 | 0.608 | 7.701 |
| *PD18-51-1318* | 18.08 | 0.32 | 0.5362 | 0.0088 | 0.7336 | 2992 | 17 | 2766 | 37 | 3141 | 24 | 1.406 | 0.711 | 11.939 |
| *PD18-51-1319* | 21.27 | 0.35 | 0.6232 | 0.0089 | 0.5269 | 3150 | 16 | 3121 | 35 | 3157 | 25 | 1.525 | 0.656 | 1.140 |
| *PD18-51-1320* | 18.74 | 0.74 | 0.5301 | 0.018 | 0.6592 | 3027 | 48 | 2741 | 83 | 3220 | 24 | 1.69 | 0.592 | 14.876 |
| *PD18-51-1321* | 26.81 | 0.75 | 0.671 | 0.017 | 0.5120 | 3371 | 28 | 3304 | 63 | 3411 | 39 | 0.0751 | 13.316 | 3.137 |
| *PD18-51-1322* | 6.66 | 0.25 | 0.2135 | 0.0066 | 0.4955 | 2066 | 30 | 1247 | 34 | 3014 | 30 | 1.49 | 0.671 | 58.626 |
| *PD18-51-1329* | 19.57 | 0.47 | 0.4921 | 0.012 | 0.7836 | 3068 | 24 | 2578 | 53 | 3404 | 23 | 1.382 | 0.724 | 24.266 |
| *PD18-51-1330* | 4.579 | 0.094 | 0.1853 | 0.0032 | 0.6774 | 1744 | 17 | 1096 | 17 | 2627 | 28 | 8.11 | 0.123 | 58.279 |
| *PD18-51-1331* | 18.03 | 1.3 | 0.5005 | 0.029 | 0.8400 | 2990 | 100 | 2615 | 140 | 3250 | 55 | 1.5 | 0.667 | 19.538 |
| *PD18-51-1332* | 21.99 | 0.32 | 0.6264 | 0.0096 | 0.7543 | 3182.3 | 14 | 3134 | 38 | 3207 | 25 | 1.941 | 0.515 | 2.276 |
| *PD18-51-1341* | 28.49 | 0.78 | 0.6283 | 0.015 | 0.5146 | 3435 | 31 | 3142 | 62 | 3607 | 23 | 1.352 | 0.740 | 12.892 |
| *PD18-51-1343* | 24.09 | 0.38 | 0.6545 | 0.01 | 0.5032 | 3271 | 16 | 3251 | 42 | 3281 | 26 | 1.589 | 0.629 | 0.914 |
| *PD18-51-1344* | 33.61 | 0.52 | 0.7194 | 0.01 | 0.5345 | 3597 | 15 | 3492 | 38 | 3649 | 23 | 1.541 | 0.649 | 4.303 |
| *PD18-51-1345* | 16.49 | 0.4 | 0.437 | 0.0098 | 0.6864 | 2904 | 22 | 2334 | 43 | 3341 | 27 | 0.37 | 2.703 | 30.141 |
| *PD18-51-1346* | 26.93 | 0.45 | 0.6841 | 0.012 | 0.5828 | 3380 | 16 | 3358 | 45 | 3391 | 23 | 1.931 | 0.518 | 0.973 |
| *PD18-51-1347* | 23.31 | 0.51 | 0.627 | 0.012 | 0.4311 | 3238 | 21 | 3136 | 50 | 3297 | 29 | 1.16 | 0.862 | 4.883 |
| *PD18-51-1348* | 20.79 | 0.47 | 0.5494 | 0.011 | 0.4503 | 3127 | 23 | 2822 | 46 | 3321 | 26 | 2.79 | 0.358 | 15.026 |
| *PD18-51-1349* | 28.13 | 0.49 | 0.68 | 0.01 | 0.4901 | 3422 | 17 | 3343 | 40 | 3457 | 29 | 10.8 | 0.093 | 3.298 |
| *PD18-51-1350* | 30.86 | 0.5 | 0.7137 | 0.012 | 0.5861 | 3513 | 16 | 3470 | 44 | 3530 | 23 | 1.337 | 0.748 | 1.700 |
| *PD18-51-1351* | 26.46 | 0.57 | 0.583 | 0.0096 | 0.8326 | 3362 | 23 | 2959 | 40 | 3592 | 24 | 1.854 | 0.539 | 17.622 |
| *PD18-51-1352* | 18.85 | 0.37 | 0.5021 | 0.0097 | 0.5818 | 3033 | 18 | 2621 | 41 | 3309 | 24 | 4.31 | 0.232 | 20.792 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-51-1353* | 30.13 | 0.68 | 0.679 | 0.013 | 0.4605 | 3488 | 22 | 3339 | 50 | 3566 | 34 | 3.98 | 0.251 | 6.366 |
| *PD18-51-1361* | 25.9 | 0.63 | 0.606 | 0.013 | 0.7563 | 3339 | 24 | 3053 | 54 | 3521 | 24 | 0.813 | 1.230 | 13.292 |
| *PD18-51-1362* | 25.83 | 0.45 | 0.6649 | 0.0098 | 0.8826 | 3339 | 17 | 3285 | 38 | 3363 | 24 | 1.101 | 0.908 | 2.319 |
| *PD18-51-1363* | 32.24 | 0.53 | 0.7403 | 0.011 | 0.7373 | 3556 | 16 | 3570 | 40 | 3544 | 21 | 1.492 | 0.670 | -0.734 |
| *PD18-51-1364* | 26.19 | 0.42 | 0.689 | 0.0092 | 0.5845 | 3352 | 16 | 3378 | 35 | 3329 | 23 | 17.73 | 0.056 | -1.472 |
| *PD18-51-1365* | 20.7 | 1.1 | 0.522 | 0.025 | 0.5704 | 3122 | 70 | 2707 | 120 | 3398 | 33 | 0.55 | 1.818 | 20.335 |
| *PD18-51-1366* | 27.87 | 0.63 | 0.693 | 0.014 | 0.5665 | 3411 | 22 | 3390 | 55 | 3411 | 33 | 1.748 | 0.572 | 0.616 |
| *PD18-51-1367* | 32.1 | 0.5 | 0.7269 | 0.01 | 0.6184 | 3552 | 15 | 3521 | 38 | 3562 | 22 | 4.548 | 0.220 | 1.151 |
| *PD18-51-1368* | 19.63 | 0.5 | 0.477 | 0.011 | 0.9144 | 3072 | 23 | 2511 | 50 | 3445 | 22 | 1.768 | 0.566 | 27.112 |
| *PD18-51-1369* | 23.27 | 0.35 | 0.6478 | 0.0088 | 0.3785 | 3237 | 15 | 3219 | 34 | 3244 | 23 | 3.217 | 0.311 | 0.771 |
| *PD18-51-1370* | 21.21 | 0.45 | 0.565 | 0.011 | 0.5138 | 3147 | 22 | 2887 | 47 | 3304 | 23 | 1.176 | 0.850 | 12.621 |
| *PD18-51-1371* | 10.4 | 0.4 | 0.2996 | 0.01 | 0.8105 | 2467 | 41 | 1688 | 51 | 3195 | 32 | 3.28 | 0.305 | 47.167 |
| *PD18-51-1372* | 26.87 | 0.52 | 0.6604 | 0.011 | 0.4289 | 3377 | 19 | 3267 | 41 | 3433 | 29 | 1.622 | 0.617 | 4.835 |
| *PD18-51-1373* | 29.15 | 0.53 | 0.703 | 0.011 | 0.6993 | 3456 | 18 | 3430 | 40 | 3466 | 23 | 1.014 | 0.986 | 1.039 |
| *PD18-51-1374* | 20.04 | 0.58 | 0.505 | 0.013 | 0.7792 | 3091 | 27 | 2634 | 52 | 3400 | 23 | 7.85 | 0.127 | 22.529 |
| *PD18-51-1375* | 20.32 | 2.2 | 0.527 | 0.055 | 0.8173 | 3105 | 110 | 2729 | 200 | 3356 | 34 | 4.3 | 0.233 | 18.683 |
| *PD18-51-1376* | 23.96 | 0.36 | 0.6601 | 0.009 | 0.4593 | 3266 | 15 | 3267 | 35 | 3253 | 25 | 5.24 | 0.191 | -0.430 |
| *PD18-51-1377* | 21.3 | 0.39 | 0.632 | 0.011 | 0.6751 | 3150 | 18 | 3154 | 45 | 3141 | 30 | 1.504 | 0.665 | -0.414 |
| *PD18-51-1385* | 24.65 | 0.54 | 0.6062 | 0.011 | 0.4062 | 3292 | 22 | 3053 | 47 | 3430 | 34 | 1.409 | 0.710 | 10.991 |
| *PD18-51-1386* | 21.25 | 0.61 | 0.628 | 0.016 | 0.6635 | 3148 | 30 | 3136 | 66 | 3143 | 28 | 1.048 | 0.954 | 0.223 |
| *PD18-51-1387* | 22.25 | 0.33 | 0.5751 | 0.0078 | 0.5808 | 3194 | 14 | 2928 | 32 | 3357 | 22 | 6.6 | 0.152 | 12.779 |
| *PD18-51-1388* | 21.7 | 0.39 | 0.6281 | 0.0089 | 0.6792 | 3169 | 17 | 3141 | 35 | 3173 | 25 | 2.175 | 0.460 | 1.009 |
| *PD18-51-1389* | 18.48 | 0.84 | 0.508 | 0.021 | 0.5588 | 3019 | 50 | 2646 | 92 | 3265 | 28 | 1.632 | 0.613 | 18.959 |
| *PD18-51-1390* | 29.64 | 0.65 | 0.715 | 0.013 | 0.3746 | 3475 | 22 | 3475 | 47 | 3467 | 35 | 1.918 | 0.521 | -0.231 |
| *PD18-51-1391* | 21.72 | 0.45 | 0.6284 | 0.01 | 0.4057 | 3169 | 21 | 3142 | 40 | 3179 | 32 | 1.886 | 0.530 | 1.164 |
| *PD18-51-1392* | 21.25 | 0.8 | 0.525 | 0.015 | 0.9411 | 3148 | 42 | 2718 | 68 | 3419 | 27 | 1.695 | 0.590 | 20.503 |
| *PD18-51-1393* | 25.64 | 0.54 | 0.66 | 0.013 | 0.8086 | 3330 | 21 | 3265 | 49 | 3363 | 30 | 1.666 | 0.600 | 2.914 |
| *PD18-51-1394* | 11.53 | 0.53 | 0.356 | 0.012 | 0.8101 | 2565 | 39 | 1963 | 57 | 3091 | 27 | 17.02 | 0.059 | 36.493 |
| *PD18-51-1395* | 7.1 | 0.75 | 0.282 | 0.025 | 0.9720 | 2129 | 83 | 1600 | 120 | 2692 | 30 | 5.44 | 0.184 | 40.565 |
| *PD18-51-1396* | 21.34 | 0.39 | 0.6205 | 0.01 | 0.4703 | 3152 | 18 | 3110 | 40 | 3171 | 29 | 1.738 | 0.575 | 1.924 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-51-1398* | 12.13 | 0.34 | 0.3321 | 0.0073 | 0.8885 | 2613 | 29 | 1848 | 36 | 3273 | 27 | 3.55 | 0.282 | 43.538 |
| *PD18-51-1399* | 30.08 | 0.57 | 0.705 | 0.014 | 0.6477 | 3487 | 19 | 3436 | 54 | 3509 | 29 | 3.275 | 0.305 | 2.080 |
| *PD18-51-1400* | 23.8 | 1.6 | 0.614 | 0.034 | 0.8663 | 3258 | 75 | 3085 | 150 | 3363 | 30 | 0.74 | 1.351 | 8.266 |
| *PD18-51-1401* | 22.33 | 0.5 | 0.582 | 0.013 | 0.6910 | 3197 | 22 | 2954 | 54 | 3357 | 22 | 1.357 | 0.737 | 12.005 |
| *PD18-51-1409* | 23 | 0.46 | 0.5894 | 0.011 | 0.6987 | 3225 | 20 | 2985 | 41 | 3375 | 28 | 3.34 | 0.299 | 11.556 |
| *PD18-51-1410* | 26.2 | 1.2 | 0.628 | 0.025 | 0.9365 | 3353 | 61 | 3138 | 110 | 3474 | 29 | 1.319 | 0.758 | 9.672 |
| *PD18-51-1411* | 29.27 | 0.66 | 0.6477 | 0.01 | 0.3037 | 3462 | 22 | 3219 | 40 | 3602 | 25 | 2.013 | 0.497 | 10.633 |
| *PD18-51-1412* | 29.68 | 0.51 | 0.6489 | 0.0098 | 0.4219 | 3475 | 17 | 3223 | 39 | 3619 | 22 | 1.005 | 0.995 | 10.942 |
| *PD18-51-1413* | 12.04 | 0.84 | 0.378 | 0.022 | 0.3819 | 2606 | 91 | 2065 | 110 | 3055 | 49 | 2.295 | 0.436 | 32.406 |
| *PD18-51-1414* | 20.52 | 0.33 | 0.6047 | 0.0084 | 0.5426 | 3115 | 16 | 3048 | 34 | 3152 | 25 | 3.809 | 0.263 | 3.299 |
| *PD18-51-1415* | 28.48 | 0.74 | 0.682 | 0.014 | 0.7115 | 3433 | 27 | 3350 | 56 | 3476 | 23 | 1.212 | 0.825 | 3.625 |
| *PD18-51-1416* | 17.82 | 0.89 | 0.521 | 0.023 | 0.5886 | 2979 | 66 | 2703 | 110 | 3154 | 30 | 1.507 | 0.664 | 14.299 |
| *PD18-51-1417* | 13.82 | 0.68 | 0.428 | 0.02 | 0.8790 | 2736 | 53 | 2297 | 91 | 3074 | 23 | 2.189 | 0.457 | 25.277 |
| *PD18-51-1418* | 25.24 | 0.47 | 0.6449 | 0.013 | 0.5516 | 3316 | 18 | 3207 | 52 | 3377 | 26 | 1.52 | 0.658 | 5.034 |
| *PD18-51-1419* | 17.77 | 1.2 | 0.543 | 0.033 | 0.9443 | 2975 | 78 | 2796 | 140 | 3089 | 25 | 3.79 | 0.264 | 9.485 |
| *PD18-51-1420* | 7.49 | 0.27 | 0.2471 | 0.0088 | 0.8666 | 2171 | 29 | 1423 | 44 | 2977 | 24 | 0.946 | 1.057 | 52.200 |
| *PD18-51-1421* | 28.93 | 0.89 | 0.6622 | 0.019 | 0.7764 | 3450 | 33 | 3274 | 78 | 3544 | 21 | 1.416 | 0.706 | 7.619 |
| *PD18-51-1422* | 23.69 | 1.2 | 0.629 | 0.03 | 0.5298 | 3246 | 53 | 3135 | 120 | 3319 | 63 | 1.472 | 0.679 | 5.544 |
| *PD18-51-1423* | 17.95 | 0.5 | 0.4776 | 0.011 | 0.3495 | 2986 | 25 | 2516 | 48 | 3316 | 26 | 0.917 | 1.091 | 24.125 |
| *PD18-51-1424* | 1.119 | 0.16 | 0.05829 | 0.0066 | 0.8188 | 761 | 58 | 365.2 | 39 | 2217 | 36 | 1.964 | 0.509 | 83.527 |
| *PD18-51-1425* | 25.96 | 0.47 | 0.6551 | 0.01 | 0.5739 | 3343 | 18 | 3247 | 40 | 3396 | 24 | 1.221 | 0.819 | 4.388 |
| *PD18-51-1426* | 19.61 | 0.98 | 0.565 | 0.025 | 0.8578 | 3070 | 56 | 2883 | 110 | 3185 | 40 | 0.812 | 1.232 | 9.482 |
| *PD18-51-1427* | 22.71 | 0.35 | 0.6305 | 0.0086 | 0.8162 | 3214 | 15 | 3151 | 34 | 3245 | 24 | 3.044 | 0.329 | 2.897 |

Appendix 3.2 Detrital Zircon Lu–Hf data. – Detrital record of the Dharwar Craton

| Analysis N | Hf176/Hf177 | 2 S.E. | Lu176/Hf177 | U/Pb AGE (grain) | 2 S.E. | Hf Chur (t) | Hf DM (t) | Hf NC(t) | Hfi | eHf | 2SE | TDMc | TNCc | Above DM line? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-61-952 | 0.280702 | 0.000044 | 0.000927 | 3205 | 54 | 0.280715 | 0.280885 | 0.28083 | 0.280645 | -2.51074 | 1.555952 | 3.701774 | 3.588163 | No |
| PD17-61-1017 | 0.280606 | 0.000056 | 0.001306 | 3247 | 36 | 0.280687 | 0.280853 | 0.280798 | 0.280524 | -5.80577 | 1.980303 | 3.925079 | 3.813019 | No |
| PD17-61-977 | 0.280711 | 0.000059 | 0.001342 | 3262 | 30 | 0.280677 | 0.280841 | 0.280787 | 0.280627 | -1.80346 | 2.086391 | 3.705879 | 3.593746 | No |
| PD17-61-901 | 0.280597 | 0.000051 | 0.000755 | 3270 | 42 | 0.280672 | 0.280835 | 0.280781 | 0.28055 | -4.36778 | 1.80349 | 3.860266 | 3.748661 | No |
| PD17-61-993 | 0.280738 | 0.00004 | 0.002357 | 3273 | 34 | 0.28067 | 0.280833 | 0.280779 | 0.28059 | -2.86716 | 1.414502 | 3.776039 | 3.664335 | No |
| PD17-61-857 | 0.280642 | 0.000044 | 0.000844 | 3490 | 32 | 0.280525 | 0.280667 | 0.280616 | 0.280585 | 2.137231 | 1.555952 | 3.659425 | 3.553071 | No |
| PD17-61-879 | 0.280641 | 0.000051 | 0.000869 | 3327 | 35 | 0.280634 | 0.280792 | 0.280738 | 0.280585 | -1.73741 | 1.80349 | 3.753477 | 3.643117 | No |
| PD17-61-1023 | 0.280724 | 0.000038 | 0.000754 | 3328 | 32 | 0.280633 | 0.280791 | 0.280738 | 0.280676 | 1.505725 | 1.343777 | 3.566716 | 3.455996 | No |
| PD17-61-916 | 0.280757 | 0.000066 | 0.000895 | 3338 | 30 | 0.280627 | 0.280783 | 0.28073 | 0.2807 | 2.591256 | 2.333929 | 3.511776 | 3.401201 | No |
| PD17-61-858 | 0.280521 | 0.000048 | 0.001187 | 3346 | 33 | 0.280621 | 0.280777 | 0.280724 | 0.280445 | -6.30355 | 1.697403 | 4.031336 | 3.922034 | No |
| PD17-61-957 | 0.280737 | 0.00005 | 0.00124 | 3347 | 30 | 0.280621 | 0.280777 | 0.280723 | 0.280657 | 1.29493 | 1.768128 | 3.594056 | 3.483883 | No |
| PD17-61-961 | 0.280837 | 0.000053 | 0.001887 | 3354 | 32 | 0.280616 | 0.280771 | 0.280718 | 0.280715 | 3.530504 | 1.874215 | 3.470087 | 3.35984 | No |
| PD17-61-896 | 0.2807 | 0.00005 | 0.000434 | 3356 | 30 | 0.280615 | 0.28077 | 0.280717 | 0.280672 | 2.037656 | 1.768128 | 3.558222 | 3.448208 | No |
| PD17-61-839 | 0.280949 | 0.000057 | 0.00179 | 3387 | 30 | 0.280594 | 0.280746 | 0.280693 | 0.280832 | 8.488438 | 2.015666 | 3.208345 | 3.098415 | Yes |
| PD17-61-941 | 0.280753 | 0.000066 | 0.001353 | 3390 | 34 | 0.280592 | 0.280744 | 0.280691 | 0.280665 | 2.587286 | 2.333929 | 3.553532 | 3.444387 | No |
| PD17-61-877 | 0.280639 | 0.000048 | 0.000632 | 3405 | 33 | 0.280582 | 0.280732 | 0.28068 | 0.280598 | 0.551685 | 1.697403 | 3.683195 | 3.574699 | No |
| PD17-61-1015 | 0.280723 | 0.000038 | 0.001474 | 3420 | 34 | 0.280572 | 0.280721 | 0.280668 | 0.280626 | 1.919404 | 1.343777 | 3.616122 | 3.507877 | No |
| PD17-61-1003 | 0.280706 | 0.000037 | 0.001543 | 3421 | 30 | 0.280571 | 0.28072 | 0.280668 | 0.280604 | 1.174245 | 1.308415 | 3.659978 | 3.551848 | No |
| PD17-61-996 | 0.280659 | 0.000055 | 0.00092 | 3424 | 31 | 0.280569 | 0.280718 | 0.280665 | 0.280598 | 1.031429 | 1.944941 | 3.670616 | 3.562584 | No |
| PD17-61-956 | 0.280891 | 0.000047 | 0.001141 | 3430 | 37 | 0.280565 | 0.280713 | 0.280661 | 0.280816 | 8.919053 | 1.66204 | 3.218043 | 3.109251 | Yes |
| PD17-61-876 | 0.280744 | 0.000053 | 0.000473 | 3447 | 34 | 0.280554 | 0.2807 | 0.280648 | 0.280713 | 5.651827 | 1.874215 | 3.421632 | 3.313692 | Yes |
| PD17-61-960 | 0.280662 | 0.000045 | 0.0005 | 3452 | 36 | 0.280551 | 0.280697 | 0.280644 | 0.280629 | 2.782499 | 1.591315 | 3.591786 | 3.484318 | No |
| PD17-61-994 | 0.2809 | 0.00016 | 0.00219 | 3454 | 35 | 0.280549 | 0.280695 | 0.280643 | 0.280754 | 7.304674 | 5.658009 | 3.331333 | 3.223393 | Yes |
| PD17-61-1022 | 0.280787 | 0.000044 | 0.000783 | 3475 | 30 | 0.280535 | 0.280679 | 0.280627 | 0.280735 | 7.10287 | 1.555952 | 3.359995 | 3.252657 | Yes |
| PD17-61-875 | 0.280656 | 0.000046 | 0.001929 | 3483 | 31 | 0.28053 | 0.280673 | 0.280621 | 0.280527 | -0.12219 | 1.626678 | 3.784088 | 3.677802 | No |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD17-61-1021* | 0.280655 | 0.00005 | 0.000536 | 3544 | 29 | 0.280489 | 0.280626 | 0.280575 | 0.280618 | 4.607127 | 1.768128 | 3.560062 | 3.454905 | Yes |
| | | | | | | | | | | | | | | |
| *PD17-42-794* | 0.281055 | 0.000087 | 0.01109 | 2737 | 54 | 0.281025 | 0.281239 | 0.281178 | 0.280474 | -19.6119 | 3.076542 | 4.326914 | 4.20268 | No |
| *PD17-42-792* | 0.280728 | 0.000051 | 0.000727 | 2874 | 32 | 0.280935 | 0.281136 | 0.281077 | 0.280688 | -8.78948 | 1.80349 | 3.806545 | 3.684631 | No |
| *PD17-42-717* | 0.280712 | 0.000048 | 0.000809 | 3118 | 42 | 0.280773 | 0.280951 | 0.280895 | 0.280664 | -3.90523 | 1.697403 | 3.713999 | 3.598171 | No |
| *PD17-42-802* | 0.280682 | 0.000039 | 0.000998 | 3124 | 33 | 0.280769 | 0.280946 | 0.28089 | 0.280622 | -5.23911 | 1.37914 | 3.795924 | 3.680427 | No |
| *PD17-42-832* | 0.280747 | 0.000054 | 0.00072 | 3151 | 34 | 0.280751 | 0.280926 | 0.28087 | 0.280703 | -1.7049 | 1.909578 | 3.612441 | 3.497245 | No |
| *PD17-42-718* | 0.280839 | 0.000037 | 0.001471 | 3168 | 39 | 0.28074 | 0.280913 | 0.280857 | 0.280749 | 0.337801 | 1.308415 | 3.507284 | 3.392302 | No |
| *PD17-42-660* | 0.280794 | 0.000043 | 0.000763 | 3185 | 38 | 0.280729 | 0.2809 | 0.280845 | 0.280747 | 0.663315 | 1.52059 | 3.501861 | 3.387307 | No |
| *PD17-42-761* | 0.280864 | 0.000046 | 0.001904 | 3191 | 33 | 0.280725 | 0.280895 | 0.28084 | 0.280747 | 0.803496 | 1.626678 | 3.49848 | 3.384075 | No |
| *PD17-42-803* | 0.280847 | 0.000036 | 0.001092 | 3219 | 35 | 0.280706 | 0.280874 | 0.280819 | 0.280779 | 2.613701 | 1.273052 | 3.415513 | 3.301656 | No |
| *PD17-42-797* | 0.280719 | 0.000066 | 0.001414 | 3235 | 36 | 0.280695 | 0.280862 | 0.280807 | 0.280631 | -2.29269 | 2.333929 | 3.71284 | 3.600025 | No |
| *PD17-42-699* | 0.280676 | 0.000038 | 0.000438 | 3249 | 35 | 0.280686 | 0.280851 | 0.280797 | 0.280649 | -1.33456 | 1.343777 | 3.668466 | 3.555919 | No |
| *PD17-42-712* | 0.280757 | 0.000059 | 0.0014 | 3270 | 29 | 0.280672 | 0.280835 | 0.280781 | 0.280669 | -0.11227 | 2.086391 | 3.614332 | 3.502214 | No |
| *PD17-42-656* | 0.280766 | 0.000045 | 0.001572 | 3271 | 33 | 0.280671 | 0.280835 | 0.28078 | 0.280667 | -0.15435 | 1.591315 | 3.617563 | 3.505477 | No |
| *PD17-42-659* | 0.280777 | 0.000036 | 0.001229 | 3285 | 39 | 0.280662 | 0.280824 | 0.28077 | 0.280699 | 1.326451 | 1.273052 | 3.542868 | 3.430988 | No |
| *PD17-42-818* | 0.280755 | 0.000048 | 0.000954 | 3315 | 33 | 0.280642 | 0.280801 | 0.280747 | 0.280694 | 1.853894 | 1.697403 | 3.53618 | 3.425061 | No |
| *PD17-42-772* | 0.280865 | 0.000037 | 0.001698 | 3323 | 32 | 0.280637 | 0.280795 | 0.280741 | 0.280756 | 4.263252 | 1.308415 | 3.402724 | 3.291535 | No |
| *PD17-42-700* | 0.281034 | 0.000056 | 0.00508 | 3325 | 41 | 0.280635 | 0.280793 | 0.28074 | 0.280709 | 2.620747 | 1.980303 | 3.499687 | 3.388751 | No |
| *PD17-42-735* | 0.280748 | 0.000049 | 0.0014 | 3330 | 54 | 0.280632 | 0.28079 | 0.280736 | 0.280658 | 0.93246 | 1.732765 | 3.601507 | 3.490911 | No |
| *PD17-42-813* | 0.280755 | 0.000041 | 0.000919 | 3401 | 32 | 0.280585 | 0.280735 | 0.280683 | 0.280695 | 3.9227 | 1.449865 | 3.484969 | 3.375968 | No |
| *PD17-42-715* | 0.280723 | 0.000037 | 0.000604 | 3407 | 32 | 0.280581 | 0.280731 | 0.280678 | 0.280683 | 3.657647 | 1.308415 | 3.505134 | 3.396329 | No |
| *PD17-42-693* | 0.28085 | 0.00011 | 0.0074 | 3419 | 39 | 0.280573 | 0.280722 | 0.280669 | 0.280363 | -7.48328 | 3.889881 | 4.156156 | 4.048972 | No |
| *PD17-42-661* | 0.280741 | 0.000055 | 0.001377 | 3434 | 39 | 0.280563 | 0.28071 | 0.280658 | 0.28065 | 3.108408 | 1.944941 | 3.558542 | 3.450543 | No |
| *PD17-42-800* | 0.280759 | 0.000046 | 0.000488 | 3464 | 30 | 0.280543 | 0.280687 | 0.280635 | 0.280726 | 6.550351 | 1.626678 | 3.383191 | 3.275615 | Yes |

Appendix 3.3 Detrital Zircon REE (ppm) – Detrital record of the Dharwar Craton

| Comments | La139 | Ce140 | Pr141 | Nd146 | Sm147 | Eu153 | Gd157 | Tb159 | Dy163 | Ho165 | Er166 | Tm169 | Yb172 | Lu175 | Hf178 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-51-1286 | 25.54 | 1738 | 199.4 | 2000 | 1119 | 355.6 | 1474 | 308.6 | 2386 | 511 | 1720 | 303.7 | 2597 | 387.3 | 13580 |
| PD18-51-1287 | 18.9 | 84.2 | 9.08 | 41.8 | 13.8 | 5.57 | 33.2 | 8.78 | 91.9 | 27.92 | 121.1 | 22.57 | 219.1 | 39.9 | 11680 |
| PD18-51-1288 | 6.9 | 83.9 | 5.98 | 36.3 | 17.2 | 6.6 | 41.6 | 11.39 | 124.6 | 44 | 213.1 | 43.7 | 464 | 91.3 | 11660 |
| PD18-51-1289 | 7.4 | 15.9 | 1.82 | 9.3 | 5.7 | 4.9 | 27.9 | 8.13 | 74.6 | 21.3 | 87.5 | 16.66 | 150.8 | 28.4 | 12270 |
| PD18-51-1290 | 0.16 | 3.51 | 0.054 | 0.46 | 1.02 | 0.269 | 8.31 | 2.86 | 39.9 | 16.09 | 83.2 | 17.72 | 186.7 | 38.2 | 11370 |
| PD18-51-1291 | 0.371 | 12.92 | 0.34 | 2.69 | 3.52 | 1.04 | 22 | 8.22 | 119.7 | 48.4 | 246.2 | 52.4 | 526 | 102.1 | 13990 |
| PD18-51-1292 | 5.1 | 24.6 | 2.58 | 13.9 | 5.14 | 4.27 | 15.3 | 4.66 | 58.7 | 21.83 | 110.1 | 24.2 | 261.5 | 54 | 13510 |
| PD18-51-1293 | 3.59 | 44 | 2.67 | 16.9 | 10.14 | 3.77 | 35.4 | 10.27 | 122.1 | 41.8 | 192.6 | 36.7 | 349 | 64.2 | 10150 |
| PD18-51-1294 | 0.65 | 17.93 | 0.89 | 7.39 | 5.96 | 0.9 | 22.4 | 6.74 | 86.2 | 31.9 | 153.4 | 31 | 295 | 55.3 | 11590 |
| PD18-51-1295 | 4.23 | 50.8 | 7.82 | 56.1 | 35.8 | 8.67 | 66 | 16.12 | 181.7 | 63.2 | 286.2 | 54.8 | 525 | 97 | 9900 |
| PD18-51-1296 | 11 | 64 | 6.61 | 34 | 13.7 | 4.82 | 25 | 7.02 | 77.5 | 26.51 | 128 | 28.2 | 295 | 57.1 | 12130 |
| PD18-51-1297 | 28.1 | 385 | 21.3 | 118.4 | 42.4 | 12.21 | 58 | 11.88 | 110.9 | 34.17 | 154.7 | 31.22 | 312 | 60.2 | 12120 |
| PD18-51-1305 | 0.025 | 5.95 | 0.221 | 5.07 | 10.94 | 1.75 | 70.3 | 21.77 | 271.5 | 95.3 | 419.7 | 76.6 | 685 | 120.6 | 10370 |
| PD18-51-1306 | 35.8 | 222 | 24.7 | 131 | 49.3 | 14.1 | 78.3 | 16.7 | 166 | 52.3 | 237 | 50.2 | 533 | 112.9 | 13900 |
| PD18-51-1307 | 0.264 | 14.21 | 0.162 | 1.51 | 1.8 | 0.216 | 11.09 | 4.19 | 57 | 22.28 | 107.9 | 21.59 | 212 | 39.6 | 12360 |
| PD18-51-1308 | 22.8 | 81 | 10 | 51.3 | 20.2 | 10.3 | 33.4 | 8.21 | 89.4 | 28.2 | 145.7 | 34.6 | 371 | 71.7 | 13240 |
| PD18-51-1309 | Below LOD | 10.46 | 0.144 | 2.55 | 6.96 | 1.58 | 45 | 15.49 | 198.9 | 74.2 | 341.3 | 65.2 | 599 | 108.9 | 9190 |
| PD18-51-1310 | 0.232 | 7.73 | 0.523 | 6.28 | 8.52 | 2.39 | 45.7 | 13.77 | 162.7 | 55.9 | 259.1 | 51 | 490.6 | 92.9 | 8350 |
| PD18-51-1311 | 8.56 | 69.6 | 7.44 | 51.7 | 31.6 | 7.93 | 86.1 | 22.5 | 238.8 | 75.7 | 317.5 | 56.9 | 507 | 91.5 | 11640 |
| PD18-51-1312 | 51.5 | 162 | 23.2 | 121 | 53.2 | 32.9 | 132.1 | 32.1 | 281 | 77.3 | 318 | 62.1 | 603 | 111.1 | 13610 |
| PD18-51-1313 | 9.7 | 48 | 4.6 | 24 | 8.6 | 2.76 | 24 | 6.93 | 80 | 28.3 | 137 | 28.6 | 299 | 62.4 | 12250 |
| PD18-51-1314 | 1.39 | 28.8 | 1.31 | 8.7 | 5.77 | 2.24 | 20.8 | 5.17 | 60.9 | 21.1 | 102.4 | 21.6 | 227.7 | 48.5 | 10650 |
| PD18-51-1315 | 3.31 | 40.9 | 3.68 | 28.2 | 24.8 | 6.6 | 114.2 | 36.47 | 460.4 | 162.2 | 724 | 128.1 | 1129 | 202.8 | 9950 |
| PD18-51-1316 | 19.3 | 112.9 | 14.7 | 82.9 | 44 | 16.8 | 70.5 | 14.32 | 121.1 | 29.6 | 113.4 | 22.88 | 246.4 | 54.4 | 12580 |
| PD18-51-1317 | 8.3 | 110 | 7.46 | 47.2 | 25.8 | 6.48 | 58.4 | 15.77 | 183.9 | 67.1 | 326.1 | 64.9 | 629 | 120.3 | 10630 |
| PD18-51-1318 | 65 | 134 | 15.6 | 79.3 | 29.1 | 5.14 | 45 | 9.95 | 97.5 | 30.31 | 138.2 | 27.64 | 267.8 | 50.02 | 11140 |
| PD18-51-1319 | 122 | 269 | 32.4 | 144 | 36.7 | 3.32 | 50.8 | 10.76 | 105.8 | 33.61 | 150.5 | 29.02 | 272.7 | 49.4 | 10820 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-51-1320 | 2.01 | 44.7 | 0.78 | 6.4 | 8.9 | 4.65 | 52.7 | 18.4 | 236.6 | 90.8 | 449 | 90.1 | 887 | 173.1 | 9490 |
| PD18-51-1321 | 0.345 | 8.97 | 0.332 | 2.77 | 2.54 | 0.52 | 14.04 | 5.02 | 72.2 | 29.21 | 151.1 | 31.9 | 318.8 | 61.4 | 16150 |
| PD18-51-1322 | 226 | 1120 | 99 | 562 | 231 | 70.3 | 295 | 50.3 | 375 | 94.4 | 387 | 75.5 | 745 | 144.4 | 11850 |
| PD18-51-1329 | 56.9 | 769 | 53.5 | 358 | 196 | 46.9 | 250 | 40.8 | 277 | 67.8 | 274.1 | 52.5 | 510 | 94.1 | 9540 |
| PD18-51-1330 | 34.5 | 226 | 17.39 | 89.2 | 28.7 | 20.2 | 50.7 | 10.98 | 96.2 | 25.71 | 108 | 22.4 | 221 | 45 | 12500 |
| PD18-51-1331 | 8.5 | 51.8 | 4.25 | 22.1 | 11.6 | 6.41 | 40.7 | 10.46 | 106.1 | 30.1 | 124.9 | 22.77 | 215.5 | 40.4 | 10590 |
| PD18-51-1332 | Below LOD | 12.92 | 0.054 | 1.52 | 4.52 | 0.69 | 31.4 | 10.85 | 149.7 | 56.5 | 264.9 | 50.2 | 471 | 86 | 10370 |
| PD18-51-1341 | 0.551 | 20.78 | 0.235 | 2.54 | 4.76 | 1.56 | 26.8 | 8.46 | 101.8 | 36 | 163.2 | 31.7 | 288.2 | 52.9 | 10190 |
| PD18-51-1343 | 0.062 | 23.56 | 0.124 | 2.26 | 4.91 | 1.74 | 26.8 | 8.38 | 107 | 40.81 | 210.5 | 43.69 | 447.9 | 89.1 | 9930 |
| PD18-51-1344 | 2.93 | 29 | 2.16 | 11.5 | 5.91 | 1.52 | 19.4 | 5.37 | 61.7 | 20.96 | 94.9 | 18.66 | 181.4 | 34.29 | 10320 |
| PD18-51-1345 | 56 | 168 | 20.8 | 114 | 60.3 | 11.52 | 174 | 38.6 | 363 | 102.6 | 472 | 96.3 | 918 | 164.6 | 17900 |
| PD18-51-1346 | 1.93 | 20.1 | 0.75 | 4.2 | 3.67 | 1.3 | 16.1 | 4.44 | 51.6 | 18.05 | 88 | 18.99 | 201.4 | 41.8 | 10590 |
| PD18-51-1347 | 9.6 | 41 | 3.6 | 26.6 | 8 | 2.87 | 26.6 | 7.2 | 83.9 | 28.4 | 134.8 | 26.68 | 260.1 | 52.7 | 8790 |
| PD18-51-1348 | 15.4 | 48.6 | 5.05 | 27.9 | 11.7 | 3.73 | 23.1 | 6.34 | 67.5 | 21.1 | 96.6 | 19.71 | 202.1 | 40.4 | 11180 |
| PD18-51-1349 | 0.398 | 6.6 | 0.481 | 3.24 | 1.53 | 0.572 | 3.55 | 0.873 | 9.93 | 3.38 | 18.11 | 4.07 | 48.5 | 11.27 | 12180 |
| PD18-51-1350 | 1.55 | 11.44 | 1.83 | 13.3 | 7.85 | 1.84 | 10.55 | 2.08 | 16.73 | 4.74 | 21.59 | 4.68 | 50.4 | 10.83 | 7290 |
| PD18-51-1351 | 7.3 | 63.4 | 5.75 | 36.4 | 21.8 | 5.72 | 41.4 | 9.75 | 96.4 | 30.6 | 139.9 | 29.4 | 292 | 55.5 | 11820 |
| PD18-51-1352 | 8.48 | 41.7 | 5.2 | 35.8 | 18.7 | 4.51 | 34.3 | 7.96 | 84.3 | 28.4 | 137.5 | 30 | 320 | 62.9 | 12780 |
| PD18-51-1353 | 3.69 | 20.34 | 2.52 | 13.46 | 3.09 | 1.5 | 4.79 | 1.202 | 14.92 | 6.73 | 42.1 | 10.49 | 141.9 | 40.4 | 11860 |
| PD18-51-1361 | 33.7 | 154 | 14.3 | 104.6 | 146.9 | 81.2 | 696 | 156.3 | 1196 | 237.9 | 639 | 80.6 | 564 | 80.1 | 11830 |
| PD18-51-1362 | 1.184 | 36.5 | 1.466 | 11.55 | 8.29 | 2.28 | 19.69 | 5.25 | 57.5 | 20.2 | 99.8 | 20.88 | 215.4 | 42.4 | 10160 |
| PD18-51-1363 | 0.264 | 12.97 | 0.436 | 4.96 | 7.46 | 0.99 | 40.9 | 12.44 | 155.2 | 55.5 | 251 | 47.1 | 443 | 81 | 9260 |
| PD18-51-1364 | 0.34 | 4.69 | 0.147 | 1.15 | 1.21 | 1.04 | 13.12 | 6.64 | 108.1 | 43.95 | 245.1 | 61.2 | 700 | 139.8 | 13980 |
| PD18-51-1365 | 5.11 | 51.6 | 3.41 | 22.8 | 13.2 | 3.83 | 22.6 | 4.74 | 44.8 | 13.86 | 64.4 | 13.36 | 137 | 28.74 | 8770 |
| PD18-51-1366 | Below LOD | 11.41 | 0.034 | 0.78 | 2.13 | 0.422 | 14.58 | 5.16 | 70.5 | 27.55 | 131.6 | 26.9 | 261.4 | 50.6 | 11400 |
| PD18-51-1367 | 1.71 | 12.69 | 1.91 | 11.78 | 7.45 | 2.42 | 16.92 | 4.96 | 59 | 21.54 | 105.7 | 21.42 | 211.3 | 40.35 | 14100 |
| PD18-51-1368 | 17.6 | 214 | 14.8 | 80.1 | 33.1 | 10.94 | 52.5 | 11.99 | 108.8 | 30.1 | 126.5 | 25.73 | 271.8 | 55.4 | 11970 |
| PD18-51-1369 | 4.3 | 22.5 | 1.51 | 9.1 | 6.6 | 1.68 | 16.8 | 4.32 | 46.3 | 15.52 | 71.1 | 14.22 | 141.4 | 28.56 | 9920 |
| PD18-51-1370 | 10.9 | 46.2 | 5.1 | 35.2 | 26.1 | 5.23 | 100.8 | 31 | 360 | 122.6 | 549 | 98.7 | 896 | 161.1 | 9500 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-51-1371 | 24.7 | 110 | 13.8 | 71 | 24.8 | 21.7 | 57.2 | 14.2 | 123.9 | 36.8 | 174.4 | 37.5 | 420 | 92.7 | 8760 |
| PD18-51-1372 | 3.15 | 20.67 | 1.66 | 10.41 | 8.75 | 2.27 | 42.4 | 14.17 | 185.2 | 66.8 | 310.5 | 57.9 | 533.6 | 95.1 | 10520 |
| PD18-51-1373 | 0.4 | 14.73 | 0.245 | 2.92 | 4.38 | 1.55 | 26.1 | 8 | 105.8 | 41 | 206.5 | 43.1 | 445 | 91.9 | 9330 |
| PD18-51-1374 | 14.2 | 35 | 4.69 | 24.9 | 8.41 | 6.1 | 18 | 4.16 | 39.4 | 10.7 | 48.4 | 9.99 | 110.9 | 23.73 | 11710 |
| PD18-51-1375 | 5.1 | 29.7 | 3.22 | 17 | 7.1 | 3.29 | 19.2 | 4.86 | 47.1 | 13.9 | 62 | 12.7 | 131.5 | 29.5 | 12710 |
| PD18-51-1376 | Below LOD | 4.55 | 0.0079 | 0.43 | 1.46 | 0.742 | 10.12 | 3.95 | 55 | 21.72 | 110.1 | 23.22 | 233.8 | 47.2 | 9790 |
| PD18-51-1377 | Below LOD | 14.57 | 0.017 | 0.59 | 1.58 | 0.195 | 10.19 | 3.78 | 49.5 | 19.14 | 93.4 | 19.21 | 184.7 | 34.58 | 10740 |
| PD18-51-1385 | 4.29 | 41.4 | 2.87 | 17.3 | 9.27 | 2.76 | 41.2 | 13.8 | 174 | 61.8 | 285 | 53.5 | 486 | 88.3 | 9800 |
| PD18-51-1386 | 190 | 428 | 52.3 | 209 | 41.2 | 2 | 47.4 | 8.73 | 90.5 | 30.1 | 141 | 27.98 | 272.5 | 52.2 | 11490 |
| PD18-51-1387 | 11.4 | 56.6 | 8.31 | 55.7 | 29.9 | 7.45 | 55.6 | 11.7 | 96 | 24.6 | 102 | 20.77 | 221.6 | 46.9 | 12230 |
| PD18-51-1388 | Below LOD | 9.88 | 0.04 | 0.71 | 2.04 | 0.108 | 11.82 | 4.06 | 55.8 | 21.7 | 108.5 | 22.2 | 219 | 41.3 | 11780 |
| PD18-51-1389 | 11.4 | 75.2 | 6.88 | 40.5 | 19.8 | 7.2 | 67.2 | 18.03 | 206.3 | 69.9 | 325 | 65.5 | 618 | 118.3 | 11200 |
| PD18-51-1390 | Below LOD | 11.35 | 0.066 | 1.34 | 2.21 | 1.14 | 12.39 | 3.65 | 44.6 | 16.42 | 80.8 | 17.31 | 182.5 | 38.7 | 9110 |
| PD18-51-1391 | 0.082 | 7.96 | 0.145 | 1.32 | 2.8 | 0.333 | 17.47 | 5.62 | 72.3 | 26.18 | 122.7 | 23.88 | 224.6 | 41.99 | 9510 |
| PD18-51-1392 | 71 | 164 | 18.6 | 86 | 28.6 | 11 | 81.1 | 21.2 | 227 | 67.3 | 275 | 50.2 | 446 | 80.2 | 10280 |
| PD18-51-1393 | 0.784 | 6.2 | 0.542 | 4.03 | 2.02 | 0.991 | 6.36 | 1.54 | 17.21 | 6.42 | 32.3 | 7.33 | 84.4 | 18.72 | 7600 |
| PD18-51-1394 | 2.42 | 4.89 | 0.359 | 1.61 | 1.67 | 1.34 | 10.1 | 4.02 | 61.2 | 25.3 | 139.3 | 31.6 | 334 | 67.3 | 11250 |
| PD18-51-1395 | 187 | 577 | 85 | 387 | 106.8 | 61.7 | 147 | 33.2 | 303 | 88.6 | 435 | 97.6 | 1030 | 205.3 | 13430 |
| PD18-51-1396 | 0.006 | 8.97 | 0.104 | 2.08 | 4.25 | 0.252 | 24.8 | 7.96 | 100.8 | 35.1 | 160.3 | 29.7 | 271.7 | 48.7 | 9830 |
| PD18-51-1397 | 101 | 192 | 22.7 | 133 | 269 | 167 | 1730 | 511 | 4430 | 912 | 2700 | 315 | 1840 | 229 | 10510 |
| PD18-51-1398 | 9.89 | 55.8 | 6.97 | 43.2 | 26.6 | 10.36 | 44.7 | 9.37 | 78.7 | 21.83 | 96.8 | 19.49 | 198.1 | 41.2 | 11740 |
| PD18-51-1399 | 0.015 | 2.19 | 0.043 | 0.37 | 0.87 | 0.432 | 5.6 | 1.83 | 25.7 | 10.71 | 56.8 | 12.5 | 141.1 | 30.2 | 8840 |
| PD18-51-1400 | 3.95 | 61 | 1.29 | 11 | 9.6 | 4.91 | 46.1 | 13.85 | 164.9 | 61.1 | 296 | 61.8 | 627 | 121.2 | 8870 |
| PD18-51-1401 | 1.68 | 55.3 | 2.12 | 12.7 | 7.8 | 2.39 | 23 | 6.14 | 77.9 | 29.7 | 163 | 37.8 | 403 | 84 | 12380 |
| PD18-51-1409 | 1.48 | 18.09 | 1.158 | 7.62 | 3.22 | 1.09 | 7.34 | 1.81 | 19.3 | 6.19 | 29.7 | 6.31 | 76.2 | 18.33 | 10800 |
| PD18-51-1410 | 4.78 | 54 | 4.18 | 28.7 | 21.2 | 6.6 | 61.5 | 17 | 202.5 | 62.5 | 292 | 52.8 | 504 | 96.6 | 10010 |
| PD18-51-1411 | 1.53 | 22.2 | 1.4 | 9.3 | 4.22 | 2.21 | 12 | 3.2 | 36.1 | 13.24 | 68.5 | 16.73 | 194.5 | 47.2 | 11780 |
| PD18-51-1412 | 106 | 1340 | 87.2 | 481 | 165 | 36.1 | 189 | 33.9 | 295 | 86.2 | 347 | 62 | 552 | 94.9 | 8320 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-51-1413 | 10.1 | 64.6 | 5.04 | 25 | 9.6 | 3.97 | 29.3 | 8.43 | 109.1 | 41.2 | 202 | 40.4 | 390 | 75.3 | 11980 |
| PD18-51-1414 | 1.29 | 8.42 | 0.763 | 5.45 | 2.79 | 0.825 | 6.03 | 1.76 | 21.82 | 8.42 | 46.5 | 10.86 | 120.1 | 25.91 | 10600 |
| PD18-51-1415 | 0.241 | 24 | 0.221 | 2.05 | 2.63 | 1.13 | 13.5 | 3.97 | 47.9 | 16.31 | 80.4 | 17.85 | 194.5 | 42.5 | 11350 |
| PD18-51-1416 | 9.11 | 111.1 | 7.68 | 43.7 | 20.4 | 5.46 | 45.4 | 12.28 | 135.8 | 43.6 | 197 | 38.6 | 368 | 67.1 | 12290 |
| PD18-51-1417 | 4.21 | 33.9 | 2.37 | 14.8 | 8.4 | 3.09 | 30.7 | 9.86 | 121.5 | 44.6 | 209.4 | 40.5 | 383.7 | 70.4 | 12530 |
| PD18-51-1418 | 6.95 | 68.9 | 7.98 | 56.2 | 29.4 | 6.05 | 46.7 | 9.06 | 82.6 | 24.3 | 111 | 22.6 | 233 | 47.5 | 10580 |
| PD18-51-1419 | 47.4 | 153.4 | 19.1 | 100.8 | 59.2 | 53.2 | 315 | 77.3 | 668 | 157.3 | 556 | 92.1 | 781 | 136.1 | 13430 |
| PD18-51-1420 | 30.3 | 116.8 | 12.58 | 67.8 | 29.2 | 16.9 | 97.7 | 28.2 | 312 | 96.4 | 409 | 75.5 | 687 | 118.5 | 10890 |
| PD18-51-1421 | 26.1 | 102.4 | 10.77 | 54 | 17 | 4.74 | 37.6 | 9.67 | 105.3 | 34.29 | 153 | 29.39 | 273.8 | 50.4 | 9840 |
| PD18-51-1422 | 0.213 | 8.69 | 0.27 | 1.88 | 2.02 | 0.83 | 8.57 | 2.53 | 32.6 | 12.04 | 59.9 | 12.4 | 129.1 | 26.75 | 9080 |
| PD18-51-1423 | 8.28 | 85.7 | 4.65 | 26.4 | 12.71 | 5.75 | 48.4 | 14.32 | 172.6 | 59.3 | 283.3 | 55.9 | 546 | 104.5 | 10680 |
| PD18-51-1424 | 1191 | 2962 | 437 | 2030 | 457 | 286.7 | 698 | 138.8 | 1093 | 263 | 1038 | 197 | 1892 | 335 | 12090 |
| PD18-51-1425 | 0.76 | 26.4 | 0.94 | 7.1 | 5.47 | 1.52 | 16.22 | 4.4 | 51.6 | 18.97 | 94 | 20.38 | 214.2 | 44.16 | 9920 |
| PD18-51-1426 | 9.9 | 70.3 | 5.78 | 35.6 | 24.8 | 6.01 | 69.6 | 20 | 228 | 77 | 340 | 63.9 | 600 | 104.9 | 11070 |
| PD18-51-1427 | 0.82 | 6.46 | 0.343 | 2.32 | 2.64 | 0.96 | 14.13 | 4.26 | 50.7 | 17.68 | 83.6 | 16.81 | 164.7 | 31.32 | 10430 |
| | | | | | | | | | | | | | | | |
| PD17-42-654 | 40.3 | 228 | 44.9 | 389 | 755 | 416 | 3340 | 836 | 6660 | 1610 | 5120 | 820 | 6190 | 918 | 14230 |
| PD17-42-655 | 5 | 19.1 | 1.91 | 17.5 | 97.9 | 53.8 | 947 | 244 | 1679 | 347 | 949 | 138.6 | 977 | 151.2 | 11760 |
| PD17-42-656 | 0.172 | 15.82 | 0.194 | 1.88 | 3.41 | 1.41 | 27.4 | 11.55 | 148.8 | 59 | 295 | 66.5 | 663 | 140.1 | 13270 |
| PD17-42-657 | 5.11 | 33.9 | 3.44 | 17.3 | 9.6 | 2.64 | 24 | 7.13 | 80.1 | 29.1 | 132.5 | 29 | 284 | 59.9 | 11000 |
| PD17-42-658 | 3.63 | 53.5 | 5.37 | 56.1 | 95 | 48.9 | 477 | 122 | 1100 | 311 | 1120 | 191 | 1481 | 242 | 8950 |
| PD17-42-659 | 0 | 12.85 | 0.034 | 0.48 | 1.53 | 0.581 | 8.75 | 2.87 | 32 | 12.11 | 57.8 | 12.4 | 120.3 | 26.12 | 11410 |
| PD17-42-660 | 0.098 | 6.81 | 0.055 | 0.88 | 2.29 | 0.214 | 15 | 6.04 | 81.2 | 33.9 | 162.8 | 34.6 | 323 | 63.4 | 12280 |
| PD17-42-661 | 0.76 | 9.12 | 0.76 | 3.8 | 1.72 | 0.47 | 7.83 | 2.77 | 35.6 | 15.13 | 80.4 | 19.4 | 219 | 51.8 | 13800 |
| PD17-42-662 | 62 | 299 | 38.4 | 247 | 338 | 194 | 1460 | 393 | 3130 | 720 | 2210 | 365 | 2740 | 435 | 17900 |
| PD17-42-663 | 3.11 | 49.7 | 3.07 | 18.1 | 10.6 | 3.88 | 27.9 | 8.48 | 88.8 | 32 | 151.7 | 34.65 | 361.3 | 82.7 | 12380 |
| PD17-42-672 | 810 | 1450 | 153 | 600 | 184 | 68 | 428 | 121 | 1030 | 242 | 770 | 127 | 980 | 155 | 8310 |
| PD17-42-673 | 2.76 | 28 | 1.92 | 11.75 | 15.11 | 5.99 | 74.7 | 25.21 | 290.5 | 106.7 | 484 | 100.9 | 932 | 187.4 | 11950 |
| PD17-42-674 | 24.6 | 150.3 | 18.2 | 95.7 | 36.6 | 11.34 | 62.4 | 17.5 | 149.6 | 37.5 | 130.6 | 24.7 | 220 | 42.1 | 14030 |
| PD17-42-674-2 | 35 | 200 | 23.7 | 117 | 38.5 | 9.9 | 49 | 11.5 | 109.1 | 38.5 | 183 | 44.4 | 478 | 99.8 | 14790 |
| PD17-42-675 | 11.4 | 66.7 | 7.45 | 38.1 | 17.1 | 3.59 | 36.8 | 11.45 | 139.6 | 54.1 | 244.4 | 51.9 | 473 | 94.1 | 12070 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-42-676 | 7.21 | 49.6 | 4.78 | 26.8 | 11.6 | 2.83 | 24.1 | 7.11 | 80.5 | 28.52 | 133.1 | 29.05 | 274.2 | 55.8 | 11110 |
| PD17-42-677 | 46.9 | 331 | 35.9 | 189 | 69.7 | 19.5 | 96.2 | 20.4 | 165 | 50 | 209.2 | 43.5 | 424 | 86.6 | 10850 |
| PD17-42-678 | 2.09 | 14.16 | 2.13 | 13.24 | 13.8 | 6.97 | 60.5 | 14.15 | 115.2 | 29.4 | 100.6 | 18.11 | 149 | 27.15 | 11670 |
| PD17-42-679 | 36.4 | 204 | 37.2 | 303 | 451 | 223 | 1860 | 523 | 4670 | 1180 | 3800 | 609 | 4590 | 688 | 13190 |
| PD17-42-680 | 2.54 | 17.9 | 2.03 | 11.9 | 6.36 | 2.7 | 19.6 | 5.9 | 68.4 | 25.5 | 121.9 | 28.1 | 296 | 69.1 | 7800 |
| PD17-42-681 | 91.9 | 601 | 58.8 | 294.4 | 118.5 | 34.7 | 179 | 41.3 | 321 | 75.6 | 274 | 54.3 | 505 | 100 | 15400 |
| PD17-42-682 | 1.305 | 15.25 | 1.111 | 7.17 | 6.21 | 2.91 | 29.6 | 8.01 | 78.6 | 26.7 | 116 | 24.7 | 241 | 51 | 11950 |
| PD17-42-683 | 2 | 11.58 | 1.77 | 10.9 | 5.67 | 2.84 | 17.9 | 5.47 | 60.2 | 22.2 | 108.6 | 24.24 | 244.5 | 52.8 | 11820 |
| PD17-42-692 | 1.32 | 46.5 | 1.58 | 11.4 | 9.3 | 3.71 | 29.4 | 8 | 76.1 | 24.02 | 103.2 | 21.5 | 214.5 | 44.8 | 10090 |
| PD17-42-693 | 0.0103 | 11.61 | 0.032 | 0.79 | 1.47 | 0.657 | 6.15 | 1.69 | 17.57 | 6.45 | 30.33 | 7.09 | 75.5 | 17.87 | 9820 |
| PD17-42-694 | 7.05 | 32.3 | 6.62 | 69.9 | 169 | 87.5 | 843 | 215 | 1700 | 403 | 1166 | 180 | 1278 | 196 | 13280 |
| PD17-42-695 | 8.24 | 49.9 | 5.47 | 31.8 | 41.4 | 21 | 170 | 36.3 | 307 | 86.7 | 329 | 61.5 | 535 | 100.9 | 13150 |
| PD17-42-695-2 | 11.32 | 105.9 | 9.38 | 50.1 | 24 | 7 | 47.5 | 12.75 | 123.9 | 39.5 | 169.3 | 36.17 | 353 | 73.4 | 10100 |
| PD17-42-696 | 5.75 | 64.7 | 4.45 | 24.4 | 13.7 | 4.37 | 32.2 | 9.46 | 99.1 | 32.7 | 144.3 | 30.1 | 295 | 62.5 | 9270 |
| PD17-42-697 | 1.71 | 32.05 | 1.427 | 8.6 | 6.37 | 1.98 | 20.32 | 5.98 | 61.9 | 21.51 | 93.4 | 20.19 | 193.6 | 40.44 | 11910 |
| PD17-42-698 | 22.71 | 135.3 | 14.75 | 80.3 | 46.8 | 24.7 | 145 | 40.5 | 346 | 93 | 305 | 52.5 | 443 | 79 | 10730 |
| PD17-42-699 | 41.6 | 253 | 30.4 | 174 | 132 | 57.6 | 407 | 109 | 930 | 243 | 780 | 141 | 1150 | 198 | 14760 |
| PD17-42-699-2 | 0.52 | 9.92 | 0.557 | 6.05 | 17.2 | 9.77 | 105 | 31.2 | 280 | 75.4 | 276 | 54.1 | 495 | 94.3 | 13560 |
| PD17-42-700 | 0.93 | 14.8 | 0.69 | 6.4 | 16.5 | 7.97 | 85 | 23.6 | 218 | 65.4 | 258 | 49.9 | 456 | 88.5 | 11620 |
| PD17-42-701 | 23.9 | 152.5 | 16.6 | 89.4 | 35.4 | 9 | 50.3 | 12.93 | 134.4 | 42.5 | 194.2 | 41.4 | 404 | 82.7 | 11470 |
| PD17-42-702 | 42.3 | 313 | 26.9 | 128.8 | 51.9 | 13.34 | 93.2 | 25.8 | 274 | 97.3 | 431 | 90.1 | 821 | 156.8 | 15440 |
| PD17-42-703 | 15.73 | 104.6 | 12.92 | 68.2 | 39.8 | 16.3 | 111 | 29.3 | 259 | 67.9 | 239 | 45 | 381 | 68.2 | 13150 |
| PD17-42-712 | 0.509 | 13.67 | 0.335 | 2.37 | 2.72 | 0.936 | 15.16 | 5.05 | 57.1 | 20.68 | 91.7 | 19.92 | 198.9 | 42.44 | 12150 |
| PD17-42-713 | 65.4 | 390 | 43.7 | 241.1 | 154.8 | 66.3 | 460 | 119.3 | 1041 | 259 | 882 | 152.7 | 1225 | 203 | 14600 |
| PD17-42-714 | 20.26 | 149 | 13.51 | 72.8 | 30.5 | 8.93 | 49.1 | 12.83 | 130.9 | 44.6 | 198.6 | 44.4 | 451 | 94.2 | 12970 |
| PD17-42-715 | 0.0169 | 22.9 | 0.119 | 2.4 | 3.56 | 1.54 | 15.04 | 4.34 | 45.5 | 16.83 | 78.2 | 17.06 | 175.2 | 39.11 | 8570 |
| PD17-42-716 | 15 | 65.1 | 7.44 | 44.6 | 24.6 | 7.12 | 63.2 | 16.1 | 160 | 52.2 | 218 | 45.6 | 434 | 91.1 | 11920 |
| PD17-42-717 | 2.76 | 18.5 | 2.11 | 12.2 | 6.8 | 2.15 | 29.3 | 9.86 | 125.1 | 46.1 | 211.7 | 43.4 | 396.4 | 78 | 10580 |
| PD17-42-718 | 0.52 | 8.3 | 0.404 | 3.55 | 5.61 | 1.26 | 32.4 | 11.07 | 142.8 | 56 | 245.3 | 48.6 | 426 | 83.5 | 10270 |
| PD17-42-719 | 5.5 | 39.9 | 4.78 | 30.9 | 23.3 | 12.29 | 106.1 | 39.9 | 345 | 93.3 | 357 | 71 | 667 | 128.4 | 15410 |
| PD17-42-720 | 9.4 | 52.5 | 6.65 | 39.4 | 15.7 | 5.42 | 25.8 | 7.26 | 63.5 | 19.66 | 91.7 | 22.91 | 260 | 62.8 | 11710 |

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| PD17-42-722 | 1.11 | 13.29 | 0.487 | 2.94 | 2.97 | 0.86 | 14.52 | 4.92 | 62.1 | 24.9 | 120.9 | 25.8 | 259.2 | 56.1 | 9040 |
| PD17-42-723 | 2.01 | 34 | 1.28 | 10.6 | 20.3 | 11 | 102 | 29.7 | 258 | 75.4 | 299 | 62.2 | 574 | 111.3 | 12510 |
| PD17-42-732 | 2.34 | 16.2 | 2.11 | 12.2 | 9.77 | 5.61 | 48.2 | 20.8 | 189 | 49.6 | 192 | 39.9 | 410 | 86.2 | 14230 |
| PD17-42-733 | 3.1 | 37.3 | 2.04 | 12.7 | 13 | 2.16 | 71.1 | 24.82 | 300.1 | 114.3 | 495 | 95.4 | 835 | 155.6 | 11260 |
| PD17-42-734 | 12.6 | 87 | 16.8 | 171 | 313 | 163 | 1670 | 463 | 4020 | 1040 | 3400 | 548 | 4050 | 646 | 10770 |
| PD17-42-735 | 0.81 | 13.68 | 0.361 | 2.85 | 3.51 | 1.62 | 25.4 | 9.08 | 121.8 | 49.7 | 233.1 | 48.72 | 459.9 | 94.3 | 10450 |
| PD17-42-736 | 3.29 | 24.27 | 3.34 | 21.8 | 20 | 7.41 | 75.7 | 21.1 | 178 | 46.5 | 167.1 | 30 | 256.1 | 49.3 | 10320 |
| PD17-42-737 | 42.3 | 264 | 61 | 620 | 1530 | 1040 | 7500 | 1850 | 14400 | 3440 | 10100 | 1660 | 12100 | 1660 | 14220 |
| PD17-42-738 | 5.65 | 51.8 | 4.47 | 29.5 | 68 | 38.8 | 351 | 68 | 500 | 122 | 405 | 73.4 | 633 | 116.6 | 13370 |
| PD17-42-739 | 15.6 | 88 | 11.1 | 65.6 | 53.3 | 22.5 | 189 | 55.4 | 490 | 139.7 | 551 | 106.3 | 955 | 181.8 | 12340 |
| PD17-42-740 | 53.8 | 346 | 42.5 | 260 | 261 | 130 | 1010 | 274 | 2340 | 587 | 1870 | 308 | 2400 | 365 | 13380 |
| PD17-42-741 | 12.5 | 82.1 | 10.3 | 75 | 110 | 56.2 | 468 | 117 | 1050 | 262 | 890 | 136 | 1100 | 182 | 10790 |
| PD17-42-742 | 32.9 | 176.1 | 25.5 | 168 | 212 | 99 | 1010 | 278 | 2380 | 528 | 1600 | 257 | 1900 | 293 | 11540 |
| PD17-42-743 | 100.9 | 685 | 103.9 | 852 | 1084 | 485 | 4240 | 1311 | 11930 | 3110 | 10060 | 1653 | 12230 | 1808 | 20970 |
| PD17-42-752 | 27.7 | 157.6 | 20.8 | 119.1 | 80 | 35.3 | 242 | 70 | 590 | 149 | 542 | 92 | 790 | 134 | 11640 |
| PD17-42-753 | 11.8 | 52.3 | 4.03 | 19.1 | 8.59 | 2.8 | 20.9 | 6.03 | 62.4 | 22 | 100.8 | 21.2 | 221.1 | 49.5 | 10910 |
| PD17-42-754 | 24.6 | 214 | 16.9 | 92.2 | 56.1 | 21.9 | 160 | 42.4 | 368 | 102 | 399 | 73.9 | 679 | 131.1 | 10390 |
| PD17-42-755 | 2.03 | 26.3 | 1.079 | 6.53 | 4.44 | 1.59 | 18.1 | 5.93 | 70.6 | 27.7 | 133 | 29.9 | 305 | 68 | 10570 |
| PD17-42-756 | 0.227 | 20.25 | 0.38 | 3.54 | 4.91 | 1.95 | 23.8 | 7.55 | 85 | 31.25 | 141.3 | 30.31 | 297.2 | 63.2 | 9350 |
| PD17-42-757 | 9.4 | 70.2 | 7.8 | 45.1 | 24.7 | 8.7 | 73 | 24 | 231 | 69.2 | 280 | 57.8 | 556 | 112.3 | 12560 |
| PD17-42-757-2 | 4.91 | 26 | 3.54 | 18.6 | 13.2 | 5.6 | 39 | 11.8 | 121 | 41.8 | 205 | 54.6 | 644 | 143.5 | 15970 |
| PD17-42-758 | 2.31 | 35.2 | 1.72 | 11.5 | 13.2 | 4.58 | 64.8 | 22.9 | 294 | 115.7 | 560 | 121.1 | 1146 | 225.4 | 13380 |
| PD17-42-759 | 1.15 | 15.8 | 1.15 | 7.31 | 7.08 | 1.38 | 32.9 | 12.47 | 161.2 | 62.7 | 293.9 | 60.1 | 538 | 104.6 | 12620 |
| PD17-42-760 | 3.77 | 31.4 | 5.8 | 63 | 92 | 48 | 390 | 119 | 1190 | 332 | 1160 | 207 | 1690 | 283 | 17100 |
| PD17-42-761 | 0.036 | 20.56 | 0.22 | 4 | 10.36 | 0.52 | 66.4 | 25.06 | 322.9 | 127 | 562 | 108.3 | 916 | 172.5 | 10890 |
| PD17-42-762 | 61.9 | 428 | 45.6 | 246 | 136 | 54.6 | 376 | 85 | 670 | 171 | 588 | 101.8 | 839 | 147.7 | 10540 |
| PD17-42-763 | 6.15 | 45.1 | 4.76 | 28.8 | 15.4 | 5.33 | 40.2 | 11.6 | 108 | 34.6 | 139 | 27.1 | 245 | 49.9 | 10620 |
| PD17-42-772 | 0.121 | 20.44 | 0.146 | 0.9 | 1.2 | 0.329 | 3.79 | 1.406 | 16.88 | 7.04 | 37 | 9.4 | 103.9 | 23.38 | 11430 |
| PD17-42-773 | 7.93 | 51.6 | 5.43 | 30.3 | 19.5 | 8.37 | 80.5 | 31.2 | 290 | 78.3 | 260 | 49.3 | 426 | 72.8 | 13140 |
| PD17-42-774 | 0.817 | 24.37 | 1.16 | 8.16 | 5.7 | 2.11 | 21.31 | 6.1 | 69 | 25.48 | 121 | 27.44 | 284.2 | 63.4 | 9990 |
| PD17-42-775 | 1.88 | 12.28 | 1.28 | 7.8 | 9.3 | 7.2 | 46 | 10.9 | 100 | 29.3 | 115.8 | 24.7 | 226 | 46.1 | 14030 |

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| PD17-42-776 | 15.8 | 122 | 12.8 | 74 | 37.4 | 11.9 | 77.6 | 19.8 | 177 | 49.3 | 187.7 | 36.3 | 339 | 67.9 | 10130 |
| PD17-42-777 | 1.82 | 38.4 | 1.21 | 9.6 | 10.37 | 3.91 | 39.8 | 11.88 | 115.7 | 37.5 | 155.6 | 31.1 | 287.1 | 55.7 | 8370 |
| PD17-42-778 | 22.5 | 99 | 9.9 | 51.4 | 31.3 | 11.88 | 111.2 | 32.9 | 295 | 82.7 | 308 | 56.3 | 470 | 85.5 | 9940 |
| PD17-42-779 | 20.2 | 117.2 | 14.5 | 77.3 | 37.3 | 11.48 | 98.4 | 27.1 | 276 | 92 | 386 | 75.1 | 691 | 141 | 10030 |
| PD17-42-780 | 9.71 | 59.4 | 5.91 | 32.2 | 22.9 | 8.29 | 75 | 20.4 | 182 | 58.4 | 242 | 50.3 | 470 | 92.2 | 12290 |
| PD17-42-781 | 6.46 | 151.1 | 5.51 | 39.4 | 34.7 | 10.25 | 112 | 29.7 | 290 | 93.6 | 380 | 75.9 | 667 | 127.1 | 8780 |
| PD17-42-782 | 5.49 | 49.1 | 4.48 | 24.9 | 15.8 | 5.9 | 50.8 | 15.5 | 151.3 | 40.1 | 149.9 | 29.1 | 247.3 | 46.1 | 11020 |
| PD17-42-783 | 8.55 | 67.9 | 6.9 | 37.5 | 17.7 | 4.89 | 30.6 | 7.79 | 75.8 | 22.8 | 95.7 | 20.7 | 203 | 41.8 | 11960 |
| PD17-42-792 | 0.308 | 17.6 | 0.378 | 3.71 | 12.2 | 6.58 | 65.9 | 21.5 | 194 | 55.5 | 226.8 | 51.2 | 534 | 116.3 | 14440 |
| PD17-42-793 | 5.71 | 59 | 4.5 | 30.1 | 36.6 | 17.93 | 146.2 | 46.7 | 396 | 100.6 | 350 | 65.9 | 594 | 112.6 | 13550 |
| PD17-42-794 | 3.77 | 19.5 | 2.41 | 13.4 | 6.7 | 3.19 | 23.8 | 9.7 | 103 | 35.1 | 176.9 | 48.8 | 578 | 128.9 | 15510 |
| PD17-42-794-2 | 1.04 | 14.23 | 1.12 | 8 | 9.6 | 2.92 | 38.2 | 13.98 | 146.8 | 48 | 206.9 | 41.5 | 371 | 72.2 | 9380 |
| PD17-42-795 | 48 | 131 | 18.9 | 84 | 24 | 3.15 | 51.7 | 15.17 | 179.6 | 66.2 | 290.5 | 57.9 | 516 | 99.2 | 11340 |
| PD17-42-796 | 14.4 | 86.6 | 7.92 | 40.1 | 25.7 | 10.06 | 92 | 29.2 | 289 | 93 | 395 | 82.1 | 777 | 160.8 | 11200 |
| PD17-42-797 | 50 | 113 | 12 | 53.1 | 15.4 | 5.02 | 24.9 | 5.32 | 46.5 | 15.43 | 65.8 | 14.6 | 152.8 | 36.95 | 10000 |
| PD17-42-798 | 4.23 | 62.9 | 2.47 | 12.5 | 7.16 | 2.47 | 30.6 | 9.52 | 104.8 | 38.1 | 175.4 | 39.5 | 388.9 | 78.7 | 10990 |
| PD17-42-799 | 3.48 | 46.3 | 2.41 | 13.6 | 7.83 | 2.79 | 28.1 | 9.21 | 108 | 41 | 199 | 46.2 | 477 | 105.6 | 11550 |
| PD17-42-800 | 0.218 | 8.37 | 0.128 | 1.3 | 2.48 | 0.553 | 14.26 | 5.3 | 66.3 | 27.77 | 136.2 | 30.45 | 297.9 | 63.5 | 10590 |
| PD17-42-801 | 70 | 168 | 20.1 | 92 | 71.1 | 36.2 | 315 | 84.6 | 716 | 188 | 669 | 120.1 | 1007 | 176.8 | 14130 |
| PD17-42-802 | 1.99 | 23.2 | 1.79 | 9.3 | 5.34 | 1.22 | 22.2 | 8.14 | 102.2 | 40.9 | 195.7 | 41.8 | 389.4 | 75.4 | 12450 |
| PD17-42-803 | 0.065 | 9.07 | 0.084 | 0.94 | 1.68 | 0.541 | 8.57 | 3.08 | 37 | 14.9 | 72.8 | 15.7 | 156 | 33.6 | 10970 |
| PD17-42-812 | 57.9 | 360 | 57.1 | 472 | 880 | 524 | 4110 | 980 | 7800 | 1830 | 5540 | 840 | 5970 | 870 | 13940 |
| PD17-42-813 | 0.473 | 17.93 | 0.286 | 2.51 | 3.05 | 0.829 | 14.7 | 4.87 | 59.6 | 23.4 | 113 | 24.5 | 248.6 | 54.8 | 11080 |
| PD17-42-814 | 13.6 | 83.1 | 8.32 | 47.8 | 44.2 | 28.1 | 190 | 44.9 | 350 | 87 | 336 | 62.9 | 540 | 99.9 | 11260 |
| PD17-42-815 | 0.346 | 24.51 | 0.509 | 5.74 | 9.68 | 2.28 | 50.8 | 17.11 | 206.3 | 78.5 | 359.1 | 75.5 | 695.3 | 139 | 9730 |
| PD17-42-816 | 4.77 | 46.6 | 3.03 | 17 | 9.21 | 2.57 | 24.1 | 7.4 | 76.2 | 27.3 | 116.2 | 23.17 | 216.4 | 43.1 | 10140 |
| PD17-42-817 | 1.03 | 15.12 | 1.07 | 6.56 | 5.65 | 0.96 | 32.7 | 11.96 | 156.7 | 63 | 294 | 59.2 | 529 | 103.3 | 12530 |
| PD17-42-818 | 0.585 | 9.3 | 0.5 | 3.03 | 3.53 | 1.29 | 12.24 | 3.94 | 45.5 | 17.07 | 79.5 | 17.8 | 176.4 | 39.1 | 10440 |
| PD17-42-819 | 8.4 | 107.7 | 7.8 | 46.9 | 30.6 | 10.42 | 90.7 | 25.5 | 253 | 83.7 | 333 | 63.5 | 547 | 102.8 | 10060 |
| PD17-42-820 | 172 | 380 | 41 | 164 | 37.6 | 2.44 | 79.4 | 23.2 | 269.9 | 100.3 | 443.7 | 86.5 | 754 | 143.2 | 11770 |
| PD17-42-821 | 0.93 | 17.8 | 1.08 | 9 | 10.9 | 2.44 | 59.3 | 19.17 | 229.8 | 83.8 | 362.6 | 70.9 | 621 | 119.8 | 11170 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-42-822 | 6.62 | 42 | 5.87 | 33.5 | 27.4 | 10.58 | 90.5 | 32 | 305 | 82 | 324 | 66.6 | 652 | 129.9 | 15280 |
| PD17-42-823 | 4.29 | 20.6 | 3.89 | 28.1 | 55.3 | 30.3 | 265 | 72.9 | 656 | 168 | 621 | 122 | 1184 | 244 | 28100 |
| PD17-42-823-2 | 9.91 | 46 | 8.49 | 64.7 | 110 | 56 | 531 | 135 | 1140 | 278 | 960 | 176 | 1530 | 308 | 25500 |
| PD17-42-832 | 0.41 | 23.92 | 0.261 | 1.63 | 2.93 | 1.21 | 16.04 | 5.58 | 64.7 | 24.73 | 119.7 | 27.26 | 273.7 | 59.2 | 10870 |
| PD17-42-833 | 3.33 | 60.3 | 2.94 | 16.6 | 15.9 | 7.3 | 73 | 25.3 | 242 | 72.2 | 296 | 62.5 | 600 | 129.8 | 11210 |
| PD17-42-834 | 3.59 | 31.2 | 4.17 | 27.1 | 13.6 | 4.24 | 53.3 | 17.7 | 200 | 72.5 | 316 | 60.4 | 538 | 106.3 | 9470 |
| PD17-42-835 | 320 | 790 | 80 | 377 | 231 | 105 | 790 | 197 | 1610 | 380 | 1210 | 204 | 1580 | 254 | 15540 |
| | | | | | | | | | | | | | | | |
| PD17-61-837 | 68 | 503 | 53.2 | 301 | 152 | 47.2 | 260 | 52.1 | 377 | 99.8 | 374 | 71.2 | 641 | 126 | 10160 |
| PD17-61-838 | 185 | 970 | 106 | 577 | 225 | 66 | 310 | 45.6 | 320 | 93.4 | 393 | 82 | 789 | 160.4 | 12410 |
| PD17-61-839 | 6.26 | 36.7 | 4.52 | 27.6 | 13.9 | 3.77 | 22.8 | 3.46 | 25 | 7.72 | 37.2 | 9.98 | 124.9 | 33.4 | 13750 |
| PD17-61-840 | 101.6 | 750 | 64.2 | 377 | 211 | 52.2 | 284 | 44.6 | 252 | 59.3 | 194.6 | 36 | 311 | 59.3 | 14280 |
| PD17-61-841 | 24.07 | 146.4 | 17.53 | 103.7 | 49.6 | 12.63 | 87.7 | 18.58 | 161 | 51.5 | 221.4 | 46.4 | 437 | 87.8 | 11550 |
| PD17-61-842 | 33.8 | 250 | 24.6 | 145.9 | 74.6 | 16.23 | 121.3 | 22.01 | 169.5 | 47 | 185.1 | 35.4 | 312.4 | 59.5 | 11680 |
| PD17-61-843 | 65 | 416 | 44.7 | 253 | 103 | 26.3 | 167 | 32 | 274 | 83.1 | 334 | 63.3 | 556 | 103.9 | 9420 |
| PD17-61-852 | 2.26 | 31.5 | 1.59 | 9.9 | 7.78 | 1.86 | 36.9 | 12.47 | 157.6 | 65.6 | 304.6 | 64.5 | 601 | 120.3 | 11990 |
| PD17-61-853 | 416 | 3180 | 258.7 | 1428 | 579 | 130.3 | 748 | 96.9 | 492 | 105.2 | 350 | 65.7 | 637 | 134.2 | 13910 |
| PD17-61-854 | 42.5 | 334 | 27.7 | 167 | 95 | 24.5 | 158 | 30.4 | 228 | 68.6 | 289 | 60.1 | 576 | 120 | 13340 |
| PD17-61-854-2 | 11.3 | 92.6 | 8.37 | 53.1 | 30.9 | 7.51 | 66 | 13.49 | 120.9 | 40.7 | 179.2 | 38.3 | 376 | 83 | 11880 |
| PD17-61-855 | 251 | 1370 | 152 | 885 | 403 | 116.2 | 592 | 93.1 | 594 | 149.4 | 546 | 101.7 | 902 | 177.2 | 10410 |
| PD17-61-856 | 474 | 2730 | 272 | 1474 | 584 | 127.4 | 744 | 85.5 | 401 | 86.1 | 285 | 53 | 497 | 95.8 | 13490 |
| PD17-61-857 | 7.94 | 68.9 | 7.23 | 49.4 | 33.9 | 7.13 | 57.5 | 11.07 | 87.2 | 26.52 | 109.3 | 23.04 | 218.9 | 44.35 | 12260 |
| PD17-61-858 | 6.62 | 44.2 | 4.47 | 27.2 | 15.3 | 4.79 | 31.4 | 7.79 | 78.1 | 26.77 | 120 | 25.36 | 243.7 | 49.7 | 12160 |
| PD17-61-859 | 368 | 2610 | 257 | 1451 | 690 | 189.4 | 900 | 129.9 | 725 | 158.8 | 551 | 105.6 | 981 | 201.5 | 11720 |
| PD17-61-860 | 153 | 1016 | 110.7 | 679 | 408 | 90.2 | 576 | 91 | 541 | 129.9 | 467 | 90.3 | 811 | 153.5 | 11750 |
| PD17-61-861 | 268 | 1800 | 182.5 | 1040 | 457 | 181.3 | 644 | 103.7 | 664 | 161.5 | 573 | 113.2 | 1063 | 206.3 | 11140 |
| PD17-61-862 | 544 | 3740 | 340 | 1780 | 619 | 153.6 | 824 | 111.9 | 610 | 133.3 | 415 | 70.2 | 581 | 106.5 | 12130 |
| PD17-61-863 | 170 | 1070 | 118 | 728 | 788 | 420 | 4370 | 1230 | 10900 | 2800 | 8550 | 1230 | 8530 | 1240 | 12770 |
| PD17-61-872 | 567 | 2003 | 276 | 1601 | 690 | 170.3 | 892 | 115.2 | 628 | 141.1 | 468 | 83.2 | 713 | 128.5 | 12190 |
| PD17-61-873 | 583 | 3930 | 337.2 | 1862 | 1023 | 304 | 2520 | 554 | 4490 | 1270 | 4060 | 634 | 4720 | 699 | 12100 |
| PD17-61-874 | 8.9 | 76.5 | 5.06 | 28.7 | 17.5 | 5.18 | 35.5 | 9.23 | 92.5 | 34 | 152.7 | 32.4 | 306 | 59.1 | 14720 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-61-875 | 9 | 78 | 11.2 | 73 | 30.3 | 2.94 | 74.3 | 19.24 | 201.2 | 70.7 | 296.6 | 56.7 | 489.1 | 91.1 | 9400 |
| PD17-61-876 | 0.75 | 8.3 | 0.474 | 3.03 | 2.27 | 0.69 | 12.43 | 4.28 | 55 | 23.47 | 117.1 | 27.2 | 278.2 | 61.5 | 8860 |
| PD17-61-877 | 7.7 | 53.7 | 6.04 | 40.1 | 25.7 | 6.56 | 69.1 | 18.34 | 195.3 | 71.5 | 318 | 64.7 | 586 | 116 | 9310 |
| PD17-61-878 | 9.1 | 102 | 8.1 | 49.2 | 27.4 | 7.09 | 47.3 | 9.63 | 76 | 23.64 | 103.7 | 22.43 | 225.6 | 48 | 12130 |
| PD17-61-879 | 43.6 | 271 | 25.3 | 133 | 51 | 14.8 | 75 | 14 | 111 | 34.5 | 148 | 31.4 | 311 | 69.1 | 12600 |
| PD17-61-880 | 620 | 3640 | 375 | 2090 | 858 | 199 | 1109 | 138.6 | 709 | 160.2 | 521 | 93.1 | 813 | 152 | 12270 |
| PD17-61-881 | 802 | 5260 | 509 | 2820 | 1192 | 246 | 1409 | 168.4 | 807 | 173.5 | 567 | 101.2 | 889 | 166.7 | 10390 |
| PD17-61-882 | 279 | 2040 | 202 | 1049 | 417 | 94.2 | 583 | 93 | 667 | 194.3 | 755 | 141.2 | 1210 | 218.3 | 9430 |
| PD17-61-883 | 252 | 1583 | 149.1 | 799 | 352 | 86 | 460 | 66.3 | 368 | 86.8 | 331 | 72.1 | 744 | 164.1 | 17080 |
| PD17-61-884 | 253 | 1370 | 138 | 704 | 256 | 64.4 | 356 | 49.3 | 323 | 91 | 368 | 76.1 | 733 | 148.9 | 10550 |
| PD17-61-892 | 328 | 1150 | 132 | 701 | 333 | 79 | 458 | 67.5 | 395 | 92.8 | 309 | 57.7 | 461 | 85.5 | 10240 |
| PD17-61-893 | 412 | 2032 | 223 | 1137 | 393 | 95.1 | 542 | 78.4 | 491 | 121.7 | 414 | 72.6 | 611 | 108.1 | 8780 |
| PD17-61-894 | 218 | 793 | 101 | 499 | 173 | 40.5 | 241 | 33.3 | 209.9 | 56.1 | 209.8 | 40.7 | 384 | 78.9 | 9780 |
| PD17-61-895 | 516 | 4900 | 349 | 1979 | 999 | 271 | 1376 | 224 | 1364 | 295 | 920 | 157.9 | 1292 | 205 | 11730 |
| PD17-61-896 | 37.3 | 369 | 25.6 | 154 | 96 | 24.4 | 155 | 25.8 | 167 | 45.2 | 190 | 42.3 | 449 | 100.6 | 11120 |
| PD17-61-897 | 158 | 784 | 110 | 735 | 435 | 100 | 634 | 86 | 456 | 94.5 | 301 | 51.1 | 435 | 80.4 | 11160 |
| PD17-61-898 | 33.3 | 205 | 24.2 | 148 | 74.6 | 21.8 | 130 | 23.8 | 196 | 54.9 | 205 | 38.9 | 333 | 59.7 | 9930 |
| PD17-61-899 | 102.6 | 607 | 55.6 | 290 | 109.2 | 26 | 172 | 27.3 | 203 | 66.2 | 285 | 61.8 | 622 | 135.4 | 11750 |
| PD17-61-900 | 567 | 2520 | 260 | 1355 | 586 | 128.5 | 743 | 102.9 | 565 | 128.5 | 457 | 88.2 | 820 | 169.5 | 9780 |
| PD17-61-901 | 3.27 | 47.1 | 2.93 | 21.4 | 18.9 | 4.15 | 66.8 | 18.4 | 195.8 | 70.4 | 301 | 58.2 | 515 | 97.1 | 9080 |
| PD17-61-902 | 33.9 | 193 | 20.2 | 107 | 43.7 | 11.3 | 74 | 13.9 | 117 | 37.8 | 162.1 | 33.6 | 313 | 61 | 11430 |
| PD17-61-903 | 380 | 2840 | 314 | 1990 | 1174 | 242 | 1593 | 229 | 1210 | 232.6 | 696 | 123.1 | 1105 | 221 | 14960 |
| PD17-61-912 | 151 | 1510 | 99.9 | 563 | 303 | 64.7 | 426 | 70.2 | 435 | 102.8 | 368 | 67.9 | 596 | 110.8 | 12760 |
| PD17-61-913 | 25.6 | 203 | 17.1 | 96 | 49.3 | 12.5 | 85 | 16.9 | 129 | 37.3 | 153 | 30.8 | 287 | 53.2 | 12140 |
| PD17-61-914 | 190 | 1223 | 125.2 | 730 | 342 | 93.3 | 481 | 70.7 | 414 | 96.6 | 340 | 63.4 | 582 | 115.4 | 9920 |
| PD17-61-915 | 1570 | 1724 | 378 | 1820 | 576 | 141 | 698 | 105.2 | 662 | 160 | 581 | 107.3 | 960 | 181.9 | 10610 |
| PD17-61-916 | 39 | 59.4 | 9.6 | 47 | 18.8 | 3.45 | 38.2 | 9.33 | 96.7 | 34.55 | 155.7 | 31.39 | 288.4 | 56.1 | 11020 |
| PD17-61-917 | 524 | 3900 | 349 | 1810 | 724 | 194 | 972 | 157.6 | 1001 | 232.5 | 796 | 142.8 | 1250 | 236.6 | 10500 |
| PD17-61-918 | 12.54 | 108.4 | 10.55 | 62.7 | 31.5 | 8.38 | 53.6 | 10.87 | 94.6 | 30.8 | 133.3 | 28.48 | 279 | 58.8 | 10470 |
| PD17-61-919 | 245 | 1536 | 140.1 | 746 | 331 | 76 | 454 | 72 | 484 | 130.2 | 484 | 88.7 | 765 | 146.7 | 9490 |
| PD17-61-920 | 107 | 494 | 58 | 319 | 122.9 | 31.5 | 147 | 19.1 | 118.6 | 35.9 | 165.2 | 45.9 | 574 | 142.5 | 17360 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-61-921 | 159 | 980 | 95 | 547 | 254 | 53.7 | 356 | 51.3 | 304 | 70.4 | 247 | 43.3 | 383 | 71.1 | 10040 |
| PD17-61-922 | 170 | 551 | 81.6 | 501 | 240 | 61.7 | 340 | 50.4 | 321 | 82.6 | 319 | 63 | 587 | 115.7 | 11220 |
| PD17-61-923 | 96.6 | 1035 | 78.5 | 482 | 317 | 77.1 | 476 | 76.1 | 436 | 94.9 | 314.5 | 57.2 | 493 | 93 | 10720 |
| PD17-61-932 | 647 | 3310 | 320 | 1652 | 659 | 151.6 | 878 | 131.1 | 815 | 212.7 | 801 | 158.3 | 1462 | 288.8 | 11040 |
| PD17-61-933 | 291 | 1410 | 169 | 1010 | 505 | 128 | 691 | 103.1 | 595 | 133.9 | 448 | 79.4 | 696 | 131.9 | 10130 |
| PD17-61-934 | 15.4 | 110 | 9.5 | 54.4 | 30.4 | 7.68 | 53.9 | 11.03 | 94 | 30.2 | 131.4 | 27.7 | 260.2 | 54.2 | 9800 |
| PD17-61-935 | 697 | 3720 | 378 | 2034 | 828 | 202.1 | 1096 | 147.2 | 902 | 232.6 | 834 | 153.8 | 1330 | 246.6 | 10680 |
| PD17-61-936 | 43.8 | 252 | 30.1 | 177 | 90 | 21.5 | 139 | 27.3 | 228 | 72.2 | 308 | 64.9 | 594 | 115.1 | 11990 |
| PD17-61-937 | 384 | 2680 | 331 | 2010 | 929 | 221 | 1212 | 172.6 | 929 | 185.1 | 534 | 83.5 | 654 | 113 | 10880 |
| PD17-61-938 | 396 | 2240 | 226.5 | 1185 | 418 | 90.8 | 545 | 69.3 | 409 | 106.2 | 407 | 81.7 | 772 | 162.5 | 10960 |
| PD17-61-939 | 178 | 821 | 106 | 627 | 328 | 92 | 508 | 82.5 | 549 | 140 | 486 | 86.5 | 712 | 130.1 | 9240 |
| PD17-61-940 | 55 | 344 | 38.2 | 220 | 113 | 26.1 | 152 | 21.1 | 121 | 28.5 | 110.1 | 22.6 | 219 | 43.7 | 11820 |
| PD17-61-941 | 14.6 | 106.8 | 10.51 | 67.6 | 42.1 | 9.93 | 78 | 16.62 | 145.2 | 48.1 | 208.5 | 45.7 | 445 | 91.5 | 11210 |
| PD17-61-942 | 104.9 | 1111 | 66.1 | 395 | 242 | 57.6 | 347 | 55.9 | 339 | 80.2 | 292.7 | 55.1 | 470 | 92.6 | 11800 |
| PD17-61-943 | 39.6 | 450 | 28 | 157 | 90 | 21.6 | 140 | 24 | 163 | 42.3 | 169.2 | 35.9 | 365 | 81.7 | 11300 |
| PD17-61-952 | 860 | 600 | 156 | 720 | 223 | 44 | 230 | 28.3 | 160 | 38.4 | 144 | 29.9 | 283 | 57.5 | 12310 |
| PD17-61-954 | 67.6 | 771 | 54.8 | 310 | 178 | 40.5 | 249 | 38.9 | 236 | 57.5 | 213 | 42.8 | 395 | 78.7 | 13060 |
| PD17-61-955 | 19.5 | 143 | 14.1 | 87 | 52.4 | 13 | 89 | 16.9 | 131 | 39 | 162 | 33.6 | 309 | 59.2 | 12130 |
| PD17-61-956 | 4.7 | 47.3 | 4.31 | 26.7 | 15.1 | 3.41 | 25.6 | 4.9 | 41.1 | 12.69 | 55.5 | 12.38 | 121.4 | 25.8 | 11540 |
| PD17-61-957 | 19.7 | 131.9 | 13.87 | 88.9 | 56.7 | 13.28 | 105.8 | 21.51 | 183.8 | 59.8 | 252.6 | 51.2 | 482 | 98.4 | 10000 |
| PD17-61-958 | 314 | 2360 | 230 | 1307 | 616 | 148 | 825 | 118.3 | 671 | 147.3 | 483 | 84.9 | 742 | 132.9 | 9810 |
| PD17-61-959 | 41 | 307 | 34.1 | 211.7 | 121.6 | 24.2 | 198.4 | 34.3 | 248 | 70 | 269 | 53.5 | 497 | 102.4 | 11820 |
| PD17-61-960 | 35 | 199 | 22.6 | 144 | 78.9 | 20.6 | 120.2 | 18.9 | 124.6 | 34.3 | 135.8 | 28.34 | 273.5 | 58.2 | 10250 |
| PD17-61-961 | 10.1 | 81 | 7.7 | 47.2 | 22.1 | 5.63 | 41.9 | 8.95 | 84.3 | 28.9 | 124 | 24.9 | 228 | 45.2 | 11360 |
| PD17-61-962 | 1280 | 1630 | 282 | 1410 | 434 | 82.1 | 498 | 63.2 | 420 | 121 | 474 | 89.4 | 784 | 143.4 | 12070 |
| PD17-61-963 | 370 | 2041 | 203.7 | 1069 | 399 | 98.9 | 534 | 74.4 | 464 | 124.2 | 512 | 120.5 | 1359 | 300.5 | 37260 |
| PD17-61-964 | 5.69 | 94 | 4.34 | 26.7 | 17.3 | 4.01 | 29.4 | 6.3 | 50.9 | 16.43 | 72 | 15.42 | 152.7 | 34 | 11000 |
| PD17-61-973 | 417 | 2890 | 253 | 1416 | 811 | 208 | 1800 | 353 | 2510 | 576 | 1780 | 300 | 2360 | 410 | 16520 |
| PD17-61-974 | 183.4 | 1943 | 125.1 | 688 | 339 | 75.8 | 438 | 65.2 | 389 | 92 | 316 | 55.3 | 469 | 86.2 | 10960 |
| PD17-61-975 | 74 | 425 | 38.6 | 232 | 116 | 24.2 | 200 | 40.9 | 342 | 103.8 | 407 | 78.8 | 686 | 123.5 | 10520 |
| PD17-61-976 | 480 | 2520 | 226 | 1180 | 499 | 126.7 | 654 | 94.8 | 567 | 130.1 | 427 | 75.4 | 605 | 108.4 | 11070 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-61-977 | 7.14 | 87.6 | 6.01 | 40.4 | 26.1 | 7.22 | 57.9 | 13.29 | 133.8 | 49.2 | 227.8 | 51 | 494 | 103.7 | 11740 |
| PD17-61-978 | 55.9 | 440 | 38.7 | 238 | 152 | 41.7 | 256 | 44.6 | 317 | 86.6 | 326 | 63.9 | 571 | 108 | 11660 |
| PD17-61-979 | 252 | 1300 | 146 | 821 | 351 | 69.3 | 449 | 58.5 | 364 | 100 | 398 | 79.6 | 770 | 156.1 | 9350 |
| PD17-61-980 | 296 | 2356 | 214 | 1175 | 563 | 119.4 | 722 | 107.9 | 673 | 173.8 | 641 | 116.3 | 990 | 192.6 | 10530 |
| PD17-61-981 | 540 | 650 | 104 | 470 | 161 | 28.7 | 199 | 36.6 | 317 | 105.2 | 424 | 87.9 | 772 | 140.9 | 11530 |
| PD17-61-982 | 95 | 191.8 | 25.9 | 152 | 78.3 | 21.78 | 157.3 | 34.1 | 314.9 | 105.4 | 439 | 87.6 | 781 | 151.5 | 9470 |
| PD17-61-983 | 367 | 2542 | 219 | 1184 | 497 | 109.3 | 617 | 76.7 | 382.6 | 82.4 | 278.6 | 54.5 | 532 | 115.9 | 11570 |
| PD17-61-984 | 316 | 1701 | 197.4 | 1106 | 502 | 137.9 | 899 | 169 | 1172 | 280 | 924 | 162.7 | 1452 | 271 | 19010 |
| PD17-61-993 | 16.5 | 147.4 | 11.39 | 73.5 | 47.8 | 11.08 | 84.6 | 15.51 | 115.4 | 33 | 133.5 | 27.2 | 262 | 53.7 | 10010 |
| PD17-61-994 | 8.9 | 118 | 7.29 | 46 | 29.5 | 6.48 | 53.8 | 11.51 | 100 | 32.41 | 142.1 | 28.88 | 272.6 | 53.4 | 11840 |
| PD17-61-994-2 | 24.8 | 420 | 20.1 | 115 | 71.4 | 15.9 | 99 | 18.3 | 120.2 | 32.1 | 125.6 | 26.2 | 247 | 52.3 | 11620 |
| PD17-61-995 | 106 | 401 | 47.8 | 260 | 101.9 | 25.8 | 157 | 28.2 | 220 | 67.2 | 288 | 62.1 | 613 | 127.3 | 11810 |
| PD17-61-996 | 1.87 | 28.9 | 1.68 | 11.19 | 7.68 | 2.14 | 23.6 | 6.67 | 71.6 | 25.54 | 114.4 | 23.34 | 217.2 | 42.5 | 12130 |
| PD17-61-997 | 10.82 | 89 | 8.44 | 55 | 34.3 | 8.24 | 64.7 | 12.81 | 102.1 | 32 | 136.3 | 29.1 | 291 | 63.4 | 9690 |
| PD17-61-998 | 106.2 | 489 | 64.9 | 408 | 216 | 59.2 | 302.8 | 49.5 | 323 | 78 | 274 | 51.5 | 469 | 92.4 | 12700 |
| PD17-61-999 | 108.1 | 802 | 70.6 | 421 | 162 | 41.3 | 224 | 35.5 | 233 | 59.6 | 230 | 44.8 | 424 | 84.4 | 14480 |
| PD17-61-1000 | 40.6 | 195 | 22.9 | 145 | 81.8 | 20.4 | 127.3 | 21.2 | 131 | 32.7 | 127.3 | 27.1 | 288 | 66.6 | 14680 |
| PD17-61-1001 | 63.9 | 375 | 41.1 | 241 | 120.1 | 25.5 | 172 | 25.4 | 158.8 | 38.5 | 143.8 | 28.56 | 262.1 | 55 | 12860 |
| PD17-61-1001-2 | 309 | 1896 | 210.3 | 1159 | 519 | 114 | 649 | 86.3 | 426 | 85.8 | 272.8 | 50.9 | 447 | 87 | 11580 |
| PD17-61-1002 | 223 | 1710 | 151 | 810 | 345 | 84.1 | 442 | 67.4 | 386 | 85.1 | 287 | 49.8 | 416 | 77.2 | 13530 |
| PD17-61-1003 | 22 | 204 | 20.1 | 126 | 71.9 | 14.8 | 109 | 19 | 140 | 41.4 | 170 | 35.5 | 340 | 69.2 | 11950 |
| PD17-61-1003-2 | 13.5 | 68 | 7.6 | 40.9 | 14.7 | 3.67 | 20.8 | 3.57 | 36.7 | 15.3 | 80.7 | 23.7 | 315 | 83.9 | 15800 |
| PD17-61-1004 | 226 | 1230 | 132.8 | 666 | 225 | 52.9 | 286 | 34.2 | 187 | 47 | 179.1 | 37.8 | 396 | 84.7 | 13540 |
| PD17-61-1013 | 368 | 2100 | 202 | 1094 | 507 | 132 | 872 | 161 | 1310 | 376 | 1280 | 215 | 1600 | 280 | 11500 |
| PD17-61-1014 | 31.5 | 205 | 24.2 | 144 | 78.7 | 19.7 | 131.6 | 27.3 | 200.5 | 55.5 | 215 | 40.8 | 368 | 69.4 | 11750 |
| PD17-61-1015 | 12.2 | 139 | 9 | 58 | 37.8 | 10.24 | 71.1 | 13.96 | 109.9 | 32.9 | 132.7 | 27.3 | 261 | 52.6 | 10360 |
| PD17-61-1016 | 220 | 1251 | 125.4 | 635 | 260 | 60.1 | 391 | 59 | 380 | 98 | 360.8 | 68.9 | 631 | 125.6 | 10960 |
| PD17-61-1017 | 34.8 | 227 | 26.6 | 170 | 89 | 27.3 | 141 | 24.4 | 166 | 44.9 | 169 | 33.3 | 306 | 63.6 | 8380 |
| PD17-61-1018 | 10.8 | 71 | 7.5 | 40 | 18.4 | 5 | 44.1 | 10.42 | 110.6 | 39.4 | 171 | 35.6 | 330.2 | 67.6 | 11600 |
| PD17-61-1019 | 4.93 | 52.1 | 4.17 | 29 | 22.5 | 5.26 | 54.5 | 13.07 | 125.7 | 42.78 | 191.2 | 41.6 | 400.2 | 84.2 | 10380 |
| PD17-61-1020 | 93 | 710 | 72 | 387 | 149 | 38 | 213 | 36.8 | 259 | 68.6 | 255 | 47.9 | 431 | 84.1 | 10570 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD17-61-1021 | 17.6 | 118.9 | 12.66 | 73.6 | 43 | 9.1 | 101.8 | 24.87 | 245.5 | 85.2 | 356.6 | 68.5 | 609 | 116.1 | 9270 |
| PD17-61-1022 | 24.4 | 172 | 18.4 | 106 | 57.2 | 11.9 | 99.2 | 18.86 | 146.7 | 45.1 | 183.3 | 36.38 | 338.1 | 67.8 | 10790 |
| PD17-61-1023 | 11 | 62.5 | 5.5 | 36.7 | 21.3 | 5.89 | 41 | 9.55 | 99.2 | 36.5 | 173.9 | 38.5 | 385 | 77 | 10500 |
| PD17-61-1024 | 60.5 | 315 | 41 | 259 | 143 | 35.2 | 207 | 31.2 | 187 | 46.3 | 171.7 | 32.69 | 305.2 | 62 | 11880 |
| PD17-61-1025 | 10.6 | 71.9 | 7.33 | 45.3 | 27.7 | 6.82 | 48.8 | 9.36 | 74 | 23.3 | 109.3 | 24.5 | 258 | 57.1 | 14250 |
| PD17-61-1026 | 391 | 2238 | 244 | 1436 | 687 | 185.5 | 957 | 150 | 859 | 191.5 | 621 | 109.9 | 965 | 195.2 | 17090 |
| PD17-61-1027 | 443.2 | 3450 | 261.1 | 1375 | 668 | 159 | 889 | 132.8 | 735 | 163.2 | 542 | 99.1 | 858 | 167.1 | 10670 |
| PD17-61-1028 | 122.8 | 1336 | 83.1 | 495 | 338 | 92.6 | 533 | 89.4 | 535 | 123.5 | 433 | 80.5 | 711 | 134 | 10140 |
| | | | | | | | | | | | | | | | |
| PD18-117-9 | 36.1 | 333 | 55.1 | 327 | 159.9 | 56.8 | 284.3 | 66.4 | 551 | 155.5 | 574 | 112.4 | 936 | 170.2 | 10650 |
| PD18-117-10 | 41.8 | 464 | 70.8 | 438 | 215 | 78.7 | 348 | 76.2 | 535 | 125.9 | 407 | 72.9 | 633 | 117.2 | 7980 |
| PD18-117-11 | 20.9 | 188.9 | 30 | 185.1 | 96 | 41 | 194.8 | 47.2 | 349 | 80.8 | 253 | 45.7 | 398 | 70.5 | 9220 |
| PD18-117-12 | 19.8 | 217 | 31.2 | 197 | 190 | 91 | 620 | 139 | 990 | 227 | 690 | 113 | 900 | 154 | 13230 |
| PD18-117-13 | 60 | 663 | 122 | 754 | 331 | 126 | 543 | 115 | 768 | 177 | 570 | 105.3 | 902 | 169.2 | 9720 |
| PD18-117-14 | 26.5 | 162 | 28.5 | 174 | 84.2 | 24.7 | 171 | 39.5 | 354 | 104.5 | 399 | 73.1 | 611 | 113 | 9400 |
| PD18-117-15 | 22.4 | 245 | 43.1 | 259 | 129 | 48.9 | 223 | 50 | 355 | 77.1 | 241 | 42.3 | 371 | 69.3 | 9160 |
| PD18-117-16 | 49.3 | 497 | 85.8 | 488 | 240.5 | 100.9 | 410 | 87.9 | 566 | 110.9 | 301.7 | 49.6 | 401 | 68.3 | 10120 |
| PD18-117-17 | 2.11 | 18.74 | 2.05 | 12.3 | 8.02 | 3.15 | 24.7 | 7.11 | 75.4 | 27.59 | 122.9 | 26.94 | 259.7 | 56.1 | 8220 |
| PD18-117-18 | 0.013 | 20.3 | 0.066 | 1.1 | 2.1 | 0.571 | 10.4 | 3.06 | 33.4 | 11.86 | 53.2 | 11.1 | 105 | 21.14 | 9050 |
| PD18-117-19 | 15.49 | 149.9 | 24 | 139.9 | 61.9 | 20.2 | 115.4 | 27.6 | 241.1 | 77.8 | 307 | 61.2 | 535 | 98.3 | 10570 |
| PD18-117-27 | 90.8 | 571 | 108.2 | 612 | 273 | 114.7 | 514 | 114.2 | 811 | 176.3 | 534 | 91.2 | 741 | 127.7 | 11360 |
| PD18-117-28 | 50.3 | 392 | 72.9 | 436 | 212 | 70.4 | 319 | 68.7 | 486 | 111 | 340 | 60.4 | 524 | 92 | 9040 |
| PD18-117-29 | 30.1 | 252.2 | 44.9 | 267 | 122.7 | 49.6 | 215.1 | 48.7 | 365 | 90.8 | 321.1 | 60.8 | 539 | 99.9 | 10360 |
| PD18-117-30 | 13.7 | 171 | 18.6 | 114 | 65.2 | 25.4 | 159 | 39.5 | 333 | 94 | 358 | 72.2 | 642 | 126.4 | 8440 |
| PD18-117-31 | 18.5 | 236 | 37.6 | 237 | 109.4 | 51.9 | 213 | 47.3 | 421 | 130.6 | 571 | 128.9 | 1279 | 259 | 9980 |
| PD18-117-32 | 20.9 | 250 | 39.5 | 242 | 109 | 39.5 | 198 | 50.3 | 397 | 119.5 | 456 | 86.4 | 752 | 141 | 10560 |
| PD18-117-33 | 37.2 | 359 | 51.7 | 312 | 173.8 | 60.2 | 322 | 73.1 | 576 | 142.9 | 508 | 95.1 | 831 | 150.6 | 10230 |
| PD18-117-34 | 36.9 | 404 | 47.8 | 274 | 144.5 | 52.8 | 280 | 71.4 | 527 | 122 | 389 | 69.3 | 585 | 103.6 | 8990 |
| PD18-117-35 | 11.1 | 140 | 17.3 | 109 | 57.1 | 19.1 | 115 | 27.4 | 221 | 64.1 | 238 | 44.6 | 399 | 75 | 7800 |
| PD18-117-36 | 49.5 | 507 | 94.9 | 536 | 267 | 92.9 | 429 | 94.1 | 689 | 174.6 | 612 | 119.8 | 1062 | 188.1 | 9550 |
| PD18-117-37 | 17.3 | 192 | 32 | 182 | 93.2 | 37.7 | 171 | 37.9 | 287 | 73.7 | 255 | 47.3 | 403 | 77.1 | 9180 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-117-45 | 4.63 | 69.4 | 9.5 | 56.9 | 38.9 | 13 | 102.8 | 26.8 | 276 | 92.7 | 393 | 81.4 | 749 | 141 | 8510 |
| PD18-117-47 | 0.164 | 3.47 | 0.187 | 1.46 | 0.92 | 0.506 | 3.47 | 1.139 | 11.26 | 4.06 | 18.87 | 4.23 | 44.9 | 9.63 | 2929 |
| PD18-117-48 | 0 | 12.01 | 0.209 | 3.32 | 7.54 | 1.95 | 47.8 | 16.07 | 185.4 | 69.6 | 295 | 57.9 | 499 | 97.3 | 8730 |
| PD18-117-49 | 0.017 | 13.14 | 0.217 | 4.23 | 9.45 | 1.06 | 53.9 | 18.31 | 224 | 85.8 | 369.4 | 70 | 585 | 108 | 8460 |
| PD18-117-50 | 17 | 205 | 34.6 | 209 | 86.1 | 31.7 | 128 | 25.3 | 182 | 46.5 | 174.7 | 37.2 | 355 | 75.3 | 9890 |
| PD18-117-51 | 4.8 | 33.5 | 2.56 | 15.4 | 6.68 | 1.72 | 19.7 | 5.93 | 65 | 23.83 | 107.6 | 23.38 | 218.8 | 43.85 | 9580 |
| PD18-117-52 | 50.5 | 397 | 84 | 518 | 234 | 73.4 | 342.3 | 63 | 417 | 93.8 | 310 | 56.6 | 497 | 95.6 | 9510 |
| PD18-117-53 | 124.1 | 1299 | 201.7 | 1228 | 793 | 369 | 2550 | 663 | 4820 | 1029 | 2830 | 417 | 2940 | 442 | 7220 |
| PD18-117-54 | 69.6 | 772 | 117.7 | 703 | 332 | 141.4 | 597 | 124 | 849 | 192 | 596 | 99.1 | 795 | 135.2 | 10740 |
| PD18-117-55 | 23.5 | 256 | 45.1 | 268 | 147.4 | 56.8 | 259 | 59.2 | 435 | 102.4 | 339 | 63.9 | 552 | 105.7 | 9230 |
| PD18-117-63 | 10.7 | 105.8 | 10.53 | 60.5 | 29.1 | 9.33 | 55.6 | 12.38 | 103.3 | 31.6 | 131.4 | 28.1 | 272 | 57.2 | 9370 |
| PD18-117-64 | 6.9 | 82.3 | 11.5 | 60.6 | 30 | 9.9 | 72.6 | 21.7 | 203.2 | 63 | 275 | 55.4 | 495 | 94 | 11000 |
| PD18-117-65 | 0.35 | 28.7 | 0.7 | 7.91 | 10.84 | 4.39 | 51.1 | 15.82 | 167.1 | 58.4 | 246.8 | 49.6 | 447 | 85.7 | 9860 |
| PD18-117-66 | 22.26 | 191.7 | 29.6 | 172.2 | 88.9 | 32.6 | 167.9 | 39.6 | 304 | 74.7 | 261 | 53.4 | 512 | 108.4 | 7910 |
| PD18-117-67 | 44 | 506 | 94.5 | 587 | 282.3 | 110.1 | 454 | 90.1 | 591 | 119 | 358 | 62.6 | 539 | 102.8 | 8740 |
| PD18-117-68 | 0.244 | 7.14 | 0.27 | 1.51 | 2.25 | 0.407 | 12.04 | 4.46 | 57.3 | 22.62 | 105.7 | 22.92 | 215.2 | 42.4 | 9950 |
| PD18-117-69 | 44.7 | 306 | 44.2 | 260 | 139.4 | 59.5 | 264 | 59 | 419 | 93.2 | 283.2 | 47 | 370 | 61.3 | 11200 |
| PD18-117-70 | 27.5 | 241 | 33.3 | 204 | 95.8 | 35.3 | 165 | 35.3 | 267 | 64.5 | 229 | 46.1 | 426 | 84 | 8410 |
| PD18-117-71 | 46.3 | 188.9 | 32.6 | 223 | 129.4 | 39.6 | 227 | 45.5 | 327 | 82.3 | 285.9 | 56.5 | 535 | 113.1 | 10100 |
| PD18-117-72 | 7.54 | 93.8 | 9.37 | 58.5 | 29.2 | 10.93 | 66.1 | 17.21 | 138.9 | 38.7 | 134.9 | 24.85 | 211.7 | 39.5 | 9020 |
| PD18-117-73 | 0.0064 | 7.88 | 0.069 | 1.19 | 2.63 | 0.402 | 17.62 | 6.53 | 83.2 | 32.9 | 152.2 | 32.4 | 299.6 | 59 | 9320 |
| PD18-117-81 | 0.465 | 73.7 | 2.31 | 35 | 45.9 | 21.7 | 127.8 | 25.8 | 192.4 | 48.5 | 157 | 26.2 | 203.1 | 34.9 | 7610 |
| PD18-117-82 | 6.8 | 55 | 7.02 | 41.3 | 16.8 | 6.01 | 29.7 | 6.69 | 65.1 | 21.3 | 101.2 | 23.29 | 240 | 52.7 | 8680 |
| PD18-117-83 | 0.072 | 5.51 | 0.31 | 2.86 | 6.15 | 1.55 | 32.6 | 10.54 | 126.3 | 45.8 | 196.7 | 38.5 | 343 | 65 | 8250 |
| PD18-117-84 | 5.04 | 64.7 | 6.37 | 41.7 | 19.7 | 9.76 | 43.7 | 9.88 | 79.5 | 20.16 | 74.4 | 14.77 | 144.5 | 30.55 | 8760 |
| PD18-117-85 | 30.3 | 348 | 62.3 | 357 | 153.4 | 54.3 | 235 | 46.1 | 334 | 81.7 | 299 | 60.4 | 573 | 115.1 | 8890 |
| PD18-117-86 | 34.7 | 345 | 52.7 | 306.1 | 130.6 | 49.1 | 213.8 | 45.7 | 338 | 79.3 | 276.9 | 53.3 | 500 | 97 | 9180 |
| PD18-117-87 | 0.028 | 14.62 | 0.229 | 3.99 | 8.17 | 0.85 | 50.9 | 16.7 | 209.5 | 76.9 | 332 | 64.5 | 562 | 105.4 | 8570 |
| PD18-117-88 | 12.93 | 135.3 | 22.72 | 131.4 | 62 | 22.04 | 114.4 | 25.6 | 206.9 | 60.5 | 243.5 | 49.7 | 483 | 101.5 | 9180 |
| PD18-117-89 | 4.93 | 46.6 | 5.9 | 38.6 | 22.1 | 7.62 | 55.7 | 15.4 | 147 | 43.2 | 173 | 34.7 | 316 | 58.7 | 10980 |
| PD18-117-90 | 100.3 | 953 | 164.6 | 1017 | 446 | 165 | 691 | 134.9 | 877 | 198 | 622 | 115 | 972 | 173.5 | 10940 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-117-91 | 21.8 | 217 | 38.3 | 264 | 126 | 46.5 | 218 | 45.4 | 294 | 67.4 | 223 | 39.5 | 337 | 63 | 8610 |
| PD18-117-99 | 0.099 | 12.59 | 0.39 | 3.88 | 6.39 | 1.18 | 40.5 | 13.19 | 168.1 | 62.6 | 277.9 | 53.6 | 456 | 85 | 8640 |
| PD18-117-100 | 24.6 | 280 | 47.5 | 286 | 137 | 56.8 | 250 | 55.3 | 399 | 95.5 | 323 | 60.3 | 536 | 99 | 8320 |
| PD18-117-102 | 13 | 37.5 | 3.93 | 20.5 | 9.34 | 1.42 | 37.4 | 12.19 | 142.5 | 54.3 | 235 | 45.4 | 401 | 75.6 | 8350 |
| PD18-117-103 | 3.5 | 31.6 | 2.95 | 15.8 | 11.3 | 3.59 | 37.2 | 11.59 | 132.5 | 49 | 216 | 44.6 | 397 | 77.6 | 10680 |
| PD18-117-104 | 16 | 178 | 21.4 | 119.6 | 69.4 | 25.1 | 158 | 42.6 | 344 | 92.2 | 333 | 63.8 | 548 | 106.9 | 7850 |
| PD18-117-105 | 201.2 | 1254 | 223.8 | 1235 | 516 | 171.1 | 722 | 132.7 | 836 | 175 | 561 | 105.9 | 943 | 186.2 | 10330 |
| PD18-117-106 | 7.39 | 93.3 | 14.5 | 87.8 | 49 | 20.8 | 110.1 | 27.9 | 244 | 65.3 | 250.1 | 46.8 | 407 | 73.1 | 9160 |
| PD18-117-107 | 5.7 | 40.2 | 4.38 | 26.3 | 16.9 | 5.99 | 56.8 | 17.86 | 194.9 | 70.4 | 300.8 | 60.7 | 541 | 110.4 | 7930 |
| PD18-117-108 | 2.29 | 26.9 | 2.86 | 17.3 | 11.7 | 3.39 | 33.6 | 10.48 | 113.9 | 41.6 | 185 | 39.1 | 367 | 71.8 | 8380 |
| PD18-117-109 | 1.87 | 31.1 | 3.97 | 24.5 | 15.9 | 5.02 | 60 | 18.51 | 204.6 | 74.2 | 313 | 61.1 | 559 | 103.9 | 8670 |
| PD18-117-119 | 89.4 | 698 | 139.7 | 841 | 404 | 121.8 | 580 | 106.2 | 661 | 136.3 | 405 | 70.4 | 620 | 120.2 | 11490 |
| PD18-117-120 | 0.096 | 25.13 | 0.244 | 3.02 | 4.12 | 1.09 | 16.12 | 4.52 | 47.5 | 15.95 | 67.4 | 13.53 | 125.1 | 25.06 | 8650 |
| PD18-117-121 | 49.2 | 537 | 92.2 | 556 | 288 | 130.3 | 527 | 115.9 | 810 | 180 | 562 | 98 | 836 | 154.1 | 9120 |
| PD18-117-122 | 4.72 | 67.1 | 6.54 | 40.7 | 22 | 7.64 | 48.9 | 12.43 | 103.2 | 28.2 | 99.5 | 19.9 | 186 | 36 | 10730 |
| PD18-117-123 | 29.5 | 377 | 53.3 | 323 | 152 | 53.9 | 255 | 53.6 | 393 | 103.7 | 378 | 74.9 | 701 | 138.4 | 8060 |
| PD18-117-124 | 25.5 | 264 | 43.8 | 267 | 124.8 | 44.6 | 219 | 47.9 | 362 | 94.5 | 341 | 64.2 | 564 | 107.9 | 9730 |
| PD18-117-125 | 43.8 | 276 | 44.5 | 256 | 136.8 | 66 | 256 | 58 | 433 | 103.2 | 352 | 62.5 | 509 | 90.8 | 11430 |
| PD18-117-126 | 1.58 | 19.46 | 1.37 | 9.41 | 6.39 | 2.46 | 33 | 11.56 | 141.1 | 55.3 | 255.1 | 52.7 | 484 | 94 | 10460 |
| PD18-117-127 | 38.7 | 450 | 79 | 467 | 208 | 77.8 | 333 | 66.1 | 446 | 101.8 | 342 | 64.8 | 580 | 112.5 | 9580 |
| PD18-117-135 | 7.69 | 95.2 | 15.62 | 98.8 | 53.8 | 23.1 | 104.7 | 23.84 | 200.6 | 58.1 | 235.2 | 47.2 | 439 | 88.8 | 8890 |
| PD18-117-136 | 49.6 | 466 | 84.4 | 486 | 243 | 91.8 | 376 | 84.4 | 614 | 143 | 530 | 108.7 | 1032 | 206.4 | 9690 |
| PD18-117-137 | 24.13 | 225.7 | 40.9 | 239.4 | 113.8 | 44.2 | 188 | 39 | 265 | 60.5 | 197.2 | 37.7 | 336 | 66.9 | 12490 |
| PD18-117-138 | 0.058 | 7.62 | 0.152 | 1.48 | 3.53 | 0.408 | 22.9 | 8.57 | 110.7 | 43.5 | 204.1 | 43.4 | 399 | 79.6 | 10940 |
| PD18-117-139 | 36.2 | 295 | 48.3 | 282 | 113.1 | 40.5 | 182 | 37.1 | 254.1 | 62.2 | 226.5 | 44.4 | 422 | 83.9 | 9540 |
| PD18-117-140 | 1.17 | 14.73 | 1.4 | 9.23 | 8.7 | 2.85 | 37.9 | 12.16 | 143.4 | 54.5 | 248.8 | 52.4 | 481 | 99.1 | 8420 |
| PD18-117-142 | 2.33 | 12.1 | 1.38 | 9.68 | 9.71 | 3.3 | 44 | 14.29 | 168.6 | 63.4 | 282.1 | 57.4 | 500 | 93.9 | 8920 |
| PD18-117-143 | 109.2 | 565 | 91.7 | 518 | 230 | 94.9 | 429 | 98.7 | 721 | 175.3 | 614 | 117.6 | 1035 | 198.1 | 11150 |
| PD18-117-144 | 23.4 | 215 | 35.1 | 202 | 89.2 | 28.2 | 161 | 38.8 | 351 | 111.1 | 430 | 82.9 | 689 | 125.6 | 9400 |
| PD18-117-145 | 13.7 | 165 | 24.7 | 155 | 81 | 32.8 | 167 | 40.9 | 372 | 115 | 450 | 91.1 | 830 | 164 | 7460 |
| PD18-117-153 | 13.6 | 175 | 30.8 | 192 | 96 | 35.7 | 183 | 45.4 | 400 | 128.6 | 490 | 93.9 | 837 | 152 | 9270 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-117-154 | 0.78 | 9.28 | 0.175 | 1.41 | 1.79 | 0.285 | 12.62 | 4.66 | 57.7 | 23.81 | 109.2 | 23.19 | 214.4 | 42.5 | 9360 |
| PD18-117-155 | 8.7 | 70.5 | 11.6 | 65.2 | 26.4 | 8.56 | 42 | 9.28 | 88.4 | 32.1 | 164 | 42.6 | 489 | 123.2 | 14720 |
| PD18-117-156 | 27.8 | 268 | 44.9 | 262 | 115 | 45.6 | 217 | 49.3 | 388 | 108 | 397 | 82.6 | 731 | 140 | 11020 |
| PD18-117-157 | 7.33 | 79.2 | 12.06 | 70 | 36.3 | 13.51 | 67.5 | 15.92 | 138 | 40.5 | 168 | 35.2 | 344 | 71.6 | 11070 |
| PD18-117-158 | 3.23 | 46.6 | 5.55 | 36.1 | 18.9 | 6.36 | 34.6 | 7.8 | 71 | 20.6 | 87.3 | 19.57 | 197.8 | 44.3 | 10290 |
| PD18-117-159 | 1.33 | 10.4 | 0.52 | 3.7 | 2.74 | 0.57 | 16.7 | 5.75 | 76.6 | 30 | 139.1 | 31.1 | 290 | 54.5 | 9350 |
| PD18-117-160 | 27.7 | 284 | 56.5 | 315 | 129.2 | 47.6 | 196 | 39.4 | 301 | 86.8 | 352.6 | 85.2 | 934 | 204.6 | 11510 |
| PD18-117-161 | 36.3 | 341 | 65 | 364 | 151 | 50.6 | 205 | 37.5 | 239 | 52.4 | 170.8 | 31.7 | 287 | 59.8 | 9840 |
| PD18-117-162 | 57.9 | 658 | 115.9 | 695 | 336 | 133.2 | 575 | 119.4 | 815 | 182.7 | 581 | 104.1 | 915 | 164.9 | 10210 |
| | | | | | | | | | | | | | | | |
| PD18-125-170 | 18.5 | 90.6 | 14.5 | 78.5 | 43.6 | 33.6 | 72.8 | 20.4 | 205.8 | 71.4 | 356 | 92.2 | 1088 | 256 | 15360 |
| PD18-125-171 | 77.2 | 612 | 80.6 | 411 | 274 | 120.2 | 413 | 116.1 | 906 | 196 | 672 | 124.4 | 1000 | 146.5 | 10480 |
| PD18-125-172 | 36.9 | 306 | 39 | 229 | 139 | 109 | 233 | 55.1 | 473 | 120.2 | 407 | 70.8 | 583 | 89 | 8280 |
| PD18-125-173 | 13.09 | 114.8 | 11.22 | 64.6 | 42.6 | 22.49 | 81.9 | 21.7 | 186.6 | 50.4 | 177.4 | 31.8 | 278 | 48.9 | 11740 |
| PD18-125-174 | 2.67 | 49.7 | 2.44 | 17.75 | 14.19 | 5.97 | 41.8 | 11.4 | 111.1 | 35.5 | 142.4 | 27.9 | 249.1 | 50 | 9780 |
| PD18-125-175 | 3.27 | 45.9 | 2.89 | 19.1 | 11.9 | 5.73 | 22.2 | 5.55 | 46.7 | 14.47 | 57.3 | 11.98 | 115.4 | 23.1 | 11530 |
| PD18-125-176 | 4.35 | 17.25 | 5.78 | 26.1 | 16.9 | 4.97 | 32.2 | 11.9 | 145.5 | 57.5 | 296 | 69.2 | 679 | 138.8 | 11480 |
| PD18-125-177 | 54 | 404 | 53.8 | 300 | 185 | 82.4 | 304 | 80.7 | 655 | 160 | 540 | 99 | 803 | 124.1 | 9240 |
| PD18-125-178 | 37.1 | 270 | 32.9 | 188 | 143.6 | 67.3 | 276 | 81 | 693 | 152.3 | 480 | 82.4 | 684 | 98.1 | 10910 |
| PD18-125-179 | 10.9 | 98 | 12.2 | 72.2 | 46.6 | 17 | 94 | 27 | 257 | 77.2 | 304 | 59.2 | 521 | 95.4 | 8790 |
| PD18-125-180 | 44.1 | 648 | 52.9 | 263 | 177 | 67.5 | 254 | 64.6 | 569 | 146 | 535 | 109.4 | 1055 | 176 | 8720 |
| PD18-125-181 | 10.2 | 71.1 | 9.8 | 55.2 | 40.9 | 21.3 | 87.3 | 24.1 | 227 | 69 | 276 | 54.3 | 496 | 93.2 | 8940 |
| PD18-125-182 | 53.6 | 900 | 56.8 | 309 | 214 | 96 | 343 | 90 | 750 | 167 | 556 | 102 | 850 | 126 | 11090 |
| PD18-125-183 | 22.5 | 176 | 21.3 | 120 | 91 | 40.8 | 180 | 52.2 | 447 | 121 | 432 | 82.6 | 703 | 123.9 | 9410 |
| PD18-125-192 | 61.1 | 482 | 54.9 | 308 | 215 | 149 | 406 | 114.2 | 948 | 225 | 768 | 141.8 | 1196 | 194.5 | 10050 |
| PD18-125-193 | 35 | 284 | 32.6 | 182 | 124 | 57.3 | 228 | 65 | 552 | 131 | 439 | 84 | 690 | 111 | 11280 |
| PD18-125-194 | 21.8 | 128 | 21.7 | 115 | 75 | 30.7 | 124 | 35.4 | 289 | 71 | 244 | 47.1 | 401 | 68.1 | 11320 |
| PD18-125-195 | 7.1 | 55 | 8.7 | 43 | 26.5 | 20.4 | 55.4 | 15.44 | 148.8 | 43.4 | 171.8 | 34.6 | 302 | 55.3 | 11070 |
| PD18-125-197 | 0.61 | 23.75 | 0.733 | 5.3 | 6.9 | 3.13 | 33.8 | 10.55 | 122.9 | 45.9 | 203.6 | 43 | 389 | 80 | 8910 |
| PD18-125-198 | 10.48 | 98.3 | 10.05 | 58.5 | 43.3 | 19.5 | 87.2 | 23 | 197.3 | 53.7 | 188.4 | 35.2 | 297 | 52.6 | 10900 |
| PD18-125-199 | 20.2 | 156 | 18.9 | 109.6 | 76.1 | 32.9 | 137.3 | 36.7 | 298 | 77.1 | 275 | 53.4 | 480 | 87.4 | 8110 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-125-200 | 73 | 630 | 70 | 382 | 254 | 113 | 450 | 124 | 1030 | 234 | 770 | 142 | 1150 | 179 | 9390 |
| PD18-125-201 | 43.1 | 369 | 33.9 | 207 | 130.8 | 67.1 | 231 | 57.5 | 495 | 132.1 | 455 | 81.9 | 671 | 116.5 | 8940 |
| PD18-125-202 | 1.55 | 15.23 | 2.54 | 15.3 | 13.2 | 3.4 | 51.6 | 18.96 | 246.4 | 99.7 | 460.9 | 93.1 | 834 | 159.5 | 7920 |
| PD18-125-203 | 14.2 | 337 | 16.9 | 88 | 61 | 24.7 | 107 | 30.4 | 257 | 69.2 | 271 | 51.4 | 466 | 82.7 | 9890 |
| PD18-125-206 | 22 | 130.7 | 25.4 | 129 | 91 | 38.8 | 182.1 | 53.5 | 533 | 172.3 | 686 | 127 | 1041 | 182 | 9650 |
| PD18-125-214 | 39.6 | 351 | 35.7 | 211 | 135 | 82 | 253 | 70.6 | 561 | 131 | 434 | 78.2 | 627 | 99.8 | 11850 |
| PD18-125-215 | 0.094 | 11.93 | 0.199 | 2.46 | 3.72 | 1.83 | 17.3 | 5.78 | 65.8 | 25.1 | 114.6 | 25.1 | 244.3 | 53 | 8530 |
| PD18-125-216 | 8.28 | 93.3 | 8.71 | 61.4 | 40.6 | 34.5 | 79.2 | 19.93 | 179.5 | 51.1 | 186.5 | 33 | 283.7 | 48 | 9780 |
| PD18-125-217 | 12.1 | 95.7 | 11.3 | 58.4 | 43.6 | 22.5 | 86.8 | 23.4 | 203 | 54.6 | 204 | 39.6 | 371 | 69.9 | 10750 |
| PD18-125-218 | 4.68 | 30.5 | 4.01 | 23.1 | 15.2 | 8 | 28.3 | 7.79 | 69.3 | 19.6 | 72.6 | 15.04 | 149.6 | 33.9 | 8320 |
| PD18-125-219 | 11 | 90.2 | 12.6 | 73.6 | 53.5 | 19 | 114.6 | 31.6 | 312 | 97.3 | 407 | 84.6 | 764 | 145 | 8370 |
| PD18-125-220 | 0.84 | 17.88 | 0.848 | 5.75 | 6.5 | 2.57 | 23.8 | 6.99 | 75.3 | 25.93 | 113.2 | 23.31 | 222 | 45.5 | 9520 |
| PD18-125-221 | 0.663 | 15.85 | 0.81 | 4.98 | 6.03 | 1.46 | 25.6 | 9.94 | 131.7 | 54.3 | 259.3 | 54.8 | 503 | 99.3 | 9560 |
| PD18-125-222 | 0.461 | 13.48 | 0.532 | 4.53 | 5.18 | 1.52 | 19.68 | 7.24 | 90 | 36.6 | 176.4 | 39.38 | 380.3 | 81.6 | 8220 |
| PD18-125-223 | 45.5 | 339 | 44 | 246 | 196 | 83.8 | 377 | 106.5 | 906 | 216 | 717 | 125.6 | 986 | 145.9 | 8890 |
| PD18-125-224 | 6.91 | 47.6 | 8.67 | 45.9 | 31.7 | 11.4 | 91.5 | 30.56 | 357.2 | 131.9 | 567 | 112.1 | 979 | 187.5 | 9970 |
| PD18-125-225 | 0 | 14.96 | 0.031 | 0.82 | 2.33 | 0.078 | 17.78 | 7.15 | 97.6 | 40.2 | 193.6 | 42.08 | 383 | 75.6 | 12360 |
| PD18-125-226 | 0.31 | 10.9 | 0.46 | 4.31 | 10.11 | 0.82 | 71.4 | 26.92 | 317.9 | 115.8 | 482 | 88.7 | 717 | 122.5 | 10990 |
| PD18-125-227 | 0.476 | 11.55 | 0.775 | 7.12 | 8.37 | 4.3 | 32.1 | 9.62 | 105.5 | 37.5 | 166.9 | 36.55 | 368.5 | 81 | 6760 |
| PD18-125-228 | 41 | 445 | 41.5 | 256 | 159.2 | 68.9 | 286 | 72.6 | 642 | 175.7 | 640 | 118.2 | 1084 | 196.9 | 7990 |
| PD18-125-239 | 203.4 | 2010 | 185.4 | 1087 | 634 | 384 | 973 | 225 | 1746 | 419 | 1385 | 270 | 2406 | 383 | 8800 |
| PD18-125-240 | 30.5 | 213 | 25.8 | 146 | 99 | 49.9 | 200 | 56.6 | 493 | 132 | 486 | 93.5 | 819 | 142.5 | 9800 |
| PD18-125-241 | 65.6 | 492 | 63.9 | 352 | 255 | 106.7 | 430 | 125.6 | 1026 | 243 | 822 | 144.9 | 1198 | 183.3 | 9580 |
| PD18-125-242 | 136.8 | 842 | 127.1 | 739 | 419 | 426 | 630 | 138.4 | 1074 | 251 | 848 | 158.1 | 1377 | 225.3 | 17650 |
| PD18-125-243 | 33.2 | 330 | 31.7 | 179 | 119 | 49.7 | 206 | 57.4 | 499 | 143 | 553 | 105.6 | 938 | 168.7 | 8410 |
| PD18-125-244 | 20.01 | 110.2 | 19.2 | 103.2 | 59.9 | 40 | 104.8 | 26.9 | 243 | 69.9 | 266.9 | 52.2 | 470 | 86.6 | 11270 |
| PD18-125-246 | 4.46 | 57.5 | 3.56 | 24.8 | 18.9 | 14 | 54.5 | 15.73 | 168.7 | 58.8 | 251.8 | 51.3 | 469 | 93.7 | 8640 |
| PD18-125-247 | 2.63 | 35 | 2.64 | 18.4 | 12.6 | 7.23 | 29.2 | 8.09 | 79.1 | 26.2 | 109.7 | 22.7 | 232 | 47.1 | 10100 |
| PD18-125-248 | 13.5 | 92 | 14 | 85.1 | 45.9 | 33.9 | 72.2 | 17.8 | 156 | 47 | 195 | 40.4 | 378 | 71.8 | 12380 |
| PD18-125-249 | 45.4 | 426 | 43.7 | 262 | 167.1 | 80.5 | 312 | 81.7 | 678 | 181.3 | 635 | 111.8 | 938 | 151.9 | 8890 |
| PD18-125-250 | 11.57 | 90.5 | 9.51 | 60.2 | 37.5 | 34.6 | 69.1 | 18.5 | 171.9 | 53.2 | 216.4 | 45.5 | 420 | 78.7 | 10990 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-125-251 | 7.04 | 50.5 | 6 | 37.3 | 23.2 | 12.8 | 47.6 | 11.9 | 102.5 | 27.8 | 96.2 | 18.1 | 161 | 31 | 11480 |
| PD18-125-252 | 9.85 | 54.5 | 5.21 | 29.1 | 17.9 | 8.78 | 46.1 | 13.33 | 147.6 | 49.8 | 223.4 | 45.7 | 440 | 86.7 | 8280 |
| PD18-125-253 | 48.6 | 391 | 44.9 | 253 | 193.1 | 89.4 | 388 | 113.4 | 949 | 232.7 | 784 | 141.2 | 1148 | 188.6 | 8250 |
| PD18-125-261 | 64.4 | 537 | 64.2 | 367 | 279 | 126.5 | 548 | 162.2 | 1351 | 318.8 | 1088 | 193 | 1563 | 234.3 | 12590 |
| PD18-125-262 | 1.34 | 25 | 1.25 | 8.8 | 8.02 | 2.74 | 25.5 | 7.9 | 83.6 | 29.68 | 130 | 28.18 | 268.5 | 54.9 | 9270 |
| PD18-125-263 | 8.39 | 74 | 7.27 | 44.5 | 28.1 | 13.3 | 65.7 | 19.52 | 200.5 | 66.1 | 272.5 | 53.8 | 495 | 93 | 9510 |
| PD18-125-264 | 47.3 | 268 | 48.1 | 257 | 181 | 73.7 | 322 | 94.2 | 810 | 212.5 | 768 | 153.4 | 1308 | 214 | 10060 |
| PD18-125-265 | 61.4 | 518 | 57 | 312 | 214 | 101.4 | 391 | 108.6 | 890 | 203.8 | 656 | 114.7 | 901 | 131.5 | 11720 |
| PD18-125-266 | 54.2 | 245 | 35.8 | 195.2 | 115 | 62 | 191.7 | 46.4 | 386 | 97 | 345 | 68.2 | 632 | 110.6 | 9700 |
| PD18-125-267 | 11.11 | 72.8 | 11.31 | 59.5 | 39.5 | 18 | 63.1 | 18 | 169 | 50.2 | 211 | 41.4 | 386 | 75.5 | 10170 |
| PD18-125-268 | 16.7 | 130 | 14.1 | 80 | 54.5 | 23.3 | 109 | 30.1 | 253 | 69 | 215 | 37.6 | 289 | 47.5 | 9470 |
| PD18-125-269 | 1.22 | 8.82 | 1.25 | 5.93 | 4.8 | 1.92 | 17.9 | 7.45 | 99.6 | 38.3 | 199.4 | 49.6 | 542 | 113.6 | 11690 |
| PD18-125-270 | 12.9 | 77.2 | 9.08 | 58.2 | 34.5 | 17.2 | 69.6 | 19.5 | 185 | 53.7 | 202 | 39 | 317 | 54.9 | 12160 |
| PD18-125-273 | 122.7 | 309 | 171 | 776 | 404 | 125.9 | 357 | 85.6 | 643 | 145.1 | 506 | 103.7 | 937 | 147.8 | 13230 |
| PD18-125-275 | 177 | 1292 | 170 | 907 | 586 | 320 | 912 | 253 | 1936 | 435 | 1395 | 264 | 2302 | 356 | 16180 |
| PD18-125-283 | 114.4 | 624 | 114.6 | 597 | 387 | 250 | 640 | 175.4 | 1416 | 323 | 1081 | 198.6 | 1646 | 257.9 | 12960 |
| PD18-125-284 | 173.5 | 961 | 139.3 | 782 | 484 | 329 | 845 | 193 | 1456 | 343.3 | 1170 | 223.4 | 1899 | 311.1 | 12790 |
| PD18-125-285 | 226.9 | 2054 | 190.8 | 1018 | 645 | 292 | 1106 | 297 | 2395 | 562 | 1883 | 334 | 2747 | 415 | 10840 |
| PD18-125-286 | 18.4 | 178 | 15.7 | 91 | 64.4 | 35.1 | 133 | 37.2 | 319 | 83 | 300 | 59.7 | 542 | 99.3 | 9150 |
| PD18-125-287 | 115.2 | 599 | 91 | 539 | 254 | 167.8 | 390 | 81.3 | 655 | 164.2 | 566 | 102.5 | 882 | 158.7 | 10410 |
| PD18-125-288 | 26.1 | 138 | 25.1 | 136 | 71.3 | 52.5 | 100 | 25.7 | 221 | 62.9 | 241 | 49 | 473 | 84 | 11250 |
| PD18-125-289 | 2.32 | 27.4 | 2.5 | 16.2 | 14.6 | 7.29 | 43.5 | 13.69 | 150.2 | 52.2 | 220.3 | 46.4 | 436 | 88.7 | 8740 |
| PD18-125-290 | 119.9 | 862 | 116.7 | 667 | 474 | 204 | 821 | 241 | 1840 | 430 | 1395 | 254 | 2030 | 305 | 10400 |
| PD18-125-291 | 11.5 | 66 | 9.3 | 54 | 30.5 | 23.5 | 55.1 | 15.7 | 141 | 42.3 | 159 | 32.3 | 288 | 56.3 | 9650 |
| PD18-125-292 | 11.09 | 77 | 8.18 | 44.5 | 27.5 | 15.39 | 58.4 | 16.32 | 157.8 | 51.8 | 212.1 | 44.9 | 432.4 | 85.7 | 8940 |
| PD18-125-293 | 55.5 | 461 | 49 | 279 | 164.8 | 92.8 | 281 | 75.9 | 608 | 166.6 | 591 | 111.1 | 965 | 157.5 | 11930 |
| PD18-125-294 | 7.5 | 77 | 6.6 | 43.9 | 30.1 | 11.4 | 79.3 | 22.3 | 217 | 67.3 | 259 | 49.2 | 419 | 75.5 | 9330 |
| PD18-125-296 | 57.1 | 417 | 62.7 | 348 | 239 | 103.4 | 374 | 99.5 | 827 | 209 | 749 | 147.9 | 1310 | 222.9 | 9710 |
| PD18-125-297 | 396 | 2540 | 254 | 1403 | 773 | 442 | 1203 | 317 | 2481 | 561 | 1829 | 322 | 2700 | 378 | 11260 |
| PD18-125-305 | 28.8 | 131 | 14.7 | 80 | 51.8 | 27.1 | 98 | 28.2 | 249 | 68.6 | 262 | 50.5 | 452 | 79.6 | 9710 |
| PD18-125-306 | 29 | 264 | 26.9 | 149 | 102 | 47.3 | 192 | 52.2 | 437 | 116 | 406 | 75.6 | 646 | 111.2 | 9410 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-125-307 | 8.5 | 81 | 7.5 | 47 | 34 | 15 | 60 | 17.3 | 146 | 37.2 | 134 | 26.3 | 225 | 36.7 | 11470 |
| PD18-125-308 | 0.65 | 16.2 | 0.91 | 6.59 | 6.1 | 2.02 | 24.9 | 8.35 | 99.3 | 37.5 | 162.8 | 33.8 | 305 | 58.8 | 11160 |
| PD18-125-310 | 66 | 289 | 95 | 453 | 246 | 109.8 | 278 | 69.4 | 558 | 136.8 | 486 | 94.2 | 854 | 141 | 9080 |
| PD18-125-311 | 92.6 | 897 | 75.7 | 416 | 280 | 122.5 | 518 | 141.3 | 1161 | 279 | 933 | 173 | 1422 | 220 | 9040 |
| PD18-125-312 | 3.44 | 52.7 | 3.51 | 25.3 | 23 | 7.93 | 68 | 18.3 | 175 | 55.6 | 216 | 41.8 | 377 | 73 | 8910 |
| PD18-125-313 | 19.5 | 118 | 17.8 | 101 | 66.3 | 33.5 | 123 | 33.5 | 299 | 86.6 | 343 | 69.9 | 655 | 126.1 | 8960 |
| PD18-125-314 | 17.2 | 139.3 | 16.4 | 93.6 | 62.7 | 27.3 | 116.8 | 29.3 | 246 | 59.3 | 205.4 | 39.5 | 349 | 63.6 | 10030 |
| PD18-125-315 | 0.04 | 24.6 | 0.267 | 3.63 | 7.72 | 4.39 | 42.7 | 11.46 | 115.4 | 38.9 | 164 | 31.7 | 281 | 53.6 | 8300 |
| PD18-125-316 | 2 | 17 | 1.94 | 11.9 | 8.2 | 3.91 | 21.2 | 6.37 | 66 | 24.9 | 115.4 | 25.53 | 252.3 | 54.2 | 9070 |
| PD18-125-317 | 21.4 | 157 | 22.9 | 130 | 93.9 | 66.2 | 354 | 140 | 1780 | 730 | 2720 | 422 | 2880 | 376 | 9520 |
| PD18-125-318 | 24.8 | 185 | 23.7 | 135 | 94 | 44.2 | 161 | 43.2 | 353 | 84 | 282 | 50.1 | 423 | 63.6 | 11600 |
| PD18-125-319 | 13.8 | 122.1 | 10.35 | 64.9 | 49.4 | 37.7 | 150.2 | 42.1 | 407 | 129.9 | 495 | 95.4 | 826 | 150.6 | 8450 |
| PD18-125-327 | 29.6 | 191 | 30.6 | 172 | 105 | 43.3 | 160 | 42.4 | 354 | 89 | 326 | 61.6 | 554 | 94.1 | 11750 |
| PD18-125-328 | 11.3 | 118 | 10.5 | 64.2 | 49.5 | 27.2 | 112 | 28.5 | 241 | 65 | 252 | 56.2 | 550 | 121.5 | 9420 |
| PD18-125-329 | 53.4 | 452 | 48.9 | 275 | 184 | 74.6 | 323 | 87.9 | 740 | 177 | 603 | 107.4 | 889 | 132 | 10050 |
| PD18-125-330 | 5 | 46.9 | 6 | 29.3 | 18.9 | 7.09 | 53.7 | 18.65 | 227.5 | 86.4 | 397 | 84.7 | 790 | 156 | 11990 |
| PD18-125-331 | 5.26 | 82.2 | 5.17 | 29.5 | 20.5 | 14.7 | 45.2 | 13.69 | 134.3 | 44.7 | 196.1 | 43.8 | 429 | 85.9 | 9300 |
| PD18-125-332 | 82.2 | 569 | 68.4 | 368 | 251 | 150.4 | 451 | 122.6 | 1023 | 247 | 820 | 145.4 | 1221 | 186.7 | 12020 |
| PD18-125-333 | 43.6 | 525 | 54.4 | 291 | 199 | 92.2 | 300 | 83.8 | 661 | 159 | 554 | 102 | 868 | 141.1 | 9200 |
| PD18-125-334 | 46.3 | 277 | 38.4 | 216 | 155 | 69.8 | 301 | 82 | 708 | 178 | 583 | 106.1 | 867 | 132.7 | 9870 |
| PD18-125-335 | 0.137 | 13.48 | 0.296 | 3.2 | 4.61 | 2.79 | 21.7 | 6.56 | 68.9 | 23.85 | 97.5 | 18.9 | 171.2 | 34.5 | 7690 |
| PD18-125-336 | 40.1 | 189.3 | 30.2 | 169.1 | 107.9 | 65.5 | 181 | 49.6 | 418 | 118.8 | 448 | 88.3 | 813 | 154.3 | 8960 |
| PD18-125-337 | 8.57 | 66.4 | 7.56 | 47.8 | 37.6 | 16.3 | 77.3 | 21.1 | 193 | 55.3 | 198 | 38.2 | 325 | 61.1 | 11430 |
| PD18-125-338 | 0.407 | 19.3 | 0.496 | 5.28 | 8.92 | 1.08 | 50.4 | 17.04 | 208.8 | 80.9 | 352 | 70.4 | 614 | 115 | 10470 |
| PD18-125-339 | 40.7 | 368 | 38.6 | 234 | 156 | 78.1 | 277 | 69.2 | 608 | 164 | 577 | 102.9 | 861 | 142.3 | 9970 |
| PD18-125-340 | 24.4 | 128.7 | 27.3 | 142 | 81.2 | 30.5 | 112 | 30.8 | 270 | 71.2 | 271 | 51.6 | 439 | 75.4 | 9360 |
| PD18-125-342 | 4.33 | 22.7 | 5.33 | 25.5 | 13.61 | 6.66 | 20.8 | 6.06 | 60.3 | 19.86 | 92.6 | 20.81 | 213.9 | 45.9 | 10950 |
| PD18-125-343 | 51.5 | 158.6 | 62.3 | 296 | 163 | 62.8 | 176 | 42.4 | 340 | 80.5 | 282 | 54.8 | 529 | 85.9 | 13090 |

Appendix 4.1 Kaladgi-Badami Basin detrital zircon U–Pb data

| Comments | $^{207}Pb/^{235}U$ | 2σ | $^{206}Pb/^{238}U$ | 2σ | Error Correlation (ρ) | $^{207}Pb/^{235}U$ Age (Ma) | Age Error 2σ | $^{206}Pb/^{238}U$ Age (Ma) | Age Error 2σ | $^{207}Pb/^{206}Pb$ Age (Ma) | Age 2σ | U/Th ratio | Th/U | Concordance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-10-470 | 11.41 | 0.4 | 0.4905 | 0.011 | 0.647 | 2554 | 33 | 2571 | 49 | 2532 | 59 | 1.687 | 0.593 | 101.540 |
| PD18-10-471 | 2.377 | 0.098 | 0.0774 | 0.0032 | 0.822 | 1235 | 33 | 481 | 19 | 2985 | 53 | 0.739 | 1.353 | 16.114 |
| PD18-10-472 | 9.44 | 0.3 | 0.3405 | 0.0069 | 0.659 | 2380 | 30 | 1888 | 33 | 2833 | 53 | 0.318 | 3.145 | 66.643 |
| PD18-10-473 | 11.36 | 0.35 | 0.4647 | 0.0096 | 0.470 | 2552 | 29 | 2459 | 42 | 2625 | 54 | 1.539 | 0.650 | 93.676 |
| PD18-10-474 | 9.3 | 0.31 | 0.353 | 0.0075 | 0.617 | 2371 | 28 | 1948 | 36 | 2755 | 52 | 0.327 | 3.058 | 70.708 |
| PD18-10-475 | 1.875 | 0.088 | 0.0648 | 0.0024 | 0.870 | 1071 | 29 | 404.4 | 15 | 2896 | 51 | 1.442 | 0.693 | 13.964 |
| PD18-10-476 | 0.951 | 0.11 | 0.02322 | 0.0032 | 0.843 | 678 | 45 | 148 | 20 | 3448 | 52 | 0.1567 | 6.382 | 4.292 |
| PD18-10-477 | 11.29 | 0.36 | 0.484 | 0.011 | 0.580 | 2545 | 30 | 2542 | 48 | 2551 | 57 | 3.271 | 0.306 | 99.647 |
| PD18-10-478 | 4.263 | 0.14 | 0.1279 | 0.003 | 0.668 | 1685 | 28 | 775 | 17 | 3125 | 49 | 0.2357 | 4.243 | 24.800 |
| PD18-10-479 | 9.92 | 0.31 | 0.4005 | 0.0074 | 0.799 | 2426 | 29 | 2171 | 34 | 2645 | 52 | 4.53 | 0.221 | 82.079 |
| PD18-10-480 | 9.49 | 0.32 | 0.3979 | 0.0084 | 0.663 | 2388 | 32 | 2158 | 39 | 2572 | 55 | 0.526 | 1.901 | 83.904 |
| PD18-10-481 | 1.664 | 0.071 | 0.0443 | 0.0018 | 0.929 | 994 | 30 | 279.4 | 11 | 3308 | 49 | 0.1566 | 6.386 | 8.446 |
| PD18-10-482 | 9.9 | 0.31 | 0.385 | 0.0085 | 0.354 | 2424 | 29 | 2098 | 40 | 2706 | 56 | 0.919 | 1.088 | 77.531 |
| PD18-10-483 | 5.973 | 0.18 | 0.1912 | 0.0037 | 0.683 | 1971 | 27 | 1127 | 20 | 3016 | 50 | 0.542 | 1.845 | 37.367 |
| PD18-10-484 | 4.391 | 0.26 | 0.1177 | 0.0046 | 0.539 | 1709 | 42 | 717 | 26 | 3299 | 60 | 0.547 | 1.828 | 21.734 |
| PD18-10-492 | 2.672 | 0.1 | 0.0844 | 0.0026 | 0.558 | 1319 | 29 | 522 | 16 | 3044 | 55 | 0.1522 | 6.570 | 17.148 |
| PD18-10-493 | 7.8 | 0.26 | 0.2482 | 0.0065 | 0.706 | 2207 | 32 | 1429 | 34 | 3046 | 50 | 2.53 | 0.395 | 46.914 |
| PD18-10-494 | 1.984 | 0.12 | 0.0551 | 0.0046 | 0.854 | 1109 | 38 | 345.5 | 27 | 3242 | 57 | 0.1532 | 6.527 | 10.657 |
| PD18-10-495 | 3.149 | 0.1 | 0.0885 | 0.0019 | 0.731 | 1443 | 26 | 547 | 11 | 3228 | 51 | 2.42 | 0.413 | 16.945 |
| PD18-10-496 | 4.579 | 0.15 | 0.1502 | 0.0033 | 0.810 | 1744 | 28 | 902 | 19 | 2988 | 48 | 0.122 | 8.197 | 30.187 |
| PD18-10-497 | 6.18 | 0.35 | 0.2645 | 0.011 | 0.932 | 1991 | 43 | 1512 | 57 | 2562 | 52 | 3.228 | 0.310 | 59.016 |
| PD18-10-498 | 1.619 | 0.071 | 0.04424 | 0.0018 | 0.583 | 977.2 | 25 | 279.1 | 11 | 3275 | 52 | 0.3927 | 2.546 | 8.522 |
| PD18-10-499 | 6.28 | 0.23 | 0.1705 | 0.0053 | 0.910 | 2015 | 35 | 1014 | 29 | 3282 | 50 | 0.805 | 1.242 | 30.896 |
| PD18-10-500 | 1.21 | 0.038 | 0.0359 | 0.00078 | 0.784 | 804.9 | 18 | 227.3 | 4.9 | 3154 | 49 | 2.235 | 0.447 | 7.207 |
| PD18-10-501 | 5.92 | 0.23 | 0.1815 | 0.0047 | 0.680 | 1963 | 36 | 1075 | 26 | 3094 | 54 | 0.454 | 2.203 | 34.745 |
| PD18-10-502 | 10.15 | 0.35 | 0.4272 | 0.012 | 0.708 | 2447 | 35 | 2301 | 54 | 2567 | 54 | 0.606 | 1.650 | 89.638 |
| PD18-10-503 | 5.146 | 0.51 | 0.1782 | 0.0075 | 0.289 | 1843 | 62 | 1057 | 40 | 2909 | 72 | 0.702 | 1.425 | 36.336 |
| PD18-10-504 | 2.381 | 0.082 | 0.0674 | 0.0014 | 0.343 | 1235 | 25 | 420.3 | 8.2 | 3220 | 55 | 0.1384 | 7.225 | 13.053 |
| PD18-10-505 | 4.453 | 0.17 | 0.1622 | 0.0054 | 0.575 | 1720 | 34 | 969 | 31 | 2826 | 49 | 0.813 | 1.230 | 34.289 |
| PD18-10-506 | 8.61 | 0.27 | 0.327 | 0.0068 | 0.780 | 2296 | 28 | 1823 | 33 | 2745 | 51 | 1.384 | 0.723 | 66.412 |
| PD18-10-507 | 9.11 | 0.3 | 0.361 | 0.008 | 0.657 | 2348 | 33 | 1986 | 38 | 2675 | 53 | 0.466 | 2.146 | 74.243 |
| PD18-10-508 | 5.63 | 0.28 | 0.2008 | 0.0097 | 0.778 | 1919 | 52 | 1179 | 54 | 2837 | 54 | 0.01105 | 90.498 | 41.558 |
| PD18-10-516 | 12.23 | 0.39 | 0.4751 | 0.01 | 0.800 | 2621 | 31 | 2505 | 45 | 2712 | 52 | 0.832 | 1.202 | 92.367 |
| PD18-10-517 | 7.11 | 0.23 | 0.2444 | 0.0057 | 0.508 | 2123 | 30 | 1409 | 30 | 2896 | 52 | 1.162 | 0.861 | 48.653 |
| PD18-10-518 | 3.462 | 0.14 | 0.0872 | 0.0032 | 0.774 | 1518 | 35 | 539 | 19 | 3416 | 49 | 0.774 | 1.292 | 15.779 |
| PD18-10-519 | 12.37 | 0.39 | 0.5047 | 0.01 | 0.803 | 2631 | 30 | 2641 | 43 | 2620 | 52 | 8.3 | 0.120 | 100.802 |
| PD18-10-520 | 6.913 | 0.21 | 0.2318 | 0.0044 | 0.645 | 2099 | 27 | 1344 | 23 | 2949 | 52 | 0.361 | 2.770 | 45.575 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-10-521 | 1.439 | 0.051 | 0.03901 | 0.001 | 0.782 | 904.9 | 23 | 246.7 | 6.4 | 3300 | 52 | 2.508 | 0.399 | 7.476 |
| PD18-10-522 | 1.175 | 0.1 | 0.03438 | 0.0035 | 0.530 | 788 | 39 | 217.9 | 22 | 3301 | 55 | 0.18 | 5.556 | 6.601 |
| PD18-10-523 | 3.6 | 0.23 | 0.1103 | 0.0072 | 0.854 | 1548 | 67 | 674 | 43 | 3081 | 53 | 0.668 | 1.497 | 21.876 |
| PD18-10-524 | 2.922 | 0.15 | 0.0797 | 0.0041 | 0.804 | 1387 | 51 | 494 | 25 | 3291 | 53 | 0.467 | 2.141 | 15.011 |
| PD18-10-525 | 5.185 | 0.17 | 0.1833 | 0.0043 | 0.628 | 1849 | 28 | 1085 | 23 | 2870 | 53 | 0.1183 | 8.453 | 37.805 |
| PD18-10-526 | 4.52 | 0.19 | 0.1686 | 0.0072 | 0.727 | 1732 | 38 | 1004 | 41 | 2783 | 56 | 0.2297 | 4.354 | 36.076 |
| PD18-10-527 | 9.57 | 0.69 | 0.4024 | 0.031 | 0.774 | 2392 | 98 | 2179 | 160 | 2556 | 67 | 1.277 | 0.783 | 85.250 |
| PD18-10-528 | 5.7 | 0.24 | 0.1929 | 0.0077 | 0.731 | 1934 | 39 | 1137 | 43 | 2943 | 53 | 0.2144 | 4.664 | 38.634 |
| PD18-10-529 | 4.33 | 0.18 | 0.1476 | 0.0043 | 0.819 | 1701 | 32 | 887 | 24 | 2932 | 53 | 2.952 | 0.339 | 30.252 |
| PD18-10-530 | 3.61 | 0.15 | 0.1024 | 0.0034 | 0.744 | 1549 | 36 | 629 | 20 | 3204 | 52 | 0.4311 | 2.320 | 19.632 |
| PD18-10-531 | 9.98 | 0.36 | 0.3672 | 0.01 | 0.731 | 2431 | 32 | 2015 | 47 | 2796 | 52 | 1.549 | 0.646 | 72.067 |
| PD18-10-532 | 2.346 | 0.095 | 0.0648 | 0.0021 | 0.900 | 1224 | 29 | 405 | 13 | 3265 | 50 | 0.679 | 1.473 | 12.404 |
| PD18-10-540 | 5.097 | 0.16 | 0.1702 | 0.0028 | 0.563 | 1834 | 27 | 1013.2 | 15 | 2955 | 51 | 0.38 | 2.632 | 34.288 |
| PD18-10-541 | 2.039 | 0.11 | 0.0619 | 0.003 | 0.905 | 1126 | 42 | 386.8 | 18 | 3105 | 51 | 0.0583 | 17.153 | 12.457 |
| PD18-10-542 | 2.668 | 0.14 | 0.0782 | 0.0037 | 0.501 | 1319 | 35 | 485.2 | 22 | 3171 | 50 | 0.2665 | 3.752 | 15.301 |
| PD18-10-543 | 2.258 | 0.12 | 0.0692 | 0.0034 | 0.767 | 1202 | 32 | 431.1 | 20 | 3117 | 51 | 1.918 | 0.521 | 13.831 |
| PD18-10-544 | 2.577 | 0.14 | 0.0833 | 0.0037 | 0.705 | 1293 | 35 | 516 | 22 | 3141 | 51 | 7.084 | 0.141 | 16.428 |
| PD18-10-545 | 5.85 | 0.34 | 0.2376 | 0.013 | 0.679 | 1953 | 72 | 1374 | 75 | 2780 | 52 | 0.874 | 1.144 | 49.424 |
| PD18-10-546 | 6.91 | 0.26 | 0.216 | 0.0062 | 0.821 | 2097 | 32 | 1260 | 32 | 3058 | 50 | 1.378 | 0.726 | 41.203 |
| PD18-10-547 | 8.43 | 0.27 | 0.3245 | 0.0067 | 0.777 | 2277 | 29 | 1811 | 33 | 2722 | 51 | 0.631 | 1.585 | 66.532 |
| PD18-10-548 | 1.339 | 0.054 | 0.03961 | 0.0011 | 0.766 | 862 | 22 | 250.4 | 6.6 | 3156 | 51 | 0.729 | 1.372 | 7.934 |
| PD18-10-549 | 4.836 | 0.16 | 0.1621 | 0.0041 | 0.449 | 1790 | 30 | 968 | 23 | 2939 | 52 | 0.607 | 1.647 | 32.936 |
| PD18-10-550 | 3.419 | 0.12 | 0.1024 | 0.0027 | 0.916 | 1508 | 29 | 628 | 16 | 3132 | 49 | 0.76 | 1.316 | 20.051 |
| PD18-10-551 | 8.274 | 0.25 | 0.2872 | 0.0056 | 0.617 | 2261 | 27 | 1627 | 28 | 2890 | 52 | 1.55 | 0.645 | 56.298 |
| PD18-10-552 | 10.31 | 0.4 | 0.3663 | 0.011 | 0.735 | 2461 | 36 | 2010 | 53 | 2855 | 54 | 0.1813 | 5.516 | 70.403 |
| PD18-10-553 | 3.846 | 0.13 | 0.1186 | 0.0031 | 0.844 | 1600 | 28 | 722 | 18 | 3084 | 53 | 0.1574 | 6.353 | 23.411 |
| PD18-10-554 | 7.05 | 0.39 | 0.3329 | 0.014 | 0.836 | 2116 | 43 | 1852 | 64 | 2529 | 52 | 3.85 | 0.260 | 73.231 |
| PD18-10-555 | 7.72 | 0.26 | 0.288 | 0.0086 | 0.751 | 2197 | 30 | 1630 | 43 | 2777 | 54 | 0.349 | 2.865 | 58.696 |
| PD18-10-556 | 1.142 | 0.043 | 0.03374 | 0.00093 | 0.594 | 773.1 | 19 | 213.9 | 5.8 | 3151 | 53 | 1.403 | 0.713 | 6.788 |
| PD18-10-565 | 1.828 | 0.076 | 0.051 | 0.0022 | 0.631 | 1055 | 29 | 320.6 | 13 | 3233 | 51 | 0.2638 | 3.791 | 9.916 |
| PD18-10-566 | 1.498 | 0.058 | 0.0495 | 0.0018 | 0.679 | 929 | 22 | 311.6 | 11 | 3112 | 53 | 0.4178 | 2.393 | 10.013 |
| PD18-10-567 | 4.18 | 0.36 | 0.1517 | 0.015 | 0.797 | 1668 | 57 | 910 | 79 | 2807 | 56 | 0.471 | 2.123 | 32.419 |
| PD18-10-568 | 1.288 | 0.059 | 0.03537 | 0.0018 | 0.817 | 839 | 25 | 224.1 | 11 | 3255 | 52 | 0.3841 | 2.603 | 6.885 |
| PD18-10-569 | 6.33 | 0.19 | 0.1776 | 0.0036 | 0.634 | 2022 | 28 | 1054 | 20 | 3224 | 50 | 1.641 | 0.609 | 32.692 |
| PD18-10-570 | 7.12 | 0.23 | 0.2577 | 0.0067 | 0.719 | 2125 | 30 | 1478 | 35 | 2834 | 51 | 0.656 | 1.524 | 52.152 |
| PD18-10-571 | 2.977 | 0.098 | 0.097 | 0.0025 | 0.589 | 1401 | 26 | 596.6 | 15 | 2989 | 53 | 0.134 | 7.463 | 19.960 |
| PD18-10-572 | 11.24 | 0.33 | 0.4869 | 0.0084 | 0.657 | 2542 | 28 | 2557 | 37 | 2533 | 52 | 1.385 | 0.722 | 100.947 |
| PD18-10-573 | 7.353 | 0.23 | 0.2459 | 0.0054 | 0.566 | 2154 | 27 | 1417 | 28 | 2956 | 53 | 0.867 | 1.153 | 47.936 |
| PD18-10-574 | 10.89 | 0.34 | 0.4505 | 0.0092 | 0.496 | 2512 | 29 | 2396 | 41 | 2606 | 57 | 0.913 | 1.095 | 91.942 |
| PD18-10-575 | 18.64 | 1.7 | 0.569 | 0.029 | 0.970 | 3019 | 61 | 2900 | 110 | 3101 | 55 | 2.177 | 0.459 | 93.518 |
| PD18-10-576 | 7.81 | 0.42 | 0.2461 | 0.0084 | 0.828 | 2208 | 45 | 1418 | 43 | 3049 | 61 | 1.195 | 0.837 | 46.507 |
| PD18-10-577 | 9.14 | 0.51 | 0.31 | 0.018 | 0.847 | 2349 | 67 | 1738 | 96 | 2926 | 57 | 0.867 | 1.153 | 59.398 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-10-578 | 11.26 | 0.34 | 0.4881 | 0.008 | 0.549 | 2544 | 28 | 2562 | 35 | 2532 | 50 | 1.726 | 0.579 | 101.185 |
| PD18-10-579 | 4.45 | 0.22 | 0.1328 | 0.0064 | 0.774 | 1721 | 53 | 804 | 38 | 3126 | 50 | 0.613 | 1.631 | 25.720 |
| PD18-10-580 | 6.75 | 0.29 | 0.227 | 0.0081 | 0.839 | 2077 | 39 | 1318 | 42 | 2946 | 48 | 0.961 | 1.041 | 44.739 |
| PD18-10-581 | 3.798 | 0.16 | 0.1209 | 0.0047 | 0.709 | 1591 | 37 | 736 | 28 | 3054 | 51 | 0.2238 | 4.468 | 24.100 |
| PD18-10-589 | 8.76 | 0.27 | 0.2995 | 0.0065 | 0.640 | 2313 | 28 | 1688 | 32 | 2923 | 51 | 0.833 | 1.200 | 57.749 |
| PD18-10-590 | 2.794 | 0.089 | 0.0851 | 0.0019 | 0.891 | 1353 | 25 | 526 | 12 | 3093 | 49 | 0.2561 | 3.905 | 17.006 |
| PD18-10-591 | 8.35 | 0.32 | 0.3032 | 0.01 | 0.700 | 2268 | 39 | 1707 | 53 | 2826 | 51 | 0.684 | 1.462 | 60.403 |
| PD18-10-592 | 6.39 | 0.25 | 0.1815 | 0.0065 | 0.703 | 2030 | 35 | 1075 | 36 | 3216 | 51 | 1.308 | 0.765 | 33.427 |
| PD18-10-593 | 10.62 | 0.49 | 0.4583 | 0.023 | 0.423 | 2490 | 54 | 2431 | 110 | 2521 | 63 | 1.363 | 0.734 | 96.430 |
| PD18-10-594 | 8.16 | 0.25 | 0.254 | 0.0051 | 0.616 | 2248 | 28 | 1458 | 26 | 3074 | 51 | 0.603 | 1.658 | 47.430 |
| PD18-10-595 | 7.39 | 0.29 | 0.2618 | 0.011 | 0.760 | 2159 | 34 | 1498 | 56 | 2854 | 57 | 0.1448 | 6.906 | 52.488 |
| PD18-10-597 | 7.94 | 0.27 | 0.2634 | 0.0064 | 0.861 | 2223 | 33 | 1507 | 33 | 2957 | 50 | 1.221 | 0.819 | 50.964 |
| PD18-10-598 | 3.829 | 0.13 | 0.1214 | 0.0027 | 0.901 | 1597 | 28 | 738 | 16 | 3043 | 50 | 3.228 | 0.310 | 24.252 |
| PD18-10-599 | 9.34 | 0.31 | 0.3713 | 0.0098 | 0.623 | 2370 | 32 | 2034 | 47 | 2663 | 55 | 0.557 | 1.795 | 76.380 |
| PD18-10-600 | 4.67 | 0.16 | 0.1541 | 0.0045 | 0.929 | 1760 | 31 | 924 | 26 | 2971 | 52 | 0.932 | 1.073 | 31.101 |
| PD18-10-601 | 10.95 | 0.5 | 0.455 | 0.018 | 0.315 | 2515 | 52 | 2414 | 86 | 2582 | 58 | 0.748 | 1.337 | 93.493 |
| PD18-10-602 | 1.883 | 0.18 | 0.0559 | 0.0048 | 0.788 | 1074 | 50 | 350.4 | 29 | 3135 | 51 | 0.4813 | 2.078 | 11.177 |
| PD18-10-603 | 8.93 | 0.33 | 0.35 | 0.0095 | 0.857 | 2328 | 35 | 1933 | 46 | 2690 | 52 | 0.522 | 1.916 | 71.859 |
| | | | | | | | | | | | | | | |
| PD18-05-611 | 6.16 | 0.22 | 0.2891 | 0.0079 | 0.74701 | 1996 | 33 | 1636 | 40 | 2540 | 54 | 1.03 | 0.971 | 64.40945 |
| PD18-05-612 | 2.478 | 0.28 | 0.1154 | 0.012 | 0.8494 | 1270 | 63 | 703 | 65 | 2553 | 58 | 0.2007 | 4.983 | 27.53623 |
| PD18-05-613 | 4.724 | 0.18 | 0.2099 | 0.006 | 0.72645 | 1770 | 34 | 1228 | 32 | 2474 | 53 | 0.735 | 1.361 | 49.63622 |
| PD18-05-614 | 4.977 | 0.17 | 0.2291 | 0.0049 | 0.61669 | 1816 | 30 | 1329 | 26 | 2429 | 56 | 1.283 | 0.779 | 54.71387 |
| PD18-05-615 | 8.73 | 0.31 | 0.3719 | 0.0091 | 0.79373 | 2308 | 35 | 2038 | 44 | 2541 | 53 | 1.064 | 0.940 | 80.20464 |
| PD18-05-616 | 5.86 | 0.2 | 0.2609 | 0.0063 | 0.70173 | 1954 | 31 | 1494 | 32 | 2488 | 55 | 0.876 | 1.142 | 60.04823 |
| PD18-05-617 | 11.83 | 0.39 | 0.5076 | 0.011 | 0.58836 | 2589 | 31 | 2645 | 46 | 2539 | 57 | 1.3 | 0.769 | 104.1749 |
| PD18-05-618 | 5.53 | 0.29 | 0.2528 | 0.0091 | 0.71293 | 1903 | 41 | 1452 | 46 | 2576 | 56 | 0.476 | 2.101 | 56.36646 |
| PD18-05-619 | 6.66 | 0.25 | 0.3189 | 0.0084 | 0.9089 | 2063 | 33 | 1783 | 41 | 2506 | 53 | 0.779 | 1.284 | 71.14924 |
| PD18-05-620 | 11.58 | 0.37 | 0.4797 | 0.0099 | 0.24605 | 2569 | 31 | 2524 | 44 | 2592 | 58 | 0.6007 | 1.665 | 97.37654 |
| PD18-05-621 | 1.376 | 0.058 | 0.0699 | 0.0025 | 0.76448 | 878 | 27 | 435.2 | 15 | 2277 | 55 | 1.081 | 0.925 | 19.11287 |
| PD18-05-622 | 6.36 | 0.5 | 0.2722 | 0.019 | 0.87725 | 2026 | 89 | 1551 | 100 | 2562 | 57 | 0.811 | 1.233 | 60.53864 |
| PD18-05-623 | 10.55 | 0.33 | 0.4451 | 0.0083 | 0.46333 | 2482 | 30 | 2372 | 37 | 2568 | 54 | 1.109 | 0.902 | 92.3676 |
| PD18-05-624 | 5.9 | 0.33 | 0.2609 | 0.012 | 0.6923 | 1960 | 42 | 1494 | 57 | 2497 | 56 | 0.431 | 2.320 | 59.8318 |
| PD18-05-625 | 9.33 | 0.3 | 0.3905 | 0.0089 | 0.54399 | 2369 | 30 | 2124 | 42 | 2591 | 54 | 0.849 | 1.178 | 81.97607 |
| PD18-05-626 | 5.24 | 0.27 | 0.2263 | 0.01 | 0.53609 | 1856 | 52 | 1315 | 54 | 2510 | 59 | 0.338 | 2.959 | 52.39044 |
| PD18-05-634 | 7.23 | 0.29 | 0.3224 | 0.0097 | 0.78982 | 2137 | 35 | 1800 | 47 | 2619 | 55 | 1.193 | 0.838 | 68.72852 |
| PD18-05-635 | 8.9 | 0.48 | 0.3785 | 0.018 | 0.79227 | 2325 | 65 | 2068 | 90 | 2546 | 54 | 1.078 | 0.928 | 81.22545 |
| PD18-05-636 | 7.33 | 0.23 | 0.3186 | 0.0065 | 0.5302 | 2152 | 30 | 1782 | 32 | 2503 | 55 | 0.974 | 1.027 | 71.19457 |
| PD18-05-637 | 0.706 | 0.039 | 0.0364 | 0.0017 | 0.91875 | 541 | 23 | 230 | 10 | 2253 | 59 | 0.857 | 1.167 | 10.20861 |
| PD18-05-638 | 1.15 | 0.077 | 0.0541 | 0.0037 | 0.8943 | 776 | 33 | 339.3 | 22 | 2396 | 57 | 0.1398 | 7.153 | 14.1611 |
| PD18-05-639 | 11.78 | 0.43 | 0.5024 | 0.011 | 0.37235 | 2583 | 33 | 2622 | 47 | 2540 | 64 | 0.895 | 1.117 | 103.2283 |
| PD18-05-640 | 9.41 | 0.3 | 0.4023 | 0.0073 | 0.60159 | 2377 | 29 | 2179 | 34 | 2548 | 54 | 0.787 | 1.271 | 85.51805 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-05-641 | 3.269 | 0.14 | 0.1515 | 0.0048 | 0.56103 | 1473 | 33 | 909 | 26 | 2418 | 55 | 0.492 | 2.033 | 37.59305 |
| PD18-05-642 | 1.144 | 0.075 | 0.0565 | 0.0036 | 0.77758 | 773 | 44 | 354 | 23 | 2441 | 59 | 0.4159 | 2.404 | 14.50225 |
| PD18-05-643 | 10.38 | 0.44 | 0.4379 | 0.015 | 0.40264 | 2466 | 45 | 2340 | 69 | 2561 | 57 | 1.3 | 0.769 | 91.37056 |
| PD18-05-644 | 10.54 | 0.42 | 0.458 | 0.015 | 0.65903 | 2481 | 42 | 2430 | 69 | 2535 | 53 | 0.724 | 1.381 | 95.85799 |
| PD18-05-645 | 10.33 | 0.34 | 0.4404 | 0.009 | 0.44711 | 2462 | 30 | 2351 | 40 | 2553 | 56 | 0.692 | 1.445 | 92.08774 |
| PD18-05-646 | 6.62 | 0.27 | 0.2909 | 0.0082 | 0.88092 | 2057 | 39 | 1644 | 39 | 2498 | 56 | 3.87 | 0.258 | 65.81265 |
| PD18-05-647 | 8.71 | 0.3 | 0.3413 | 0.0086 | 0.61479 | 2307 | 34 | 1892 | 42 | 2692 | 53 | 1.5 | 0.667 | 70.28232 |
| PD18-05-648 | 12.18 | 0.38 | 0.5024 | 0.0092 | 0.57553 | 2617 | 29 | 2623 | 39 | 2608 | 56 | 1.82 | 0.549 | 100.5752 |
| PD18-05-649 | 11.19 | 0.4 | 0.4814 | 0.012 | 0.29594 | 2536 | 33 | 2531 | 50 | 2544 | 68 | 0.732 | 1.366 | 99.48899 |
| PD18-05-657 | 11.45 | 0.39 | 0.4719 | 0.01 | 0.39267 | 2558 | 31 | 2490 | 44 | 2604 | 59 | 4.1 | 0.244 | 95.62212 |
| PD18-05-658 | 4.369 | 0.23 | 0.2165 | 0.0092 | 0.69498 | 1708 | 38 | 1263 | 47 | 2447 | 54 | 0.837 | 1.195 | 51.61422 |
| PD18-05-659 | 4.64 | 0.19 | 0.2094 | 0.0058 | 0.92031 | 1754 | 32 | 1225 | 31 | 2449 | 54 | 0.3413 | 2.930 | 50.02042 |
| PD18-05-660 | 2.75 | 0.27 | 0.1185 | 0.01 | 0.66021 | 1336 | 59 | 721 | 56 | 2545 | 64 | 0.78 | 1.282 | 28.33006 |
| PD18-05-661 | 9.67 | 0.44 | 0.403 | 0.014 | 0.56314 | 2403 | 50 | 2182 | 69 | 2581 | 55 | 1.04 | 0.962 | 84.54088 |
| PD18-05-662 | 6.61 | 0.21 | 0.2895 | 0.0054 | 0.5571 | 2059 | 29 | 1644 | 27 | 2493 | 54 | 0.366 | 2.732 | 65.94465 |
| PD18-05-663 | 6.24 | 0.3 | 0.2494 | 0.0062 | 0.23139 | 2009 | 37 | 1435 | 31 | 2654 | 65 | 1.53 | 0.654 | 54.06933 |
| PD18-05-664 | 6.77 | 0.3 | 0.241 | 0.0081 | 0.69539 | 2080 | 36 | 1392 | 41 | 2847 | 53 | 1.472 | 0.679 | 48.89357 |
| PD18-05-665 | 7.87 | 0.38 | 0.3392 | 0.013 | 0.59488 | 2218 | 39 | 1881 | 60 | 2681 | 54 | 0.536 | 1.866 | 70.16039 |
| PD18-05-666 | 5.82 | 0.28 | 0.2429 | 0.0095 | 0.45217 | 1948 | 50 | 1401 | 51 | 2598 | 55 | 1.572 | 0.636 | 53.9261 |
| PD18-05-667 | 2.458 | 0.083 | 0.1127 | 0.0024 | 0.76102 | 1258 | 25 | 688 | 14 | 2422 | 54 | 1.018 | 0.982 | 28.40628 |
| PD18-05-668 | 3.75 | 0.14 | 0.1698 | 0.0049 | 0.34526 | 1579 | 29 | 1010 | 27 | 2455 | 60 | 0.7 | 1.429 | 41.14053 |
| PD18-05-669 | 9.37 | 0.32 | 0.4046 | 0.0092 | 0.70462 | 2372 | 31 | 2189 | 42 | 2532 | 55 | 0.837 | 1.195 | 86.4534 |
| PD18-05-670 | 10.11 | 0.33 | 0.4156 | 0.0083 | 0.42174 | 2442 | 30 | 2239 | 38 | 2613 | 57 | 0.668 | 1.497 | 85.68695 |
| PD18-05-671 | 10.07 | 0.37 | 0.4252 | 0.009 | 0.30849 | 2437 | 35 | 2283 | 40 | 2558 | 66 | 0.627 | 1.595 | 89.24941 |
| PD18-05-672 | 4.953 | 0.21 | 0.2223 | 0.0072 | 0.68188 | 1810 | 41 | 1294 | 39 | 2475 | 54 | 1.517 | 0.659 | 52.28283 |
| PD18-05-680 | 12.6 | 0.39 | 0.4547 | 0.0086 | 0.64667 | 2649 | 29 | 2415 | 38 | 2829 | 52 | 1.017 | 0.983 | 85.36585 |
| PD18-05-681 | 1.245 | 0.047 | 0.0596 | 0.002 | 0.90236 | 820 | 22 | 373.3 | 12 | 2368 | 55 | 0.721 | 1.387 | 15.76436 |
| PD18-05-682 | 13.68 | 0.46 | 0.516 | 0.011 | 0.42211 | 2725 | 32 | 2681 | 45 | 2754 | 54 | 1.519 | 0.658 | 97.34931 |
| PD18-05-683 | 12.07 | 0.62 | 0.501 | 0.025 | 0.17043 | 2608 | 58 | 2614 | 110 | 2590 | 60 | 1.2 | 0.833 | 100.9266 |
| PD18-05-684 | 1.499 | 0.053 | 0.0736 | 0.0018 | 0.84974 | 928 | 21 | 457.8 | 11 | 2311 | 55 | 0.922 | 1.085 | 19.80961 |
| PD18-05-685 | 5.6 | 0.25 | 0.2475 | 0.0093 | 0.56692 | 1915 | 44 | 1425 | 50 | 2483 | 56 | 0.737 | 1.357 | 57.39025 |
| PD18-05-686 | 11.95 | 0.42 | 0.483 | 0.01 | 0.69948 | 2598 | 33 | 2539 | 44 | 2640 | 60 | 1.506 | 0.664 | 96.17424 |
| PD18-05-687 | 10.43 | 0.33 | 0.4471 | 0.0085 | 0.75938 | 2472 | 29 | 2381 | 38 | 2543 | 53 | 1.06 | 0.943 | 93.62957 |
| PD18-05-688 | 10.49 | 0.33 | 0.4515 | 0.0079 | 0.51107 | 2483 | 31 | 2401 | 35 | 2542 | 55 | 1.207 | 0.829 | 94.45319 |
| PD18-05-689 | 7.96 | 0.44 | 0.388 | 0.015 | 0.7243 | 2226 | 42 | 2113 | 67 | 2471 | 56 | 2.737 | 0.365 | 85.51194 |
| PD18-05-690 | 5.54 | 0.26 | 0.2267 | 0.0079 | 0.93097 | 1903 | 37 | 1317 | 41 | 2609 | 52 | 0.906 | 1.104 | 50.47911 |
| PD18-05-691 | 10.66 | 0.34 | 0.4683 | 0.009 | 0.60663 | 2492 | 30 | 2475 | 39 | 2507 | 53 | 1.014 | 0.986 | 98.72357 |
| PD18-05-692 | 5.271 | 0.19 | 0.2411 | 0.0057 | 0.39218 | 1863 | 31 | 1392 | 29 | 2434 | 54 | 1.765 | 0.567 | 57.18981 |
| PD18-05-693 | 3.98 | 0.21 | 0.1761 | 0.0077 | 0.82225 | 1632 | 38 | 1045 | 42 | 2494 | 54 | 0.548 | 1.825 | 41.90056 |
| PD18-05-694 | 7.51 | 0.47 | 0.312 | 0.016 | 0.30365 | 2169 | 70 | 1748 | 81 | 2570 | 63 | 0.3644 | 2.744 | 68.01556 |
| PD18-05-695 | 4.89 | 0.19 | 0.2144 | 0.0067 | 0.72596 | 1798 | 37 | 1252 | 36 | 2506 | 55 | 0.788 | 1.269 | 49.9601 |
| PD18-05-703 | 9.44 | 0.33 | 0.4067 | 0.0099 | 0.49306 | 2384 | 33 | 2199 | 46 | 2534 | 56 | 0.758 | 1.319 | 86.77979 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-05-704 | 2.204 | 0.23 | 0.1168 | 0.0088 | 0.89816 | 1180 | 56 | 712 | 49 | 2331 | 57 | 0.983 | 1.017 | 30.54483 |
| PD18-05-705 | 11.83 | 0.4 | 0.5064 | 0.01 | 0.56279 | 2588 | 31 | 2640 | 43 | 2546 | 56 | 1.675 | 0.597 | 103.6921 |
| PD18-05-706 | 12.26 | 0.49 | 0.4832 | 0.017 | 0.53306 | 2623 | 43 | 2540 | 80 | 2674 | 55 | 3.52 | 0.284 | 94.98878 |
| PD18-05-707 | 10.14 | 0.37 | 0.429 | 0.013 | 0.69632 | 2446 | 37 | 2299 | 59 | 2585 | 54 | 1.168 | 0.856 | 88.93617 |
| PD18-05-708 | 11.11 | 0.37 | 0.474 | 0.01 | 0.54619 | 2530 | 31 | 2499 | 45 | 2552 | 55 | 0.977 | 1.024 | 97.9232 |
| PD18-05-709 | 10.85 | 0.5 | 0.471 | 0.014 | 0.39212 | 2511 | 47 | 2487 | 61 | 2533 | 68 | 0.861 | 1.161 | 98.18397 |
| PD18-05-710 | 9.51 | 0.31 | 0.4048 | 0.0083 | 0.80736 | 2388 | 29 | 2190 | 38 | 2550 | 57 | 0.419 | 2.387 | 85.88235 |
| PD18-05-711 | 8.18 | 0.32 | 0.3455 | 0.01 | 0.70369 | 2250 | 40 | 1912 | 52 | 2558 | 54 | 1.006 | 0.994 | 74.7459 |
| PD18-05-712 | 10.92 | 0.36 | 0.4645 | 0.011 | 0.61122 | 2514 | 31 | 2457 | 49 | 2559 | 56 | 0.871 | 1.148 | 96.01407 |
| PD18-05-713 | 9.93 | 0.4 | 0.4701 | 0.016 | 0.6554 | 2427 | 42 | 2483 | 71 | 2520 | 54 | 1.056 | 0.947 | 98.53175 |
| PD18-05-714 | 11.1 | 0.35 | 0.4738 | 0.0091 | 0.48419 | 2530 | 29 | 2499 | 40 | 2553 | 56 | 1.461 | 0.684 | 97.88484 |
| PD18-05-715 | 9.94 | 0.38 | 0.4185 | 0.011 | 0.66668 | 2427 | 38 | 2252 | 52 | 2565 | 57 | 0.738 | 1.355 | 87.79727 |
| PD18-05-716 | 7.96 | 0.25 | 0.3497 | 0.0069 | 0.49559 | 2225 | 30 | 1933 | 33 | 2499 | 54 | 1.559 | 0.641 | 77.35094 |
| PD18-05-717 | 10.12 | 0.46 | 0.419 | 0.017 | 0.49075 | 2443 | 50 | 2254 | 78 | 2582 | 58 | 0.53 | 1.887 | 87.29667 |
| PD18-05-718 | 5.72 | 0.43 | 0.2515 | 0.017 | 0.93056 | 1928 | 90 | 1445 | 94 | 2486 | 57 | 0.665 | 1.504 | 58.1255 |
| PD18-05-726 | 8.7 | 1 | 0.396 | 0.03 | 0.84296 | 2301 | 140 | 2150 | 150 | 2580 | 91 | 0.732 | 1.366 | 83.33333 |
| PD18-05-727 | 5.52 | 0.29 | 0.2689 | 0.012 | 0.73514 | 1901 | 47 | 1535 | 60 | 2487 | 56 | 0.817 | 1.224 | 61.72095 |
| PD18-05-728 | 10.73 | 0.36 | 0.4753 | 0.0099 | 0.41596 | 2498 | 32 | 2505 | 41 | 2634 | 57 | 2.001 | 0.500 | 95.10251 |
| PD18-05-729 | 10.51 | 0.36 | 0.4536 | 0.01 | 0.38423 | 2478 | 32 | 2410 | 45 | 2531 | 62 | 1.02 | 0.980 | 95.21928 |
| PD18-05-730 | 2.132 | 0.15 | 0.098 | 0.0061 | 0.84606 | 1162 | 41 | 603 | 35 | 2424 | 53 | 1.142 | 0.876 | 24.87624 |
| PD18-05-731 | 1.151 | 0.045 | 0.0551 | 0.0014 | 0.56176 | 777 | 21 | 345.5 | 8.6 | 2350 | 57 | 0.598 | 1.672 | 14.70213 |
| PD18-05-732 | 10.8 | 0.37 | 0.4688 | 0.0096 | 0.31369 | 2503 | 32 | 2477 | 42 | 2529 | 57 | 2.188 | 0.457 | 97.94385 |
| PD18-05-733 | 10.48 | 0.35 | 0.4463 | 0.0089 | 0.45167 | 2476 | 32 | 2378 | 42 | 2546 | 54 | 1.219 | 0.820 | 93.40141 |
| PD18-05-734 | 12.07 | 0.42 | 0.44 | 0.011 | 0.78916 | 2608 | 35 | 2350 | 50 | 2795 | 56 | 0.937 | 1.067 | 84.07871 |
| PD18-05-735 | 12.15 | 0.45 | 0.5125 | 0.012 | 0.17641 | 2618 | 34 | 2666 | 50 | 2563 | 64 | 1.212 | 0.825 | 104.0187 |
| PD18-05-736 | 6.77 | 0.54 | 0.297 | 0.023 | 0.87108 | 2076 | 100 | 1673 | 120 | 2516 | 55 | 0.515 | 1.942 | 66.49444 |
| PD18-05-737 | 2.836 | 0.31 | 0.1307 | 0.013 | 0.78378 | 1363 | 61 | 798 | 69 | 2420 | 55 | 0.442 | 2.262 | 32.97521 |
| PD18-05-738 | 7.73 | 0.37 | 0.3339 | 0.012 | 0.65503 | 2199 | 38 | 1856 | 57 | 2522 | 54 | 0.782 | 1.279 | 73.59239 |
| PD18-05-739 | 0.519 | 0.027 | 0.02777 | 0.0012 | 0.67927 | 424.4 | 17 | 176.5 | 7.4 | 2161 | 58 | 0.2917 | 3.428 | 8.167515 |
| PD18-05-740 | 9.78 | 0.34 | 0.4174 | 0.0097 | 0.77687 | 2412 | 32 | 2247 | 44 | 2552 | 52 | 0.847 | 1.181 | 88.04859 |
| PD18-05-741 | 9.42 | 0.37 | 0.397 | 0.013 | 0.73956 | 2378 | 41 | 2155 | 60 | 2560 | 54 | 1.025 | 0.976 | 84.17969 |
| PD18-05-749 | 11.88 | 0.41 | 0.4974 | 0.01 | 0.10663 | 2593 | 33 | 2601 | 45 | 2578 | 60 | 1.178 | 0.849 | 100.8922 |
| PD18-05-750 | 2.248 | 0.51 | 0.103 | 0.021 | 0.77061 | 1194 | 94 | 632 | 110 | 2419 | 59 | 1.399 | 0.715 | 26.1265 |
| PD18-05-751 | 4.113 | 0.18 | 0.1985 | 0.0067 | 0.62126 | 1655 | 40 | 1167 | 37 | 2484 | 55 | 0.526 | 1.901 | 46.98068 |
| PD18-05-752 | 7.77 | 0.28 | 0.3334 | 0.0088 | 0.71885 | 2203 | 32 | 1854 | 42 | 2532 | 52 | 1.312 | 0.762 | 73.22275 |
| PD18-05-753 | 9.99 | 0.36 | 0.4221 | 0.012 | 0.4767 | 2432 | 37 | 2269 | 54 | 2568 | 53 | 0.537 | 1.862 | 88.3567 |
| PD18-05-754 | 9.89 | 0.31 | 0.4238 | 0.0083 | 0.48992 | 2423 | 28 | 2276 | 37 | 2543 | 55 | 0.912 | 1.096 | 89.50059 |
| PD18-05-755 | 4.63 | 0.26 | 0.1975 | 0.0096 | 0.6248 | 1752 | 40 | 1162 | 50 | 2534 | 55 | 0.253 | 3.953 | 45.85635 |
| PD18-05-756 | 6.878 | 0.21 | 0.2977 | 0.0055 | 0.47813 | 2095 | 27 | 1679 | 27 | 2526 | 53 | 0.4889 | 2.045 | 66.46873 |
| PD18-05-757 | 10.5 | 0.51 | 0.46 | 0.018 | 0.54613 | 2485 | 54 | 2437 | 85 | 2533 | 63 | 1.483 | 0.674 | 96.21003 |
| PD18-05-758 | 10.87 | 0.35 | 0.4546 | 0.0088 | 0.55612 | 2511 | 30 | 2415 | 39 | 2587 | 55 | 0.487 | 2.053 | 93.35137 |
| PD18-05-759 | 1.882 | 0.15 | 0.0873 | 0.0059 | 0.84353 | 1072 | 43 | 539 | 34 | 2407 | 55 | 0.444 | 2.252 | 22.39302 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-05-760 | 11.97 | 0.45 | 0.4892 | 0.01 | 0.30101 | 2597 | 35 | 2566 | 44 | 2618 | 64 | 1.804 | 0.554 | 98.01375 |
| PD18-05-761 | 8.98 | 0.3 | 0.3886 | 0.0087 | 0.61133 | 2334 | 30 | 2120 | 41 | 2524 | 56 | 0.492 | 2.033 | 83.99366 |
| PD18-05-762 | 2.661 | 0.13 | 0.1211 | 0.005 | 0.78785 | 1317 | 40 | 737 | 29 | 2431 | 53 | 0.2641 | 3.786 | 30.31674 |
| PD18-05-763 | 12.89 | 0.44 | 0.482 | 0.011 | 0.73966 | 2669 | 32 | 2533 | 48 | 2782 | 54 | 1.497 | 0.668 | 91.0496 |
| PD18-05-764 | 7.52 | 0.25 | 0.3606 | 0.0074 | 0.63025 | 2174 | 29 | 1984 | 35 | 2503 | 56 | 0.512 | 1.953 | 79.26488 |
| | | | | | | | | | | | | | | |
| KL18-8-772 | 6.46 | 0.22 | 0.2696 | 0.0062 | 0.77955 | 2038 | 29 | 1538 | 31 | 2590 | 53 | 1.665 | 0.601 | 59.38224 |
| KL18-8-773 | 7.34 | 0.25 | 0.2991 | 0.0074 | 0.70751 | 2153 | 34 | 1686 | 37 | 2628 | 54 | 0.4721 | 2.118 | 64.15525 |
| KL18-8-774 | 10.08 | 0.4 | 0.4101 | 0.011 | 0.59997 | 2439 | 39 | 2214 | 53 | 2613 | 52 | 1.179 | 0.848 | 84.7302 |
| KL18-8-775 | 2.68 | 0.12 | 0.1162 | 0.0047 | 0.60289 | 1321 | 36 | 709 | 27 | 2663 | 56 | 0.586 | 1.706 | 26.62411 |
| KL18-8-776 | 9.66 | 0.37 | 0.402 | 0.0092 | 0.18547 | 2397 | 35 | 2177 | 42 | 2602 | 66 | 1.493 | 0.670 | 83.66641 |
| KL18-8-777 | 8.79 | 6.9 | 0.3447 | 0.087 | 0.67516 | 2314 | 220 | 1909 | 320 | 2688 | 160 | 1.121 | 0.892 | 71.01935 |
| KL18-8-778 | 6.65 | 0.28 | 0.2853 | 0.0084 | 0.75062 | 2059 | 37 | 1616 | 42 | 2547 | 60 | 1.216 | 0.822 | 63.44719 |
| KL18-8-779 | 7.76 | 0.37 | 0.3288 | 0.014 | 0.45239 | 2202 | 54 | 1832 | 73 | 2577 | 56 | 0.762 | 1.312 | 71.09042 |
| KL18-8-780 | 6.52 | 0.25 | 0.2731 | 0.0082 | 0.85518 | 2044 | 34 | 1554 | 41 | 2584 | 55 | 1.38 | 0.725 | 60.13932 |
| KL18-8-781 | 3.232 | 0.16 | 0.1341 | 0.0061 | 0.70496 | 1462 | 44 | 811 | 35 | 2601 | 55 | 1.129 | 0.886 | 31.18032 |
| KL18-8-782 | 7.43 | 0.24 | 0.3161 | 0.0074 | 0.5127 | 2163 | 28 | 1770 | 36 | 2558 | 56 | 1.279 | 0.782 | 69.19468 |
| KL18-8-783 | 5.43 | 0.17 | 0.2328 | 0.0051 | 0.7577 | 1888 | 28 | 1348 | 27 | 2546 | 53 | 0.979 | 1.021 | 52.9458 |
| KL18-8-784 | 18.29 | 0.84 | 0.58 | 0.017 | 0.66821 | 3000 | 48 | 2944 | 70 | 3027 | 75 | 0.713 | 1.403 | 97.25801 |
| KL18-8-785 | 7.61 | 1.1 | 0.321 | 0.02 | 0.75845 | 2184 | 95 | 1794 | 95 | 2558 | 88 | 1.056 | 0.947 | 70.13292 |
| KL18-8-786 | 5.38 | 0.18 | 0.221 | 0.0051 | 0.80459 | 1880 | 30 | 1286 | 27 | 2626 | 54 | 1.626 | 0.615 | 48.97182 |
| KL18-8-787 | 10.33 | 0.4 | 0.444 | 0.015 | 0.6358 | 2461 | 40 | 2368 | 68 | 2525 | 58 | 1.303 | 0.767 | 93.78218 |
| KL18-8-795 | 6.99 | 0.29 | 0.2871 | 0.01 | 0.52502 | 2108 | 43 | 1626 | 53 | 2600 | 60 | 1.255 | 0.797 | 62.53846 |
| KL18-8-796 | 10.37 | 0.33 | 0.4335 | 0.0082 | 0.5683 | 2469 | 30 | 2320 | 37 | 2590 | 57 | 0.803 | 1.245 | 89.57529 |
| KL18-8-797 | 10.85 | 0.35 | 0.4484 | 0.0094 | 0.57302 | 2511 | 31 | 2387 | 41 | 2604 | 52 | 1.437 | 0.696 | 91.66667 |
| KL18-8-798 | 5.69 | 0.23 | 0.2451 | 0.0091 | 0.88054 | 1924 | 35 | 1410 | 47 | 2681 | 56 | 1.097 | 0.912 | 52.59232 |
| KL18-8-799 | 7.76 | 0.27 | 0.32 | 0.0086 | 0.76659 | 2201 | 31 | 1788 | 42 | 2611 | 55 | 1.033 | 0.968 | 68.47951 |
| KL18-8-800 | 4.95 | 0.72 | 0.1986 | 0.022 | 0.73598 | 1809 | 94 | 1167 | 110 | 2645 | 71 | 1.215 | 0.823 | 44.12098 |
| KL18-8-801 | 10.06 | 0.61 | 0.399 | 0.023 | 0.67792 | 2439 | 77 | 2163 | 110 | 2662 | 56 | 3.79 | 0.264 | 81.2547 |
| KL18-8-802 | 3.47 | 0.13 | 0.1429 | 0.0041 | 0.87944 | 1518 | 30 | 861 | 23 | 2602 | 53 | 2.539 | 0.394 | 33.08993 |
| KL18-8-803 | 7.84 | 4.1 | 0.317 | 0.058 | 0.69638 | 2207 | 170 | 1772 | 230 | 2627 | 130 | 1.009 | 0.991 | 67.45337 |
| KL18-8-804 | 8.17 | 2 | 0.334 | 0.027 | 0.6775 | 2248 | 130 | 1854 | 120 | 2616 | 120 | 1.05 | 0.952 | 70.87156 |
| KL18-8-805 | 6.12 | 0.29 | 0.2636 | 0.01 | 0.52233 | 1990 | 47 | 1507 | 54 | 2520 | 59 | 1.168 | 0.856 | 59.80159 |
| KL18-8-806 | 8.77 | 0.31 | 0.3574 | 0.0096 | 0.71262 | 2312 | 34 | 1968 | 46 | 2622 | 54 | 1.653 | 0.605 | 75.05721 |
| KL18-8-807 | 9.87 | 0.41 | 0.406 | 0.017 | 0.68779 | 2420 | 44 | 2197 | 83 | 2598 | 56 | 1.982 | 0.505 | 84.56505 |
| KL18-8-808 | 8.32 | 0.27 | 0.3936 | 0.0075 | 0.51465 | 2265 | 29 | 2139 | 35 | 2513 | 55 | 0.7705 | 1.298 | 85.11739 |
| KL18-8-809 | 5.43 | 4.7 | 0.226 | 0.038 | 0.3735 | 1889 | 180 | 1313 | 170 | 2587 | 170 | 1.07 | 0.935 | 50.75377 |
| KL18-8-810 | 11.69 | 0.37 | 0.4926 | 0.01 | 0.355 | 2581 | 31 | 2580 | 43 | 2578 | 57 | 6.33 | 0.158 | 100.0776 |
| KL18-8-818 | 11.74 | 0.42 | 0.492 | 0.012 | 0.54166 | 2580 | 34 | 2575 | 51 | 2582 | 61 | 25.2 | 0.040 | 99.72889 |
| KL18-8-819 | 5.36 | 0.19 | 0.2273 | 0.006 | 0.70533 | 1878 | 32 | 1320 | 32 | 2580 | 52 | 0.998 | 1.002 | 51.16279 |
| KL18-8-820 | 10.32 | 0.67 | 0.4341 | 0.027 | 0.65128 | 2467 | 88 | 2323 | 130 | 2565 | 55 | 1.231 | 0.812 | 90.5653 |
| KL18-8-821 | 8.31 | 0.41 | 0.339 | 0.014 | 0.8261 | 2261 | 53 | 1882 | 72 | 2611 | 55 | 1.233 | 0.811 | 72.07966 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KL18-8-822 | 7.005 | 0.22 | 0.2804 | 0.0057 | 0.45438 | 2111 | 28 | 1593 | 29 | 2654 | 54 | 1.341 | 0.746 | 60.02261 |
| KL18-8-823 | 7.25 | 0.33 | 0.3006 | 0.012 | 0.58578 | 2141 | 48 | 1693 | 60 | 2586 | 56 | 1.328 | 0.753 | 65.4679 |
| KL18-8-824 | 3.81 | 0.27 | 0.1569 | 0.0053 | 0.82992 | 1592 | 52 | 939 | 30 | 2613 | 82 | 1.159 | 0.863 | 35.93571 |
| KL18-8-825 | 12.24 | 0.4 | 0.5039 | 0.0094 | 0.4956 | 2620 | 31 | 2629 | 40 | 2610 | 56 | 1.191 | 0.840 | 100.728 |
| KL18-8-826 | 7.06 | 0.24 | 0.3012 | 0.0071 | 0.80611 | 2121 | 34 | 1696 | 36 | 2552 | 54 | 2.068 | 0.484 | 66.45768 |
| KL18-8-827 | 4.19 | 0.18 | 0.1751 | 0.0066 | 0.90101 | 1668 | 35 | 1039 | 36 | 2588 | 53 | 0.941 | 1.063 | 40.14683 |
| KL18-8-828 | 2.79 | 8.2 | 0.111 | 0.091 | 0.88653 | 1334 | 310 | 678 | 360 | 2690 | 190 | 0.813 | 1.230 | 25.20446 |
| KL18-8-829 | 6.93 | 0.24 | 0.294 | 0.0073 | 0.74534 | 2100 | 30 | 1660 | 36 | 2558 | 54 | 1.337 | 0.748 | 64.89445 |
| KL18-8-830 | 6.66 | 0.24 | 0.2874 | 0.0086 | 0.69185 | 2070 | 36 | 1627 | 43 | 2552 | 56 | 1.419 | 0.705 | 63.75392 |
| KL18-8-831 | 11.32 | 0.42 | 0.4845 | 0.011 | 0.23087 | 2546 | 35 | 2545 | 48 | 2547 | 63 | 0.81 | 1.235 | 99.92148 |
| KL18-8-832 | 6.49 | 0.39 | 0.254 | 0.015 | 0.74943 | 2042 | 75 | 1459 | 83 | 2682 | 57 | 1.304 | 0.767 | 54.3997 |
| KL18-8-833 | 4.64 | 0.34 | 0.1931 | 0.014 | 0.54098 | 1755 | 49 | 1138 | 72 | 2610 | 56 | 1.52 | 0.658 | 43.60153 |
| KL18-8-841 | 7.14 | 0.33 | 0.296 | 0.011 | 0.60961 | 2126 | 47 | 1670 | 57 | 2588 | 54 | 0.405 | 2.469 | 64.52859 |
| KL18-8-842 | 9.6 | 0.34 | 0.4076 | 0.01 | 0.71286 | 2395 | 34 | 2203 | 47 | 2550 | 55 | 0.997 | 1.003 | 86.39216 |
| KL18-8-843 | 8.56 | 0.27 | 0.3668 | 0.0073 | 0.60765 | 2290 | 29 | 2014 | 34 | 2547 | 54 | 1.003 | 0.997 | 79.07342 |
| KL18-8-844 | 6.82 | 0.33 | 0.2868 | 0.013 | 0.67407 | 2087 | 53 | 1625 | 66 | 2561 | 56 | 1.028 | 0.973 | 63.45178 |
| KL18-8-845 | 9.69 | 0.31 | 0.4064 | 0.0079 | 0.78865 | 2404 | 30 | 2197 | 36 | 2587 | 56 | 1.475 | 0.678 | 84.92462 |
| KL18-8-846 | 5.03 | 0.22 | 0.2021 | 0.006 | 0.37446 | 1821 | 36 | 1185 | 32 | 2640 | 78 | 1.435 | 0.697 | 44.88636 |
| KL18-8-847 | 9.26 | 0.31 | 0.3904 | 0.0079 | 0.59929 | 2365 | 32 | 2123 | 37 | 2561 | 54 | 0.816 | 1.225 | 82.89731 |
| KL18-8-848 | 6.25 | 0.28 | 0.2619 | 0.01 | 0.58594 | 2010 | 47 | 1499 | 54 | 2571 | 55 | 1.448 | 0.691 | 58.30416 |
| KL18-8-849 | 7.63 | 0.35 | 0.327 | 0.013 | 0.58905 | 2187 | 39 | 1823 | 61 | 2532 | 54 | 1.182 | 0.846 | 71.99842 |
| KL18-8-850 | 10.19 | 0.32 | 0.4314 | 0.0077 | 0.55738 | 2450 | 29 | 2311 | 35 | 2568 | 55 | 0.8718 | 1.147 | 89.99221 |
| KL18-8-851 | 8.18 | 0.33 | 0.3373 | 0.011 | 0.73551 | 2249 | 40 | 1873 | 55 | 2599 | 52 | 1.242 | 0.805 | 72.06618 |
| KL18-8-852 | 1.769 | 0.072 | 0.0664 | 0.0027 | 0.68394 | 1034 | 30 | 414.2 | 17 | 2763 | 57 | 1.432 | 0.698 | 14.99095 |
| KL18-8-853 | 17.05 | 1.4 | 0.3901 | 0.019 | 0.69042 | 2936 | 61 | 2122 | 85 | 3539 | 57 | 1.407 | 0.711 | 59.96044 |
| KL18-8-854 | 7.105 | 0.22 | 0.3131 | 0.0061 | 0.57134 | 2123 | 29 | 1756 | 30 | 2502 | 54 | 4.76 | 0.210 | 70.18385 |
| KL18-8-855 | 8.56 | 0.27 | 0.3496 | 0.007 | 0.70347 | 2291 | 29 | 1932 | 33 | 2623 | 55 | 1.287 | 0.777 | 73.65612 |
| KL18-8-856 | 6.56 | 0.21 | 0.2742 | 0.006 | 0.56931 | 2053 | 28 | 1561 | 31 | 2577 | 55 | 0.164 | 6.098 | 60.57431 |
| KL18-8-857 | 6.92 | 0.25 | 0.292 | 0.008 | 0.7329 | 2097 | 32 | 1650 | 40 | 2562 | 58 | 0.746 | 1.340 | 64.40281 |
| KL18-8-858 | 5.73 | 0.25 | 0.2382 | 0.0083 | 0.74815 | 1929 | 39 | 1376 | 44 | 2607 | 63 | 0.719 | 1.391 | 52.78097 |
| KL18-8-866 | 7.17 | 0.23 | 0.305 | 0.006 | 0.49863 | 2132 | 28 | 1715 | 30 | 2558 | 55 | 0.87 | 1.149 | 67.04457 |
| KL18-8-867 | 3.06 | 0.12 | 0.1222 | 0.0043 | 0.84607 | 1420 | 34 | 743 | 25 | 2659 | 54 | 2.378 | 0.421 | 27.94284 |
| KL18-8-868 | 1.036 | 0.038 | 0.02539 | 0.0012 | 0.71326 | 722 | 20 | 161.6 | 7.8 | 3457 | 68 | 0.763 | 1.311 | 4.674573 |
| KL18-8-869 | 1.369 | 0.069 | 0.0348 | 0.0021 | 0.80984 | 875 | 34 | 220.2 | 13 | 3377 | 72 | 6.42 | 0.156 | 6.52058 |
| KL18-8-870 | 9.02 | 0.42 | 0.367 | 0.015 | 0.64358 | 2334 | 57 | 2013 | 77 | 2615 | 54 | 2.67 | 0.375 | 76.97897 |
| KL18-8-871 | 7.189 | 0.23 | 0.2994 | 0.0069 | 0.57067 | 2134 | 30 | 1688 | 35 | 2594 | 54 | 1.28 | 0.781 | 65.07325 |
| KL18-8-872 | 9.58 | 0.51 | 0.4036 | 0.0085 | 0.72102 | 2393 | 43 | 2185 | 40 | 2572 | 84 | 0.81 | 1.235 | 84.95334 |
| KL18-8-873 | 8.52 | 0.45 | 0.367 | 0.02 | 0.75884 | 2285 | 72 | 2014 | 110 | 2527 | 57 | 1.93 | 0.518 | 79.69925 |
| KL18-8-874 | 2.009 | 0.19 | 0.0768 | 0.0075 | 0.7246 | 1117 | 50 | 477 | 44 | 2722 | 54 | 3.117 | 0.321 | 17.52388 |
| KL18-8-875 | 8.33 | 0.28 | 0.342 | 0.0086 | 0.40178 | 2265 | 31 | 1896 | 42 | 2628 | 56 | 1.479 | 0.676 | 72.14612 |
| KL18-8-876 | 8.69 | 0.32 | 0.3639 | 0.0097 | 0.66633 | 2303 | 35 | 1999 | 46 | 2576 | 58 | 0.2724 | 3.671 | 77.60093 |
| KL18-8-877 | 6.61 | 0.23 | 0.2761 | 0.0061 | 0.48701 | 2058 | 29 | 1571 | 31 | 2590 | 59 | 0.664 | 1.506 | 60.65637 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KL18-8-878 | 7.97 | 0.44 | 0.3391 | 0.017 | 0.28494 | 2224 | 64 | 1881 | 89 | 2539 | 57 | 0.436 | 2.294 | 74.08429 |
| KL18-8-879 | 11.26 | 0.36 | 0.4831 | 0.0089 | 0.5236 | 2543 | 30 | 2540 | 39 | 2540 | 57 | 0.903 | 1.107 | 100 |
| KL18-8-880 | 6.27 | 0.24 | 0.2494 | 0.0092 | 0.30581 | 2014 | 39 | 1435 | 49 | 2655 | 55 | 2.146 | 0.466 | 54.04896 |
| KL18-8-881 | 7.94 | 0.34 | 0.3422 | 0.0073 | 0.12356 | 2227 | 38 | 1896 | 35 | 2562 | 74 | 0.84 | 1.190 | 74.00468 |
| KL18-8-882 | 7.47 | 0.28 | 0.3 | 0.0069 | 0.73428 | 2164 | 34 | 1690 | 34 | 2655 | 60 | 0.722 | 1.385 | 63.65348 |
| KL18-8-890 | 11.13 | 0.36 | 0.4636 | 0.0095 | 0.59569 | 2532 | 30 | 2454 | 42 | 2597 | 56 | 1.571 | 0.637 | 94.49365 |
| KL18-8-891 | 5.26 | 0.19 | 0.1996 | 0.0071 | 0.76307 | 1861 | 34 | 1173 | 39 | 2738 | 57 | 1.267 | 0.789 | 42.84149 |
| KL18-8-892 | 11.41 | 0.41 | 0.4645 | 0.011 | 0.27106 | 2553 | 33 | 2457 | 47 | 2618 | 62 | 2.411 | 0.415 | 93.85027 |
| KL18-8-893 | 11.35 | 0.36 | 0.4911 | 0.0098 | 0.41259 | 2551 | 29 | 2574 | 42 | 2528 | 57 | 1.683 | 0.594 | 101.8196 |
| KL18-8-894 | 4.47 | 0.18 | 0.2045 | 0.0075 | 0.70307 | 1722 | 33 | 1199 | 40 | 2573 | 56 | 1.281 | 0.781 | 46.5993 |
| KL18-8-895 | 8.12 | 0.33 | 0.3417 | 0.011 | 0.52184 | 2243 | 37 | 1894 | 57 | 2569 | 55 | 0.426 | 2.347 | 73.72518 |
| KL18-8-896 | 4.67 | 6.6 | 0.217 | 0.1 | 0.94268 | 1753 | 250 | 1264 | 390 | 2544 | 160 | 1.429 | 0.700 | 49.68553 |
| KL18-8-897 | 8.56 | 0.33 | 0.37 | 0.011 | 0.76683 | 2289 | 36 | 2025 | 50 | 2527 | 58 | 0.916 | 1.092 | 80.13455 |
| KL18-8-898 | 6.56 | 0.23 | 0.2889 | 0.0071 | 0.82791 | 2055 | 30 | 1641 | 36 | 2498 | 53 | 0.758 | 1.319 | 65.69255 |
| KL18-8-899 | 6.12 | 0.25 | 0.2731 | 0.01 | 0.52431 | 1992 | 42 | 1556 | 54 | 2511 | 53 | 1.164 | 0.859 | 61.96734 |
| KL18-8-900 | 9.96 | 0.36 | 0.419 | 0.011 | 0.46139 | 2429 | 36 | 2255 | 51 | 2583 | 57 | 2.2 | 0.455 | 87.30159 |
| KL18-8-901 | 12.07 | 0.41 | 0.492 | 0.012 | 0.63822 | 2608 | 35 | 2578 | 54 | 2615 | 52 | 2.1 | 0.476 | 98.58509 |
| KL18-8-902 | 10.05 | 0.34 | 0.43 | 0.0086 | 0.63488 | 2436 | 31 | 2304 | 39 | 2542 | 59 | 1.183 | 0.845 | 90.63729 |
| KL18-8-903 | 2.869 | 0.14 | 0.1304 | 0.006 | 0.59856 | 1373 | 39 | 790 | 34 | 2588 | 55 | 1.205 | 0.830 | 30.5255 |
| KL18-8-904 | 2.59 | 0.19 | 0.0981 | 0.0037 | 0.49053 | 1297 | 56 | 603 | 22 | 2744 | 94 | 1.389 | 0.720 | 21.97522 |
| KL18-8-905 | 9.39 | 0.33 | 0.402 | 0.0096 | 0.53088 | 2374 | 32 | 2176 | 44 | 2553 | 61 | 0.971 | 1.030 | 85.23306 |
| | | | | | | | | | | | | | | |
| PD18-12-921 | 5.84 | 0.2 | 0.1417 | 0.0043 | 0.58681 | 1951 | 29 | 854 | 24 | 3469 | 49 | 0.418 | 2.392 | 24.61805 |
| PD18-12-922 | 8.04 | 0.28 | 0.3477 | 0.012 | 0.5348 | 2234 | 37 | 1923 | 62 | 2537 | 29 | 1.126 | 0.888 | 75.79819 |
| PD18-12-923 | 11.86 | 1.3 | 0.476 | 0.013 | 0.40957 | 2584 | 76 | 2509 | 54 | 2630 | 100 | 0.757 | 1.321 | 95.39924 |
| PD18-12-924 | 12.69 | 0.25 | 0.504 | 0.0082 | 0.33494 | 2655 | 19 | 2630 | 35 | 2680 | 32 | 1.134 | 0.882 | 98.13433 |
| PD18-12-925 | 10.59 | 0.28 | 0.4454 | 0.01 | 0.54969 | 2485 | 24 | 2374 | 46 | 2576 | 30 | 0.76 | 1.316 | 92.15839 |
| PD18-12-926 | 9.67 | 0.2 | 0.4068 | 0.0073 | 0.48852 | 2402 | 19 | 2205 | 33 | 2568 | 35 | 0.7062 | 1.416 | 85.86449 |
| PD18-12-928 | 5.29 | 0.23 | 0.2144 | 0.0097 | 0.82618 | 1864 | 35 | 1252 | 51 | 2644 | 30 | 0.669 | 1.495 | 47.3525 |
| PD18-12-929 | 7.96 | 0.17 | 0.3251 | 0.0066 | 0.5622 | 2224 | 19 | 1813 | 32 | 2626 | 32 | 0.853 | 1.172 | 69.04037 |
| PD18-12-930 | 12.35 | 0.37 | 0.5017 | 0.011 | 0.70606 | 2625 | 28 | 2619 | 45 | 2626 | 45 | 1.218 | 0.821 | 99.73343 |
| PD18-12-931 | 3.698 | 0.099 | 0.1424 | 0.0037 | 0.78118 | 1574 | 22 | 858 | 21 | 2730 | 25 | 0.771 | 1.297 | 31.42857 |
| PD18-12-932 | 5.35 | 0.32 | 0.209 | 0.013 | 0.65588 | 1873 | 43 | 1223 | 66 | 2708 | 32 | 1.084 | 0.923 | 45.16248 |
| PD18-12-933 | 5.51 | 0.25 | 0.2062 | 0.0087 | 0.85525 | 1900 | 36 | 1208 | 46 | 2758 | 29 | 0.472 | 2.119 | 43.79985 |
| PD18-12-934 | 10.87 | 0.32 | 0.4695 | 0.011 | 0.41256 | 2507 | 28 | 2479 | 47 | 2528 | 45 | 1.163 | 0.860 | 98.06171 |
| PD18-12-935 | 5.08 | 0.2 | 0.1975 | 0.0079 | 0.55766 | 1831 | 39 | 1161 | 44 | 2714 | 30 | 0.366 | 2.732 | 42.77819 |
| PD18-12-936 | 6.37 | 0.2 | 0.2144 | 0.0067 | 0.72313 | 2027 | 30 | 1252 | 36 | 2951 | 26 | 0.615 | 1.626 | 42.4263 |
| PD18-12-944 | 6.7 | 0.37 | 0.266 | 0.015 | 0.65554 | 2069 | 65 | 1517 | 81 | 2667 | 28 | 0.608 | 1.645 | 56.88039 |
| PD18-12-945 | 10.54 | 0.27 | 0.4149 | 0.0096 | 0.76235 | 2479 | 24 | 2235 | 44 | 2688 | 36 | 0.525 | 1.905 | 83.14732 |
| PD18-12-946 | 4.3 | 0.12 | 0.1691 | 0.005 | 0.65904 | 1689 | 24 | 1011 | 28 | 2691 | 39 | 0.569 | 1.757 | 37.56968 |
| PD18-12-947 | 2.034 | 0.17 | 0.0641 | 0.0055 | 0.79838 | 1126 | 47 | 400.4 | 33 | 3044 | 23 | 0.321 | 3.115 | 13.15375 |
| PD18-12-948 | 3.806 | 0.065 | 0.1378 | 0.0023 | 0.64956 | 1593 | 14 | 832 | 13 | 2832 | 28 | 0.728 | 1.374 | 29.37853 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-12-949 | 0.644 | 0.017 | 0.01683 | 0.00043 | 0.71314 | 504 | 10 | 107.6 | 2.7 | 3342 | 32 | 0.2078 | 4.812 | 3.219629 |
| PD18-12-950 | 1.858 | 0.14 | 0.0654 | 0.0058 | 0.88202 | 1064 | 43 | 408 | 34 | 2869 | 26 | 0.2331 | 4.290 | 14.22098 |
| PD18-12-951 | 7.3 | 0.17 | 0.2847 | 0.007 | 0.77719 | 2146 | 21 | 1613 | 35 | 2701 | 25 | 0.941 | 1.063 | 59.71862 |
| PD18-12-952 | 11.61 | 0.48 | 0.3083 | 0.013 | 0.81806 | 2572 | 36 | 1731 | 64 | 3321 | 25 | 0.856 | 1.168 | 52.12285 |
| PD18-12-953 | 9.16 | 0.29 | 0.379 | 0.011 | 0.52131 | 2348 | 31 | 2067 | 51 | 2599 | 40 | 0.509 | 1.965 | 79.53059 |
| PD18-12-954 | 3.02 | 0.12 | 0.1007 | 0.0041 | 0.78755 | 1411 | 34 | 618 | 24 | 2966 | 25 | 0.332 | 3.012 | 20.83614 |
| PD18-12-955 | 2.918 | 0.082 | 0.1047 | 0.0032 | 0.87622 | 1386 | 20 | 642 | 18 | 2847 | 25 | 0.3376 | 2.962 | 22.55005 |
| PD18-12-956 | 2.061 | 0.1 | 0.0696 | 0.0038 | 0.73458 | 1134 | 37 | 434 | 23 | 2942 | 31 | 0.2104 | 4.753 | 14.75187 |
| PD18-12-957 | 5.14 | 0.15 | 0.2028 | 0.0065 | 0.63706 | 1842 | 29 | 1190 | 36 | 2674 | 26 | 0.71 | 1.408 | 44.50262 |
| PD18-12-958 | 10.24 | 0.53 | 0.439 | 0.013 | 0.47273 | 2453 | 41 | 2344 | 59 | 2524 | 64 | 0.6 | 1.667 | 92.86846 |
| PD18-12-959 | 6.72 | 0.27 | 0.2815 | 0.012 | 0.7721 | 2073 | 43 | 1598 | 61 | 2577 | 28 | 1.956 | 0.511 | 62.01009 |
| PD18-12-960 | 7.2 | 0.3 | 0.296 | 0.013 | 0.73903 | 2132 | 44 | 1668 | 65 | 2609 | 34 | 1.293 | 0.773 | 63.93254 |
| PD18-12-968 | 6.56 | 0.18 | 0.2565 | 0.007 | 0.58238 | 2051 | 26 | 1471 | 36 | 2709 | 28 | 0.611 | 1.637 | 54.30048 |
| PD18-12-969 | 4.18 | 0.14 | 0.162 | 0.006 | 0.77204 | 1668 | 31 | 968 | 34 | 2714 | 30 | 1.094 | 0.914 | 35.66691 |
| PD18-12-970 | 10.38 | 0.22 | 0.4493 | 0.0086 | 0.57203 | 2467 | 19 | 2391 | 38 | 2527 | 31 | 1.127 | 0.887 | 94.61812 |
| PD18-12-971 | 10.51 | 0.27 | 0.4286 | 0.0088 | 0.58865 | 2478 | 26 | 2298 | 40 | 2627 | 35 | 0.591 | 1.692 | 87.47621 |
| PD18-12-972 | 10.88 | 0.23 | 0.4558 | 0.009 | 0.44718 | 2514 | 19 | 2419 | 40 | 2590 | 36 | 0.732 | 1.366 | 93.39768 |
| PD18-12-973 | 4.259 | 0.12 | 0.1574 | 0.0045 | 0.68284 | 1684 | 22 | 942 | 25 | 2794 | 26 | 0.741 | 1.350 | 33.7151 |
| PD18-12-974 | 3.4 | 0.22 | 0.11 | 0.0074 | 0.86148 | 1503 | 52 | 673 | 43 | 3009 | 24 | 0.432 | 2.315 | 22.36623 |
| PD18-12-975 | 5.862 | 0.16 | 0.22 | 0.0058 | 0.43794 | 1955 | 21 | 1282 | 30 | 2778 | 24 | 0.564 | 1.773 | 46.14831 |
| PD18-12-976 | 5.8 | 1.3 | 0.1663 | 0.037 | 0.84231 | 1945 | 110 | 991 | 180 | 3206 | 25 | 1.131 | 0.884 | 30.91079 |
| PD18-12-977 | 5.448 | 0.1 | 0.2249 | 0.0039 | 0.62535 | 1891 | 16 | 1307 | 20 | 2616 | 25 | 1.275 | 0.784 | 49.96177 |
| PD18-12-978 | 10.55 | 0.19 | 0.4506 | 0.008 | 0.66689 | 2483 | 17 | 2397 | 36 | 2555 | 31 | 0.898 | 1.114 | 93.81605 |
| PD18-12-979 | 11.64 | 0.53 | 0.461 | 0.02 | 0.48852 | 2572 | 52 | 2443 | 95 | 2669 | 35 | 1.148 | 0.871 | 91.53241 |
| PD18-12-980 | 7.12 | 1.9 | 0.27 | 0.027 | 0.92085 | 2113 | 120 | 1536 | 130 | 2741 | 99 | 0.776 | 1.289 | 56.03794 |
| PD18-12-981 | 9 | 0.26 | 0.3649 | 0.0086 | 0.6584 | 2332 | 28 | 2003 | 41 | 2634 | 43 | 0.397 | 2.519 | 76.04404 |
| PD18-12-982 | 10.9 | 0.45 | 0.428 | 0.018 | 0.87357 | 2511 | 46 | 2294 | 88 | 2685 | 25 | 1.1 | 0.909 | 85.43762 |
| PD18-12-983 | 11.64 | 0.25 | 0.4886 | 0.01 | 0.7106 | 2573 | 20 | 2562 | 45 | 2581 | 31 | 1.047 | 0.955 | 99.26385 |
| PD18-12-984 | 9.4 | 0.19 | 0.3992 | 0.0084 | 0.61002 | 2376 | 19 | 2164 | 39 | 2558 | 30 | 0.7333 | 1.364 | 84.59734 |
| PD18-12-992 | 3.2 | 0.16 | 0.1248 | 0.0064 | 0.9085 | 1454 | 46 | 758 | 38 | 2711 | 26 | 0.596 | 1.678 | 27.96016 |
| PD18-12-993 | 3.788 | 0.15 | 0.2455 | 0.0096 | 0.81458 | 1588 | 37 | 1415 | 51 | 1816 | 25 | 1.85 | 0.541 | 77.9185 |
| PD18-12-994 | 0.836 | 0.068 | 0.02279 | 0.0028 | 0.84934 | 616 | 32 | 145.2 | 18 | 3271 | 45 | 0.2446 | 4.088 | 4.439009 |
| PD18-12-995 | 6.13 | 0.36 | 0.2321 | 0.014 | 0.71455 | 1993 | 70 | 1344 | 77 | 2748 | 26 | 1.157 | 0.864 | 48.9083 |
| PD18-12-996 | 26.11 | 0.5 | 0.681 | 0.012 | 0.5662 | 3348 | 19 | 3351 | 46 | 3350 | 28 | 2.881 | 0.347 | 100.0299 |
| PD18-12-997 | 9 | 0.2 | 0.2554 | 0.005 | 0.77742 | 2337 | 21 | 1466 | 26 | 3222 | 24 | 0.829 | 1.206 | 45.49969 |
| PD18-12-998 | 3.593 | 0.16 | 0.1305 | 0.0062 | 0.93135 | 1546 | 37 | 790 | 35 | 2822 | 24 | 0.4136 | 2.418 | 27.99433 |
| PD18-12-999 | 6.63 | 0.15 | 0.2731 | 0.0057 | 0.71362 | 2064 | 20 | 1555 | 29 | 2616 | 29 | 0.595 | 1.681 | 59.4419 |
| PD18-12-1000 | 8.31 | 0.17 | 0.3234 | 0.0062 | 0.62603 | 2264 | 19 | 1806 | 31 | 2712 | 26 | 0.674 | 1.484 | 66.59292 |
| PD18-12-1001 | 10.62 | 0.31 | 0.4655 | 0.0098 | 0.29746 | 2485 | 27 | 2462 | 43 | 2502 | 50 | 0.76 | 1.316 | 98.40128 |
| PD18-12-1002 | 2.83 | 0.37 | 0.068 | 0.0071 | 0.62163 | 1363 | 70 | 423.9 | 41 | 3483 | 34 | 0.2306 | 4.337 | 12.17054 |
| PD18-12-1003 | 10.87 | 0.31 | 0.44 | 0.011 | 0.75804 | 2512 | 25 | 2346 | 51 | 2647 | 34 | 0.86 | 1.163 | 88.62864 |
| PD18-12-1004 | 0.529 | 0.021 | 0.01111 | 0.00069 | 0.61715 | 431 | 13 | 71.2 | 4.4 | 3679 | 39 | 0.2504 | 3.994 | 1.935309 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-12-1005 | 7.31 | 0.15 | 0.2995 | 0.0055 | 0.57466 | 2148 | 18 | 1688 | 27 | 2621 | 31 | 0.859 | 1.164 | 64.4029 |
| PD18-12-1006 | 4.73 | 0.12 | 0.1925 | 0.0048 | 0.63049 | 1771 | 21 | 1134 | 26 | 2642 | 28 | 0.864 | 1.157 | 42.92203 |
| PD18-12-1007 | 7.13 | 0.19 | 0.2049 | 0.0059 | 0.75952 | 2126 | 24 | 1201 | 31 | 3198 | 25 | 0.3247 | 3.080 | 37.55472 |
| PD18-12-1008 | 8.82 | 0.22 | 0.357 | 0.0097 | 0.71142 | 2317 | 24 | 1967 | 47 | 2646 | 28 | 1.069 | 0.935 | 74.33862 |
| PD18-12-1016 | 5.67 | 0.16 | 0.2321 | 0.0073 | 0.85711 | 1924 | 30 | 1345 | 39 | 2617 | 28 | 0.705 | 1.418 | 51.39473 |
| PD18-12-1017 | 11.72 | 0.57 | 0.478 | 0.012 | 0.80359 | 2578 | 41 | 2515 | 51 | 2618 | 47 | 2.176 | 0.460 | 96.0657 |
| PD18-12-1018 | 2.664 | 0.16 | 0.0826 | 0.0055 | 0.72903 | 1317 | 57 | 511 | 33 | 3081 | 40 | 0.2203 | 4.539 | 16.58552 |
| PD18-12-1019 | 0.4336 | 0.043 | 0.00766 | 0.0015 | 0.61876 | 365.5 | 27 | 49.2 | 9.6 | 3947 | 72 | 0.2282 | 4.382 | 1.246516 |
| PD18-12-1020 | 6.7 | 0.24 | 0.241 | 0.0086 | 0.9164 | 2064 | 32 | 1389 | 44 | 2836 | 29 | 0.68 | 1.471 | 48.97743 |
| PD18-12-1021 | 0.47 | 0.016 | 0.00949 | 0.0004 | 0.52564 | 391 | 11 | 60.9 | 2.6 | 3747 | 34 | 0.3265 | 3.063 | 1.6253 |
| PD18-12-1022 | 7.73 | 0.44 | 0.33 | 0.02 | 0.66434 | 2199 | 71 | 1837 | 100 | 2551 | 32 | 0.718 | 1.393 | 72.01098 |
| PD18-12-1023 | 6.84 | 0.29 | 0.2909 | 0.013 | 0.57979 | 2089 | 33 | 1645 | 64 | 2575 | 40 | 1.039 | 0.962 | 63.8835 |
| PD18-12-1024 | 1.045 | 0.11 | 0.0355 | 0.0041 | 0.82827 | 726 | 44 | 225.1 | 25 | 2916 | 30 | 0.61 | 1.639 | 7.719479 |
| PD18-12-1025 | 4.84 | 0.18 | 0.1902 | 0.0076 | 0.93108 | 1789 | 31 | 1121 | 41 | 2695 | 24 | 0.572 | 1.748 | 41.59555 |
| PD18-12-1026 | 11.16 | 0.31 | 0.477 | 0.012 | 0.43179 | 2532 | 26 | 2511 | 52 | 2548 | 47 | 0.769 | 1.300 | 98.54788 |
| PD18-12-1027 | 4.437 | 0.24 | 0.1368 | 0.007 | 0.56425 | 1718 | 40 | 827 | 39 | 3075 | 26 | 0.3106 | 3.220 | 26.89431 |
| PD18-12-1028 | 3.68 | 0.11 | 0.1324 | 0.0043 | 0.76379 | 1566 | 26 | 801 | 25 | 2830 | 27 | 0.614 | 1.629 | 28.30389 |
| PD18-12-1029 | 6.46 | 0.14 | 0.2682 | 0.0067 | 0.53186 | 2039 | 18 | 1531 | 33 | 2601 | 28 | 0.768 | 1.302 | 58.86198 |
| PD18-12-1030 | 1.133 | 0.23 | 0.03492 | 0.0099 | 0.6339 | 769 | 75 | 221.3 | 59 | 3086 | 42 | 0.21 | 4.762 | 7.171095 |
| PD18-12-1031 | 11.22 | 0.33 | 0.443 | 0.012 | 0.46926 | 2538 | 29 | 2360 | 56 | 2688 | 39 | 1.071 | 0.934 | 87.79762 |
| PD18-12-1032 | 16.71 | 0.34 | 0.5379 | 0.0095 | 0.67517 | 2919 | 21 | 2773 | 40 | 3014 | 26 | 0.556 | 1.799 | 92.00398 |
| PD18-12-1040 | 4.24 | 0.12 | 0.1604 | 0.0045 | 0.78908 | 1680 | 24 | 959 | 25 | 2753 | 25 | 0.481 | 2.079 | 34.83473 |
| PD18-12-1041 | 2.158 | 0.1 | 0.1245 | 0.007 | 0.86213 | 1165 | 38 | 756 | 41 | 2039 | 42 | 1.381 | 0.724 | 37.077 |
| PD18-12-1042 | 1.204 | 0.072 | 0.03441 | 0.0026 | 0.84498 | 802 | 29 | 218 | 16 | 3198 | 31 | 0.2296 | 4.355 | 6.81676 |
| PD18-12-1043 | 8.9 | 0.22 | 0.3841 | 0.009 | 0.5621 | 2329 | 22 | 2094 | 41 | 2538 | 31 | 0.574 | 1.742 | 82.50591 |
| PD18-12-1044 | 16.03 | 0.38 | 0.533 | 0.012 | 0.4967 | 2875 | 22 | 2752 | 50 | 2954 | 39 | 0.646 | 1.548 | 93.16181 |
| PD18-12-1045 | 0.518 | 0.029 | 0.01274 | 0.0013 | 0.78095 | 426 | 18 | 81.6 | 8.2 | 3444 | 55 | 0.392 | 2.551 | 2.369338 |
| PD18-12-1046 | 5.736 | 0.11 | 0.2365 | 0.0044 | 0.7554 | 1935 | 17 | 1368 | 23 | 2616 | 27 | 0.911 | 1.098 | 52.29358 |
| PD18-12-1047 | 6.68 | 0.13 | 0.2721 | 0.0043 | 0.68877 | 2069 | 18 | 1551 | 24 | 2620 | 26 | 0.714 | 1.401 | 59.19847 |
| PD18-12-1048 | 10.65 | 0.2 | 0.4686 | 0.0093 | 0.27266 | 2492 | 18 | 2477 | 43 | 2498 | 31 | 1.935 | 0.517 | 99.15933 |
| PD18-12-1049 | 6.49 | 0.15 | 0.2634 | 0.0068 | 0.58637 | 2042 | 23 | 1506 | 35 | 2632 | 34 | 0.608 | 1.645 | 57.21884 |
| PD18-12-1050 | 4.59 | 0.61 | 0.115 | 0.0063 | 0.13087 | 1747 | 73 | 701 | 36 | 3425 | 81 | 0.2163 | 4.623 | 20.46715 |
| PD18-12-1051 | 8.25 | 0.16 | 0.3409 | 0.0059 | 0.71129 | 2257 | 18 | 1890 | 29 | 2605 | 27 | 0.72 | 1.389 | 72.55278 |
| PD18-12-1052 | 5.553 | 0.11 | 0.22 | 0.0045 | 0.70069 | 1907 | 18 | 1282 | 24 | 2674 | 26 | 0.867 | 1.153 | 47.94316 |
| PD18-12-1053 | 5.21 | 0.17 | 0.1972 | 0.0071 | 0.86056 | 1852 | 31 | 1160 | 37 | 2753 | 26 | 0.449 | 2.227 | 42.13585 |
| PD18-12-1054 | 4.92 | 0.16 | 0.1833 | 0.0051 | 0.73873 | 1804 | 30 | 1084 | 28 | 2769 | 25 | 0.659 | 1.517 | 39.14771 |
| PD18-12-1055 | 1.121 | 0.047 | 0.0373 | 0.0018 | 0.86371 | 768 | 23 | 235.8 | 11 | 2961 | 37 | 0.287 | 3.484 | 7.963526 |
| PD18-12-1063 | 7.58 | 0.34 | 0.3055 | 0.015 | 0.75183 | 2179 | 48 | 1717 | 76 | 2641 | 33 | 1.463 | 0.684 | 65.01325 |
| PD18-12-1064 | 9.74 | 0.43 | 0.425 | 0.02 | 0.62924 | 2408 | 49 | 2282 | 96 | 2520 | 37 | 0.545 | 1.835 | 90.55556 |
| PD18-12-1065 | 4.955 | 0.17 | 0.1989 | 0.0067 | 0.44 | 1811 | 26 | 1169 | 35 | 2657 | 29 | 0.486 | 2.058 | 43.99699 |
| PD18-12-1066 | 4.85 | 0.1 | 0.3162 | 0.007 | 0.77624 | 1792 | 18 | 1770 | 35 | 1811 | 25 | 2.76 | 0.362 | 97.73606 |
| PD18-12-1067 | 8.52 | 0.32 | 0.2493 | 0.0049 | 0.53772 | 2286 | 40 | 1434 | 26 | 3169 | 57 | 0.3189 | 3.136 | 45.25087 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-12-1068 | 3.787 | 0.15 | 0.1446 | 0.0062 | 0.81826 | 1589 | 36 | 870 | 36 | 2743 | 27 | 0.3269 | 3.059 | 31.7171 |
| PD18-12-1069 | 11.28 | 0.48 | 0.33 | 0.013 | 0.58522 | 2545 | 58 | 1838 | 67 | 3150 | 27 | 1.082 | 0.924 | 58.34921 |
| PD18-12-1070 | 11.3 | 0.56 | 0.45 | 0.011 | 0.43191 | 2542 | 40 | 2395 | 47 | 2663 | 56 | 1.09 | 0.917 | 89.93616 |
| PD18-12-1071 | 4.09 | 0.27 | 0.1587 | 0.011 | 0.76942 | 1659 | 64 | 949 | 65 | 2698 | 34 | 0.482 | 2.075 | 35.1742 |
| | | | | | | | | | | | | | | |
| PD18-13-1072 | 3.49 | 0.13 | 0.1224 | 0.0048 | 0.78682 | 1523 | 29 | 744 | 27 | 2877 | 27 | 0.414 | 2.415 | 25.86027 |
| PD18-13-1073 | 7.12 | 0.23 | 0.2289 | 0.0074 | 0.8493 | 2125 | 33 | 1328 | 40 | 3021 | 24 | 0.578 | 1.730 | 43.95895 |
| PD18-13-1074 | 6.86 | 0.25 | 0.2594 | 0.012 | 0.62548 | 2091 | 34 | 1486 | 61 | 2744 | 34 | 0.378 | 2.646 | 54.15452 |
| PD18-13-1075 | 8.33 | 0.54 | 0.33 | 0.024 | 0.86314 | 2265 | 82 | 1836 | 120 | 2670 | 41 | 0.492 | 2.033 | 68.76404 |
| PD18-13-1076 | 3.887 | 0.34 | 0.1421 | 0.012 | 0.67031 | 1610 | 54 | 857 | 64 | 2792 | 27 | 0.5905 | 1.693 | 30.69484 |
| PD18-13-1077 | 3.89 | 0.1 | 0.1342 | 0.0031 | 0.61974 | 1609 | 22 | 811 | 18 | 2890 | 29 | 0.404 | 2.475 | 28.06228 |
| PD18-13-1078 | 0.595 | 0.015 | 0.01032 | 0.00053 | 0.48527 | 473.6 | 9 | 66.2 | 3.4 | 3975 | 43 | 0.5057 | 1.977 | 1.665409 |
| PD18-13-1079 | 0.924 | 0.031 | 0.02032 | 0.00099 | 0.55265 | 664.3 | 15 | 129.7 | 6.2 | 3617 | 32 | 0.3001 | 3.332 | 3.585845 |
| PD18-13-1087 | 5.81 | 0.17 | 0.2222 | 0.0071 | 0.78113 | 1947 | 28 | 1293 | 38 | 2730 | 27 | 0.58 | 1.724 | 47.36264 |
| PD18-13-1088 | 2.654 | 0.089 | 0.0863 | 0.0037 | 0.79737 | 1315 | 22 | 534 | 22 | 3003 | 26 | 0.2793 | 3.580 | 17.78222 |
| PD18-13-1089 | 2.824 | 0.11 | 0.0961 | 0.0044 | 0.7767 | 1361 | 35 | 592 | 26 | 2905 | 30 | 0.2961 | 3.377 | 20.37866 |
| PD18-13-1090 | 9.64 | 0.23 | 0.2673 | 0.006 | 0.81884 | 2402 | 22 | 1526 | 30 | 3256 | 25 | 1.185 | 0.844 | 46.86732 |
| PD18-13-1091 | 1.854 | 0.17 | 0.0598 | 0.0068 | 0.86429 | 1063 | 50 | 374 | 40 | 3011 | 37 | 0.376 | 2.660 | 12.42112 |
| PD18-13-1092 | 17.93 | 0.85 | 0.5121 | 0.018 | 0.7634 | 2985 | 35 | 2664 | 71 | 3200 | 23 | 3.88 | 0.258 | 83.25 |
| PD18-13-1093 | 6.29 | 0.25 | 0.2413 | 0.0099 | 0.70372 | 2012 | 38 | 1392 | 53 | 2722 | 30 | 1.23 | 0.813 | 51.13887 |
| PD18-13-1094 | 5.7 | 0.25 | 0.1895 | 0.0093 | 0.77892 | 1928 | 44 | 1118 | 52 | 2955 | 37 | 1.005 | 0.995 | 37.83418 |
| PD18-13-1095 | 6.18 | 0.53 | 0.1924 | 0.015 | 0.73479 | 1999 | 59 | 1134 | 76 | 3049 | 24 | 0.46 | 2.174 | 37.19252 |
| PD18-13-1096 | 9.06 | 0.37 | 0.3453 | 0.01 | 0.60835 | 2340 | 41 | 1911 | 49 | 2739 | 46 | 0.983 | 1.017 | 69.76999 |
| PD18-13-1097 | 6.27 | 0.3 | 0.1903 | 0.0093 | 0.79632 | 2012 | 57 | 1122 | 53 | 3108 | 40 | 0.505 | 1.980 | 36.10039 |
| PD18-13-1098 | 5.07 | 0.19 | 0.1744 | 0.0069 | 0.44179 | 1830 | 32 | 1036 | 38 | 2909 | 37 | 0.579 | 1.727 | 35.61361 |
| PD18-13-1099 | 7.11 | 0.16 | 0.2858 | 0.0061 | 0.72194 | 2123 | 22 | 1620 | 31 | 2655 | 27 | 0.477 | 2.096 | 61.01695 |
| PD18-13-1100 | 7.6 | 0.4 | 0.321 | 0.019 | 0.77194 | 2183 | 67 | 1795 | 98 | 2575 | 34 | 1.029 | 0.972 | 69.70874 |
| PD18-13-1101 | 2.335 | 0.11 | 0.0824 | 0.0035 | 0.90366 | 1222 | 27 | 510 | 21 | 2876 | 25 | 0.44 | 2.273 | 17.73296 |
| PD18-13-1102 | 6.99 | 0.32 | 0.2789 | 0.015 | 0.69412 | 2107 | 45 | 1584 | 75 | 2648 | 39 | 0.529 | 1.890 | 59.81873 |
| PD18-13-1103 | 5.54 | 0.32 | 0.2184 | 0.013 | 0.82315 | 1905 | 66 | 1273 | 75 | 2680 | 29 | 0.973 | 1.028 | 47.5 |
| PD18-13-1111 | 3.29 | 0.26 | 0.1117 | 0.0099 | 0.83008 | 1485 | 92 | 682 | 60 | 2953 | 100 | 0.3402 | 2.939 | 23.09516 |
| PD18-13-1112 | 6.66 | 0.28 | 0.2803 | 0.013 | 0.70023 | 2063 | 45 | 1591 | 66 | 2569 | 36 | 0.632 | 1.582 | 61.93071 |
| PD18-13-1113 | 5.361 | 0.12 | 0.212 | 0.0049 | 0.59638 | 1877 | 19 | 1239 | 27 | 2677 | 26 | 0.74 | 1.351 | 46.28315 |
| PD18-13-1114 | 7.84 | 0.23 | 0.2286 | 0.0068 | 0.81905 | 2211 | 28 | 1327 | 36 | 3163 | 24 | 0.549 | 1.821 | 41.95384 |
| PD18-13-1115 | 2.619 | 0.36 | 0.0672 | 0.011 | 0.65828 | 1305 | 71 | 419 | 62 | 3376 | 30 | 0.263 | 3.802 | 12.41114 |
| PD18-13-1116 | 7.65 | 0.31 | 0.2635 | 0.011 | 0.86584 | 2188 | 45 | 1507 | 60 | 2907 | 27 | 1.1 | 0.909 | 51.84039 |
| PD18-13-1117 | 0.648 | 0.021 | 0.0115 | 0.00066 | 0.40784 | 507.3 | 13 | 73.7 | 4.2 | 3942 | 46 | 0.3427 | 2.918 | 1.869609 |
| PD18-13-1118 | 6.37 | 0.13 | 0.248 | 0.0046 | 0.7582 | 2026 | 17 | 1428 | 24 | 2703 | 25 | 0.577 | 1.733 | 52.83019 |
| PD18-13-1119 | 4.65 | 0.21 | 0.1808 | 0.0094 | 0.74851 | 1756 | 32 | 1071 | 49 | 2710 | 28 | 1.089 | 0.918 | 39.5203 |
| PD18-13-1120 | 8.5 | 0.26 | 0.2624 | 0.0081 | 0.82516 | 2284 | 30 | 1501 | 42 | 3077 | 25 | 1.429 | 0.700 | 48.78128 |
| PD18-13-1121 | 7.54 | 0.31 | 0.2386 | 0.0094 | 0.71222 | 2176 | 45 | 1379 | 51 | 3046 | 31 | 0.622 | 1.608 | 45.27249 |
| PD18-13-1122 | 5.42 | 0.23 | 0.2096 | 0.0095 | 0.74143 | 1888 | 40 | 1226 | 52 | 2723 | 28 | 0.789 | 1.267 | 45.02387 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-13-1123 | 1.284 | 0.24 | 0.0359 | 0.0087 | 0.69194 | 837 | 69 | 227 | 52 | 3265 | 44 | 0.1991 | 5.023 | 6.952527 |
| PD18-13-1124 | 22.24 | 0.46 | 0.603 | 0.013 | 0.82066 | 3198 | 20 | 3039 | 51 | 3293 | 24 | 1.995 | 0.501 | 92.28667 |
| PD18-13-1125 | 4.16 | 0.2 | 0.1606 | 0.0079 | 0.56052 | 1661 | 35 | 959 | 43 | 2721 | 40 | 0.53 | 1.887 | 35.2444 |
| PD18-13-1126 | 5.18 | 0.15 | 0.2142 | 0.0068 | 0.57273 | 1846 | 26 | 1251 | 37 | 2604 | 34 | 0.4171 | 2.398 | 48.04147 |
| PD18-13-1127 | 6.23 | 0.15 | 0.2486 | 0.0055 | 0.73284 | 2006 | 22 | 1431 | 28 | 2665 | 30 | 1.029 | 0.972 | 53.69606 |
| PD18-13-1135 | 9.15 | 0.27 | 0.2663 | 0.0069 | 0.69664 | 2351 | 31 | 1522 | 36 | 3179 | 25 | 1.251 | 0.799 | 47.87669 |
| PD18-13-1136 | 4.083 | 0.073 | 0.1531 | 0.0027 | 0.77353 | 1650 | 15 | 918 | 15 | 2775 | 23 | 0.62 | 1.613 | 33.08108 |
| PD18-13-1137 | 7.48 | 0.35 | 0.24 | 0.013 | 0.76165 | 2166 | 55 | 1383 | 70 | 2995 | 88 | 0.764 | 1.309 | 46.17696 |
| PD18-13-1138 | 4.789 | 0.11 | 0.1888 | 0.0045 | 0.68283 | 1781 | 19 | 1114 | 24 | 2688 | 29 | 0.558 | 1.792 | 41.44345 |
| PD18-13-1139 | 16.77 | 0.69 | 0.4458 | 0.016 | 0.67265 | 2920 | 44 | 2376 | 73 | 3321 | 28 | 1.016 | 0.984 | 71.54472 |
| PD18-13-1140 | 4.756 | 0.13 | 0.1887 | 0.0055 | 0.73977 | 1776 | 26 | 1114 | 30 | 2675 | 27 | 0.882 | 1.134 | 41.64486 |
| PD18-13-1141 | 7.11 | 0.41 | 0.275 | 0.012 | 0.48482 | 2122 | 55 | 1563 | 59 | 2707 | 93 | 0.546 | 1.832 | 57.73919 |
| PD18-13-1142 | 0.996 | 0.087 | 0.0229 | 0.003 | 0.66283 | 700 | 39 | 145.8 | 19 | 3545 | 48 | 0.2596 | 3.852 | 4.112835 |
| PD18-13-1143 | 6.08 | 0.15 | 0.2319 | 0.0057 | 0.73854 | 1986 | 25 | 1344 | 30 | 2724 | 27 | 0.597 | 1.675 | 49.33921 |
| PD18-13-1144 | 6.02 | 0.23 | 0.2374 | 0.009 | 0.78024 | 1975 | 38 | 1372 | 48 | 2674 | 31 | 0.812 | 1.232 | 51.3089 |
| PD18-13-1145 | 11.87 | 0.3 | 0.456 | 0.01 | 0.38566 | 2591 | 25 | 2420 | 47 | 2728 | 38 | 1.728 | 0.579 | 88.70968 |
| PD18-13-1146 | 6.8 | 0.14 | 0.272 | 0.0053 | 0.64794 | 2084 | 18 | 1550 | 27 | 2662 | 28 | 0.595 | 1.681 | 58.2269 |
| PD18-13-1147 | 6.09 | 0.2 | 0.2378 | 0.0075 | 0.52862 | 1986 | 33 | 1375 | 40 | 2689 | 33 | 0.872 | 1.147 | 51.13425 |
| PD18-13-1148 | 2.473 | 0.13 | 0.0848 | 0.005 | 0.84444 | 1263 | 37 | 525 | 30 | 2915 | 23 | 0.3407 | 2.935 | 18.01029 |
| PD18-13-1149 | 9.22 | 0.18 | 0.3088 | 0.0052 | 0.33103 | 2359 | 19 | 1734 | 26 | 2950 | 29 | 0.83 | 1.205 | 58.77966 |
| PD18-13-1150 | 9.41 | 0.31 | 0.389 | 0.013 | 0.83762 | 2375 | 33 | 2115 | 62 | 2596 | 30 | 0.619 | 1.616 | 81.47149 |
| PD18-13-1151 | 0.45 | 0.018 | 0.00735 | 0.00058 | 0.74996 | 377.1 | 12 | 47.2 | 3.7 | 4090 | 55 | 0.406 | 2.463 | 1.154034 |
| PD18-13-1152 | 5.49 | 0.28 | 0.2186 | 0.011 | 0.75187 | 1899 | 54 | 1274 | 61 | 2664 | 40 | 0.39 | 2.564 | 47.82282 |
| PD18-13-1153 | 7.47 | 0.22 | 0.3113 | 0.0091 | 0.86826 | 2172 | 28 | 1745 | 45 | 2591 | 26 | 0.798 | 1.253 | 67.34851 |
| PD18-13-1161 | 2.576 | 0.096 | 0.0856 | 0.0038 | 0.76369 | 1293 | 26 | 529.6 | 22 | 2965 | 26 | 0.3619 | 2.763 | 17.86172 |
| PD18-13-1162 | 7.19 | 0.34 | 0.288 | 0.015 | 0.78583 | 2142 | 55 | 1629 | 78 | 2648 | 33 | 2.58 | 0.388 | 61.51813 |
| PD18-13-1163 | 3.752 | 0.19 | 0.1422 | 0.008 | 0.75568 | 1580 | 51 | 857 | 47 | 2755 | 32 | 0.499 | 2.004 | 31.10708 |
| PD18-13-1164 | 2.636 | 0.15 | 0.0854 | 0.0057 | 0.70537 | 1308 | 36 | 528 | 33 | 2971 | 27 | 0.593 | 1.686 | 17.77179 |
| PD18-13-1165 | 4.108 | 0.091 | 0.1527 | 0.0031 | 0.61088 | 1655 | 18 | 916 | 17 | 2782 | 26 | 0.3054 | 3.274 | 32.92595 |
| PD18-13-1166 | 5.687 | 0.2 | 0.2275 | 0.0083 | 0.56599 | 1928 | 34 | 1321 | 45 | 2659 | 28 | 1.077 | 0.929 | 49.68033 |
| PD18-13-1167 | 5.8 | 0.13 | 0.2222 | 0.0057 | 0.44374 | 1945 | 20 | 1293 | 30 | 2734 | 25 | 0.633 | 1.580 | 47.29334 |
| PD18-13-1168 | 4.91 | 0.095 | 0.1762 | 0.0026 | 0.66755 | 1802 | 16 | 1046 | 14 | 2831 | 27 | 0.579 | 1.727 | 36.94807 |
| PD18-13-1169 | 4.176 | 0.34 | 0.1434 | 0.012 | 0.64699 | 1668 | 50 | 864 | 64 | 2913 | 26 | 0.44 | 2.273 | 29.66014 |
| PD18-13-1170 | 2.765 | 0.21 | 0.0792 | 0.0039 | 0.77261 | 1345 | 46 | 491 | 23 | 3183 | 42 | 0.3267 | 3.061 | 15.4257 |
| PD18-13-1172 | 8.53 | 0.28 | 0.269 | 0.0088 | 0.76571 | 2287 | 28 | 1533 | 44 | 3057 | 23 | 1.67 | 0.599 | 50.1472 |
| PD18-13-1173 | 2.488 | 0.25 | 0.0692 | 0.0081 | 0.85609 | 1273 | 66 | 431 | 47 | 3261 | 35 | 0.3293 | 3.037 | 13.2168 |
| PD18-13-1174 | 3.681 | 0.087 | 0.1333 | 0.0027 | 0.458 | 1569 | 19 | 806 | 15 | 2821 | 27 | 1.086 | 0.921 | 28.57143 |
| PD18-13-1175 | 3.141 | 0.19 | 0.1053 | 0.006 | 0.87268 | 1441 | 41 | 645 | 34 | 2952 | 24 | 0.4452 | 2.246 | 21.84959 |
| PD18-13-1176 | 0.646 | 0.028 | 0.01117 | 0.00088 | 0.71812 | 506 | 16 | 71.6 | 5.6 | 4002 | 55 | 0.2713 | 3.686 | 1.789105 |
| PD18-13-1177 | 3.98 | 0.24 | 0.141 | 0.0094 | 0.5809 | 1629 | 67 | 850 | 56 | 2862 | 44 | 0.357 | 2.801 | 29.69951 |
| PD18-13-1185 | 4.316 | 0.098 | 0.1894 | 0.0045 | 0.66354 | 1695 | 21 | 1118 | 25 | 2514 | 30 | 0.462 | 2.165 | 44.47096 |
| PD18-13-1186 | 5.29 | 0.18 | 0.1961 | 0.0073 | 0.85799 | 1864 | 31 | 1153 | 40 | 2777 | 27 | 1.701 | 0.588 | 41.51963 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-13-1187 | 1.426 | 0.14 | 0.05826 | 0.0057 | 0.56675 | 899.5 | 46 | 365 | 33 | 2623 | 25 | 1.136 | 0.880 | 13.91536 |
| PD18-13-1188 | 4.127 | 0.21 | 0.1506 | 0.0086 | 0.26361 | 1659 | 53 | 904 | 50 | 2815 | 34 | 0.475 | 2.105 | 32.11368 |
| PD18-13-1189 | 6.67 | 0.2 | 0.2724 | 0.008 | 0.69965 | 2066 | 29 | 1552 | 42 | 2624 | 30 | 0.747 | 1.339 | 59.14634 |
| PD18-13-1190 | 1.115 | 0.024 | 0.02294 | 0.00068 | 0.53961 | 760.1 | 12 | 146.2 | 4.3 | 3716 | 42 | 0.2421 | 4.131 | 3.934338 |
| PD18-13-1191 | 8.33 | 0.25 | 0.3191 | 0.0084 | 0.72421 | 2264 | 29 | 1784 | 42 | 2724 | 29 | 0.851 | 1.175 | 65.49192 |
| PD18-13-1192 | 7.05 | 0.74 | 0.2368 | 0.024 | 0.78088 | 2115 | 68 | 1369 | 110 | 2949 | 29 | 0.596 | 1.678 | 46.42252 |
| PD18-13-1193 | 11.11 | 0.25 | 0.4798 | 0.0089 | 0.3259 | 2529 | 21 | 2525 | 39 | 2522 | 40 | 1.426 | 0.701 | 100.119 |
| PD18-13-1194 | 9.17 | 0.52 | 0.385 | 0.024 | 0.71196 | 2353 | 72 | 2096 | 120 | 2587 | 34 | 1.215 | 0.823 | 81.02049 |
| PD18-13-1195 | 8.43 | 0.28 | 0.3437 | 0.01 | 0.64718 | 2275 | 33 | 1903 | 51 | 2622 | 35 | 0.396 | 2.525 | 72.57818 |
| PD18-13-1196 | 6.719 | 0.11 | 0.2706 | 0.0047 | 0.54168 | 2074 | 15 | 1543 | 24 | 2648 | 28 | 0.806 | 1.241 | 58.27039 |
| PD18-13-1197 | 5.3 | 0.16 | 0.2153 | 0.0072 | 0.82074 | 1870 | 24 | 1256 | 38 | 2639 | 29 | 0.831 | 1.203 | 47.59379 |
| | | | | | | | | | | | | | | |
| PD18-14-1198 | 17.34 | 0.63 | 0.478 | 0.016 | 0.73252 | 2952 | 38 | 2518 | 71 | 3263 | 24 | 66.4 | 0.015 | 77.16825 |
| PD18-14-1199 | 9.24 | 0.21 | 0.3781 | 0.0084 | 0.61758 | 2364 | 21 | 2066 | 39 | 2621 | 32 | 0.739 | 1.353 | 78.82488 |
| PD18-14-1200 | 10.86 | 0.49 | 0.36 | 0.012 | 0.68347 | 2510 | 45 | 1981 | 61 | 2959 | 63 | 0.851 | 1.175 | 66.94829 |
| PD18-14-1201 | 1.004 | 0.16 | 0.0244 | 0.0072 | 0.75026 | 704 | 60 | 155.6 | 46 | 3461 | 75 | 0.1622 | 6.165 | 4.49581 |
| PD18-14-1209 | 14.31 | 0.5 | 0.5905 | 0.018 | 0.72534 | 2770 | 40 | 2990 | 79 | 2612 | 26 | 1.195 | 0.837 | 114.4717 |
| PD18-14-1210 | 3.013 | 0.41 | 0.1144 | 0.019 | 0.33255 | 1410 | 83 | 698 | 100 | 2737 | 41 | 0.3107 | 3.219 | 25.50237 |
| PD18-14-1211 | 9.52 | 0.27 | 0.274 | 0.0065 | 0.74376 | 2386 | 24 | 1560 | 33 | 3182 | 26 | 0.534 | 1.873 | 49.02577 |
| PD18-14-1212 | 8.49 | 0.33 | 0.2291 | 0.008 | 0.91858 | 2282 | 43 | 1329 | 43 | 3284 | 24 | 0.566 | 1.767 | 40.46894 |
| PD18-14-1213 | 7.51 | 0.45 | 0.329 | 0.02 | 0.83873 | 2173 | 67 | 1833 | 100 | 2516 | 29 | 1.231 | 0.812 | 72.85374 |
| PD18-14-1214 | 4.768 | 0.092 | 0.1945 | 0.003 | 0.78303 | 1778 | 16 | 1145 | 16 | 2621 | 28 | 1.61 | 0.621 | 43.68562 |
| PD18-14-1215 | 4.68 | 0.16 | 0.1885 | 0.0061 | 0.76508 | 1763 | 31 | 1113 | 34 | 2643 | 26 | 0.672 | 1.488 | 42.11124 |
| PD18-14-1216 | 10.82 | 0.24 | 0.4668 | 0.0083 | 0.48934 | 2508 | 19 | 2468 | 37 | 2536 | 33 | 1.167 | 0.857 | 97.31861 |
| PD18-14-1217 | 1.267 | 0.1 | 0.03511 | 0.0035 | 0.75843 | 829 | 46 | 222.4 | 22 | 3266 | 47 | 0.1778 | 5.624 | 6.809553 |
| PD18-14-1218 | 2.607 | 0.24 | 0.0924 | 0.0095 | 0.42937 | 1302 | 51 | 569 | 54 | 2862 | 35 | 0.3163 | 3.162 | 19.8812 |
| PD18-14-1219 | 7.36 | 0.25 | 0.2376 | 0.0076 | 0.44581 | 2155 | 34 | 1374 | 41 | 3013 | 25 | 0.691 | 1.447 | 45.60239 |
| PD18-14-1220 | 4.82 | 0.11 | 0.1942 | 0.0048 | 0.58923 | 1788 | 19 | 1144 | 26 | 2650 | 24 | 0.499 | 2.004 | 43.16981 |
| PD18-14-1221 | 2.859 | 0.12 | 0.1118 | 0.0051 | 0.76403 | 1369 | 28 | 683 | 29 | 2699 | 29 | 1.182 | 0.846 | 25.30567 |
| PD18-14-1222 | 8.01 | 0.27 | 0.3313 | 0.012 | 0.72295 | 2231 | 36 | 1844 | 61 | 2608 | 28 | 1.001 | 0.999 | 70.70552 |
| PD18-14-1223 | 11.23 | 0.23 | 0.4736 | 0.0079 | 0.69525 | 2540 | 19 | 2498 | 35 | 2566 | 35 | 1.133 | 0.883 | 97.34996 |
| PD18-14-1224 | 0.682 | 0.094 | 0.0151 | 0.0039 | 0.84654 | 527 | 44 | 96.6 | 24 | 3602 | 66 | 0.2185 | 4.577 | 2.681843 |
| PD18-14-1225 | 6.3 | 0.36 | 0.2647 | 0.016 | 0.84879 | 2016 | 66 | 1512 | 87 | 2578 | 31 | 1.367 | 0.732 | 58.65012 |
| PD18-14-1233 | 1.436 | 0.059 | 0.0423 | 0.0021 | 0.62371 | 907 | 22 | 267.1 | 13 | 3158 | 30 | 0.204 | 4.902 | 8.457885 |
| PD18-14-1234 | 4.78 | 0.087 | 0.178 | 0.0032 | 0.76601 | 1780 | 15 | 1056 | 18 | 2776 | 27 | 0.747 | 1.339 | 38.04035 |
| PD18-14-1235 | 8.75 | 0.42 | 0.2732 | 0.011 | 0.54862 | 2311 | 39 | 1557 | 52 | 3065 | 27 | 0.798 | 1.253 | 50.79935 |
| PD18-14-1236 | 11.37 | 0.23 | 0.4675 | 0.0073 | 0.22018 | 2552 | 19 | 2472 | 32 | 2608 | 35 | 1.179 | 0.848 | 94.78528 |
| PD18-14-1237 | 13.85 | 0.57 | 0.4024 | 0.014 | 0.63814 | 2743 | 50 | 2179 | 70 | 3181 | 30 | 1.071 | 0.934 | 68.50047 |
| PD18-14-1238 | 12.73 | 0.29 | 0.5116 | 0.0078 | 0.25521 | 2657 | 21 | 2662 | 33 | 2644 | 39 | 1.107 | 0.903 | 100.6808 |
| PD18-14-1239 | 1.437 | 0.2 | 0.0445 | 0.0074 | 0.81652 | 903 | 60 | 280.7 | 44 | 3079 | 33 | 0.283 | 3.534 | 9.116596 |
| PD18-14-1240 | 5.26 | 0.18 | 0.1897 | 0.0069 | 0.82143 | 1860 | 34 | 1119 | 38 | 2828 | 26 | 0.364 | 2.747 | 39.5686 |
| PD18-14-1241 | 2.643 | 0.098 | 0.0936 | 0.0043 | 0.62978 | 1311 | 25 | 576 | 25 | 2864 | 29 | 1.006 | 0.994 | 20.11173 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD18-14-1242 | 9.18 | 0.34 | 0.2393 | 0.0088 | 0.82717 | 2377 | 30 | 1382 | 44 | 3378 | 24 | 0.441 | 2.268 | 40.91178 |
| PD18-14-1243 | 11.16 | 0.36 | 0.391 | 0.013 | 0.80859 | 2535 | 35 | 2126 | 61 | 2867 | 24 | 0.876 | 1.142 | 74.15417 |
| PD18-14-1244 | 1.542 | 0.12 | 0.0512 | 0.0042 | 0.90467 | 946 | 39 | 322 | 25 | 2968 | 32 | 0.2545 | 3.929 | 10.84906 |
| PD18-14-1245 | 7.04 | 0.39 | 0.2337 | 0.0081 | 0.18535 | 2116 | 47 | 1354 | 43 | 2960 | 45 | 1.93 | 0.518 | 45.74324 |
| PD18-14-1246 | 5.09 | 0.25 | 0.1602 | 0.0094 | 0.83787 | 1833 | 45 | 958 | 53 | 3051 | 28 | 0.39 | 2.564 | 31.39954 |
| PD18-14-1247 | 8.47 | 0.34 | 0.3668 | 0.011 | 0.59852 | 2279 | 32 | 2013 | 52 | 2527 | 31 | 1.272 | 0.786 | 79.65968 |
| PD18-14-1248 | 6.15 | 0.63 | 0.0674 | 0.005 | 0.33775 | 1995 | 130 | 421 | 30 | 4649 | 110 | 0.2263 | 4.419 | 9.055711 |
| PD18-14-1249 | 6.29 | 0.18 | 0.2605 | 0.0063 | 0.67976 | 2012 | 25 | 1491 | 32 | 2595 | 35 | 0.862 | 1.160 | 57.45665 |
| PD18-14-1257 | 3.628 | 0.072 | 0.1499 | 0.0028 | 0.82354 | 1555 | 16 | 900 | 16 | 2602 | 23 | 4.96 | 0.202 | 34.58878 |
| PD18-14-1258 | 4.6 | 0.21 | 0.187 | 0.0091 | 0.83817 | 1747 | 46 | 1104 | 51 | 2636 | 28 | 0.394 | 2.538 | 41.88164 |
| PD18-14-1259 | 3.79 | 0.51 | 0.1435 | 0.022 | 0.70686 | 1588 | 72 | 872 | 110 | 2717 | 32 | 1.514 | 0.661 | 32.09422 |
| PD18-14-1260 | 3.681 | 0.11 | 0.1361 | 0.0041 | 0.64268 | 1565 | 27 | 822 | 23 | 2789 | 29 | 1.303 | 0.767 | 29.47293 |
| PD18-14-1261 | 15.76 | 0.3 | 0.4748 | 0.008 | 0.60455 | 2861 | 18 | 2504 | 35 | 3115 | 25 | 1.047 | 0.955 | 80.38523 |
| PD18-14-1262 | 3.237 | 0.17 | 0.1233 | 0.0068 | 0.26453 | 1465 | 34 | 750 | 38 | 2742 | 28 | 0.652 | 1.534 | 27.3523 |
| PD18-14-1263 | 1.312 | 0.26 | 0.02247 | 0.013 | 0.58254 | 850 | 96 | 143.2 | 75 | 3974 | 120 | 0.1293 | 7.734 | 3.603422 |
| PD18-14-1264 | 5.649 | 0.16 | 0.2221 | 0.0056 | 0.72458 | 1923 | 25 | 1293 | 30 | 2689 | 25 | 0.782 | 1.279 | 48.08479 |
| PD18-14-1265 | 1.304 | 0.12 | 0.03096 | 0.0018 | 0.60432 | 845 | 44 | 196.5 | 11 | 3499 | 51 | 0.2051 | 4.876 | 5.61589 |
| PD18-14-1266 | 10.28 | 0.2 | 0.3306 | 0.0062 | 0.47993 | 2459 | 19 | 1841 | 30 | 3018 | 23 | 1.513 | 0.661 | 61.00066 |
| PD18-14-1267 | 3.37 | 0.11 | 0.1292 | 0.0044 | 0.85002 | 1495 | 27 | 783 | 25 | 2722 | 31 | 0.312 | 3.205 | 28.76561 |
| PD18-14-1268 | 5.96 | 0.23 | 0.1728 | 0.0067 | 0.86298 | 1969 | 29 | 1027 | 35 | 3167 | 24 | 0.392 | 2.551 | 32.42817 |
| PD18-14-1269 | 9.66 | 0.27 | 0.3859 | 0.011 | 0.63089 | 2400 | 27 | 2102 | 51 | 2663 | 31 | 3.39 | 0.295 | 78.93353 |
| PD18-14-1270 | 0.5794 | 0.011 | 0.00817 | 0.00016 | 0.47801 | 463.7 | 7.1 | 52.46 | 1 | 4267 | 28 | 0.2634 | 3.797 | 1.229435 |
| PD18-14-1271 | 9.1 | 0.54 | 0.375 | 0.023 | 0.7411 | 2344 | 79 | 2049 | 120 | 2601 | 34 | 0.679 | 1.473 | 78.77739 |
| PD18-14-1272 | 9.07 | 0.26 | 0.387 | 0.017 | 0.63882 | 2342 | 27 | 2108 | 84 | 2557 | 94 | 0.53 | 1.887 | 82.44036 |
| PD18-14-1273 | 11.83 | 0.27 | 0.4839 | 0.0089 | 0.49016 | 2588 | 22 | 2543 | 39 | 2616 | 37 | 0.978 | 1.022 | 97.20948 |
| PD18-14-1281 | 4.36 | 0.15 | 0.172 | 0.0056 | 0.58357 | 1703 | 27 | 1023 | 31 | 2683 | 28 | 0.752 | 1.330 | 38.12896 |
| PD18-14-1282 | 7.14 | 0.49 | 0.28 | 0.02 | 0.73766 | 2126 | 100 | 1590 | 110 | 2696 | 37 | 0.501 | 1.996 | 58.97626 |
| PD18-14-1283 | 1.921 | 0.085 | 0.0719 | 0.0037 | 0.64075 | 1087 | 26 | 447 | 22 | 2762 | 31 | 1.669 | 0.599 | 16.18392 |
| PD18-14-1284 | 5.54 | 0.53 | 0.2257 | 0.022 | 0.80983 | 1904 | 62 | 1311 | 110 | 2624 | 37 | 0.737 | 1.357 | 49.96189 |
| PD18-14-1285 | 3.219 | 0.19 | 0.098 | 0.0056 | 0.86272 | 1460 | 44 | 602 | 33 | 3108 | 24 | 0.3731 | 2.680 | 19.36937 |

## Appendix 4.2 Kaladgi-Badami Basin detrital zircon REE (ppm)

| *Comments* | *La* | *Ce* | *Pr* | *Nd* | *Sm* | *Eu* | *Gd* | *Tb* | *Dy* | *Ho* | *Er* | *Tm* | *Yb* | *Lu* | *Hf* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-10-470* | 0.0073 | 11.48 | 0.069 | 1.52 | 3.59 | 0.222 | 22.15 | 6.96 | 81.2 | 28.25 | 126.7 | 23.87 | 224.7 | 41.2 | 10170 |
| *PD18-10-471* | 69.2 | 1467 | 125.3 | 1062 | 1339 | 552 | 4220 | 1022 | 9130 | 2156 | 6930 | 1038 | 7980 | 1163 | 13360 |
| *PD18-10-472* | 17.99 | 199.8 | 22.03 | 149.4 | 148.3 | 54.2 | 382 | 86.8 | 691 | 158.1 | 544 | 92.5 | 781 | 129.1 | 11700 |
| *PD18-10-473* | 0.46 | 19.2 | 0.687 | 8.49 | 12.54 | 4.46 | 43.1 | 11.3 | 116.5 | 35.5 | 150 | 27.7 | 253.9 | 48.9 | 9370 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-10-474* | 13.08 | 168.5 | 15.44 | 115.3 | 123.7 | 42.8 | 288 | 61.5 | 469 | 111.8 | 394 | 68 | 603 | 106.6 | 10880 |
| *PD18-10-475* | 75 | 2557 | 172.5 | 1418 | 1609 | 596 | 4500 | 946 | 7260 | 1549 | 4520 | 583 | 4074 | 572 | 16270 |
| *PD18-10-476* | 150 | 3280 | 294.8 | 2606 | 3100 | 1204 | 8470 | 2032 | 16330 | 3640 | 11700 | 1840 | 14350 | 2191 | 22050 |
| *PD18-10-477* | 0.031 | 8.83 | 0.078 | 1.63 | 1.86 | 0.349 | 7.97 | 2.82 | 36.8 | 13.81 | 67.8 | 14.11 | 140.2 | 27.26 | 14090 |
| *PD18-10-478* | 208.6 | 2130 | 282.2 | 1784 | 1411 | 472 | 3160 | 618 | 4460 | 896 | 2713 | 411 | 3170 | 460 | 11700 |
| *PD18-10-479* | 2.71 | 37 | 4.12 | 33.8 | 29.2 | 11 | 86 | 19 | 188 | 51.5 | 217 | 40 | 365 | 64.5 | 14340 |
| *PD18-10-480* | 2.79 | 101.9 | 4.79 | 40.3 | 46.8 | 17.88 | 146.7 | 35.4 | 310 | 80 | 276.5 | 46.9 | 399 | 64.8 | 10510 |
| *PD18-10-481* | 147.6 | 2940 | 250.6 | 1888 | 2221 | 826 | 5980 | 1470 | 12140 | 2800 | 9140 | 1389 | 10790 | 1556 | 18050 |
| *PD18-10-482* | 1.49 | 60.5 | 2.42 | 18.5 | 23.1 | 9.1 | 99 | 27.5 | 273 | 77.1 | 294 | 51.4 | 447 | 79.4 | 11060 |
| *PD18-10-483* | 46.2 | 479.4 | 52.1 | 385.7 | 448.6 | 174.8 | 1274 | 311.5 | 2592 | 620 | 2030 | 321 | 2490 | 370.1 | 12550 |
| *PD18-10-484* | 129.1 | 1230 | 155.5 | 1160 | 1257 | 490 | 3900 | 869 | 7280 | 1640 | 4990 | 686 | 4910 | 697 | 12050 |
| *PD18-10-492* | 107.5 | 1693 | 164.7 | 1460 | 1797 | 690 | 4750 | 1057 | 8770 | 1911 | 5920 | 863 | 6760 | 958 | 13950 |
| *PD18-10-493* | 57.6 | 243 | 35.6 | 190 | 143 | 43.7 | 271 | 56.6 | 424 | 103.3 | 377.1 | 69.4 | 649 | 119.5 | 13230 |
| *PD18-10-494* | 153.1 | 2133 | 203.5 | 1690 | 2091 | 830 | 5930 | 1427 | 11920 | 2745 | 8830 | 1339 | 10550 | 1531 | 17070 |
| *PD18-10-495* | 169.5 | 1492 | 198.9 | 1494 | 1435 | 528 | 2750 | 618 | 4730 | 970 | 2970 | 470 | 3660 | 501 | 19240 |
| *PD18-10-496* | 113 | 1230 | 140.2 | 868 | 804 | 267.3 | 2030 | 419 | 3095 | 673 | 2096 | 323 | 2523 | 373.9 | 14980 |
| *PD18-10-497* | 34.8 | 298.3 | 29.9 | 210 | 151.5 | 59.8 | 431 | 105.3 | 888 | 217.8 | 799 | 148.3 | 1376 | 244.5 | 15020 |
| *PD18-10-498* | 125 | 2824 | 260.7 | 2215 | 2443 | 919 | 7060 | 1594 | 12950 | 2995 | 9510 | 1450 | 11070 | 1631 | 19880 |
| *PD18-10-499* | 125.1 | 990 | 111.8 | 723 | 688 | 235 | 1430 | 312 | 2310 | 497 | 1630 | 267 | 2170 | 339 | 12500 |
| *PD18-10-500* | 70.8 | 2492 | 146.3 | 1368 | 1832 | 713 | 5920 | 1500 | 12010 | 2635 | 7870 | 1121 | 8460 | 1219 | 16200 |
| *PD18-10-501* | 218.9 | 2282 | 327 | 1735 | 796 | 211.6 | 1550 | 264 | 1804 | 378 | 1158 | 174.3 | 1307 | 200 | 10360 |
| *PD18-10-502* | 1.63 | 51.2 | 3.64 | 36.4 | 58.2 | 23.1 | 182 | 45.6 | 402 | 103.2 | 371 | 61.7 | 516 | 87.1 | 11760 |
| *PD18-10-503* | 110.1 | 764 | 115 | 710 | 492 | 177.8 | 1213 | 257 | 2050 | 452 | 1420 | 217 | 1685 | 245.6 | 12970 |
| *PD18-10-504* | 113.3 | 2144 | 190.1 | 1568 | 1907 | 754 | 5460 | 1355 | 11450 | 2617 | 8370 | 1248 | 9570 | 1346 | 15120 |
| *PD18-10-505* | 61.1 | 816 | 88.7 | 589 | 548 | 199 | 1452 | 304 | 2381 | 519 | 1625 | 242.4 | 1874 | 280 | 11620 |
| *PD18-10-506* | 16.3 | 177 | 21.1 | 133.3 | 103.9 | 35.3 | 272 | 54.9 | 416 | 95.1 | 325 | 55.6 | 506 | 91.6 | 10590 |
| *PD18-10-507* | 3.81 | 97.8 | 6.3 | 54.9 | 72.1 | 27.5 | 210.1 | 52.9 | 443 | 108.5 | 376 | 61.2 | 502 | 81.4 | 11730 |
| *PD18-10-508* | 40 | 774 | 71.1 | 745 | 1122 | 512 | 2840 | 743 | 6390 | 1347 | 4330 | 674 | 5450 | 680 | 11950 |
| *PD18-10-516* | 0.534 | 68.2 | 2.06 | 28.6 | 38.3 | 14.1 | 100.3 | 22.5 | 196 | 53.8 | 217 | 39.8 | 363 | 66.7 | 10810 |
| *PD18-10-517* | 26.8 | 305.7 | 30.3 | 223.7 | 255 | 90.5 | 600 | 141.1 | 1153 | 269 | 907 | 151.3 | 1242 | 197.9 | 12610 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-10-518* | 162.8 | 2670 | 247.3 | 1670 | 1622 | 570 | 3770 | 818 | 6650 | 1470 | 4580 | 658 | 4880 | 680 | 11930 |
| *PD18-10-519* | 11.28 | 20.5 | 1.63 | 7.56 | 4.18 | 0.541 | 18.3 | 6.74 | 86.6 | 32.72 | 153.5 | 31.3 | 300 | 55.3 | 13380 |
| *PD18-10-520* | 65.1 | 447 | 60.6 | 406 | 407 | 147.2 | 861 | 195 | 1556 | 342 | 1134 | 190 | 1556 | 228.8 | 14920 |
| *PD18-10-521* | 95.6 | 3220 | 211.5 | 1681 | 1944 | 744 | 5530 | 1394 | 11330 | 2563 | 8000 | 1249 | 9670 | 1413 | 18620 |
| *PD18-10-522* | 75.2 | 2283 | 161.8 | 1639 | 2251 | 928 | 6760 | 1727 | 14830 | 3480 | 11230 | 1724 | 12840 | 1905 | 15000 |
| *PD18-10-523* | 107.9 | 1473 | 153 | 1151 | 1240 | 484 | 3490 | 773 | 6060 | 1378 | 4270 | 606 | 4530 | 654 | 12200 |
| *PD18-10-524* | 143.5 | 2190 | 199 | 1597 | 2000 | 763 | 5140 | 1249 | 9800 | 2140 | 6790 | 1022 | 7760 | 1144 | 17810 |
| *PD18-10-525* | 38.1 | 732 | 68 | 587 | 808 | 299 | 1909 | 451 | 3340 | 680 | 2026 | 315 | 2366 | 342 | 11700 |
| *PD18-10-526* | 48.8 | 620 | 69.5 | 477 | 479 | 160.6 | 1218 | 269 | 2010 | 454 | 1483 | 229 | 1778 | 264 | 12320 |
| *PD18-10-527* | 2.31 | 79.9 | 4.33 | 38.7 | 48 | 18.9 | 140.2 | 35.5 | 315 | 79.8 | 281.6 | 47.8 | 397 | 63.5 | 13260 |
| *PD18-10-528* | 110.7 | 1304 | 133.1 | 864 | 756 | 245 | 1698 | 360 | 2570 | 563 | 1695 | 272 | 2060 | 306 | 12240 |
| *PD18-10-529* | 183.9 | 1489 | 169.5 | 1083 | 719 | 190.5 | 1346 | 182.9 | 1003 | 186.4 | 551 | 86.1 | 748 | 128.5 | 13090 |
| *PD18-10-530* | 99.7 | 1652 | 146.1 | 1169 | 1386 | 525 | 3940 | 916 | 7810 | 1793 | 5700 | 822 | 6430 | 920 | 14900 |
| *PD18-10-531* | 16.8 | 85.7 | 11.38 | 76.9 | 65.4 | 27.1 | 198 | 46.1 | 407 | 99.4 | 357 | 62.9 | 561 | 97.7 | 11480 |
| *PD18-10-532* | 112.8 | 1997 | 170.8 | 1430 | 1839 | 745 | 5420 | 1325 | 10980 | 2484 | 7600 | 1118 | 8460 | 1147 | 14840 |
| *PD18-10-540* | 46.7 | 716 | 67.7 | 533 | 611 | 233.2 | 1736 | 410.5 | 3393 | 786 | 2549 | 390.1 | 3031 | 452 | 13580 |
| *PD18-10-541* | 156.6 | 2061 | 238.6 | 2126 | 2663 | 1034 | 7080 | 1692 | 13120 | 2787 | 8660 | 1277 | 10090 | 1358 | 15410 |
| *PD18-10-542* | 108.6 | 1653 | 175.9 | 1869 | 2298 | 892 | 6180 | 1335 | 10900 | 2490 | 7810 | 1106 | 8530 | 1181 | 13010 |
| *PD18-10-543* | 163 | 2529 | 266.6 | 1979 | 2016 | 755 | 5850 | 1253 | 10020 | 2240 | 6740 | 948 | 7350 | 1020 | 18660 |
| *PD18-10-544* | 139.4 | 1533 | 146.2 | 1059 | 1237 | 450 | 3463 | 774 | 6220 | 1337 | 4070 | 563 | 4140 | 586 | 14890 |
| *PD18-10-545* | 16.7 | 238 | 22.8 | 180 | 212 | 86.7 | 575 | 141.8 | 1200 | 280 | 928 | 153 | 1272 | 194 | 14980 |
| *PD18-10-546* | 23.39 | 118.3 | 13.63 | 135.3 | 128.4 | 45 | 320 | 69.2 | 618 | 167 | 637 | 112.4 | 978 | 161.7 | 12400 |
| *PD18-10-547* | 5.79 | 111.9 | 8.57 | 68.7 | 85.1 | 33.7 | 240 | 60.4 | 517 | 129.3 | 437 | 76.4 | 631 | 101.9 | 14870 |
| *PD18-10-548* | 107.9 | 2367 | 209.4 | 1955 | 2387 | 929 | 6630 | 1631 | 13320 | 2983 | 9120 | 1320 | 10010 | 1375 | 15110 |
| *PD18-10-549* | 34.7 | 544 | 49.5 | 373 | 447 | 171 | 1156 | 282.4 | 2285 | 513 | 1654 | 264.1 | 2125 | 316.3 | 12590 |
| *PD18-10-550* | 264.9 | 2131 | 305 | 1922 | 1542 | 539 | 4210 | 829 | 6510 | 1383 | 4336 | 614 | 4640 | 679 | 19350 |
| *PD18-10-551* | 21.1 | 154.4 | 16.8 | 109 | 113.2 | 37.8 | 264 | 65 | 535 | 136.4 | 490 | 88.8 | 778 | 131.9 | 11090 |
| *PD18-10-552* | 38.4 | 234 | 30 | 182 | 146 | 47.9 | 338 | 73 | 575 | 137 | 456 | 76 | 639 | 100.6 | 8660 |
| *PD18-10-553* | 115 | 1686 | 162.9 | 1441 | 1960 | 690 | 4410 | 1041 | 7850 | 1552 | 4590 | 644 | 4680 | 641 | 15080 |
| *PD18-10-554* | 17.68 | 29.9 | 9.9 | 65.2 | 40.7 | 9.17 | 106 | 25.2 | 254 | 81.8 | 370 | 75.9 | 694 | 122.5 | 13440 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-10-555* | 14.3 | 244 | 21.5 | 176 | 209 | 79.4 | 542 | 120 | 963 | 218 | 724 | 117.7 | 969 | 151 | 10640 |
| *PD18-10-556* | 93.8 | 3141 | 188.9 | 1614 | 1983 | 777 | 6150 | 1565 | 13030 | 2942 | 9190 | 1364 | 10250 | 1425 | 17320 |
| *PD18-10-565* | 129.9 | 2137 | 211 | 2091 | 2822 | 1251 | 8940 | 2016 | 15890 | 3610 | 11190 | 1653 | 12150 | 1773 | 14280 |
| *PD18-10-566* | 76.1 | 2128 | 158.2 | 1581 | 2235 | 925 | 6750 | 1675 | 13870 | 3210 | 10080 | 1492 | 11290 | 1629 | 14110 |
| *PD18-10-567* | 31.9 | 633 | 56.9 | 500 | 612 | 247 | 1870 | 403 | 3540 | 811 | 2760 | 411 | 3120 | 468 | 14800 |
| *PD18-10-568* | 96.2 | 2526 | 191.8 | 1782 | 2340 | 944 | 7270 | 1796 | 15230 | 3560 | 11490 | 1734 | 12910 | 1870 | 18410 |
| *PD18-10-569* | 123.8 | 1188 | 123.9 | 757 | 680 | 221.3 | 1403 | 274 | 1825 | 359 | 1062 | 158.9 | 1198 | 176.1 | 14030 |
| *PD18-10-570* | 49.2 | 582 | 54.3 | 375 | 359 | 110.1 | 777 | 150.2 | 1094 | 236 | 734 | 110.1 | 888 | 138.5 | 10650 |
| *PD18-10-571* | 81.8 | 1661 | 142 | 1255 | 1808 | 666 | 4456 | 1078 | 8790 | 1787 | 5470 | 784 | 6010 | 818 | 14940 |
| *PD18-10-572* | 1.94 | 22.9 | 0.741 | 4.89 | 2.93 | 0.627 | 9.11 | 2.67 | 33.2 | 13.27 | 72.8 | 17.38 | 203.7 | 47.8 | 11060 |
| *PD18-10-573* | 42.1 | 271 | 30 | 189 | 183 | 68.1 | 471 | 110 | 864 | 206.5 | 700 | 110.8 | 905 | 137.4 | 10870 |
| *PD18-10-574* | 1.7 | 28 | 2.04 | 18.2 | 22.3 | 4.43 | 79.7 | 20.58 | 209.2 | 65.3 | 266.3 | 46.6 | 403 | 72.1 | 9700 |
| *PD18-10-575* | 40.7 | 35.2 | 7.27 | 63.6 | 230 | 75.9 | 456 | 81 | 580 | 136 | 467 | 77.4 | 641 | 108.6 | 15220 |
| *PD18-10-576* | 54.4 | 465 | 59.7 | 370 | 263 | 74 | 566 | 116.4 | 842 | 195 | 630 | 106.6 | 844 | 138.2 | 11730 |
| *PD18-10-577* | 26.3 | 190 | 20.7 | 139 | 143 | 52.6 | 366 | 90.3 | 782 | 189 | 683 | 115.1 | 970 | 157.5 | 13590 |
| *PD18-10-578* | 0.136 | 25.9 | 0.24 | 2.44 | 2.98 | 0.75 | 12.36 | 3.65 | 39.3 | 13.09 | 60.4 | 12.58 | 125.1 | 24.28 | 11080 |
| *PD18-10-579* | 153.1 | 1992 | 225.9 | 1684 | 1689 | 583 | 4126 | 892 | 6900 | 1449 | 4380 | 600 | 4370 | 608 | 14580 |
| *PD18-10-580* | 53.6 | 445 | 47 | 294 | 226 | 73.3 | 548 | 116.6 | 870 | 199 | 656 | 106.8 | 870 | 135.2 | 11660 |
| *PD18-10-581* | 112 | 1113 | 123.3 | 939 | 1061 | 396 | 2910 | 655 | 5350 | 1218 | 3770 | 578 | 4400 | 646 | 13650 |
| *PD18-10-589* | 11.83 | 133 | 8.94 | 55.9 | 36 | 8.26 | 99.1 | 19.96 | 185.2 | 56.7 | 240.5 | 47.57 | 452.5 | 85 | 10480 |
| *PD18-10-590* | 91.6 | 1846 | 148 | 1206 | 1456 | 590 | 4290 | 1012 | 8770 | 2019 | 6510 | 955 | 7560 | 1051 | 16050 |
| *PD18-10-591* | 45.2 | 467 | 51 | 329 | 306 | 91.4 | 660 | 132.4 | 940 | 198 | 625 | 102.4 | 852 | 147.2 | 10600 |
| *PD18-10-592* | 133.1 | 653 | 90.1 | 503 | 422 | 134.7 | 940 | 195.9 | 1488 | 329 | 1083 | 173 | 1354 | 203.5 | 13060 |
| *PD18-10-593* | 0.43 | 25.9 | 1.5 | 16.9 | 21.8 | 10 | 64 | 15.9 | 145 | 37.5 | 148 | 26.9 | 245 | 43.4 | 14520 |
| *PD18-10-594* | 45.2 | 325 | 32.8 | 207 | 203 | 68.9 | 497 | 111.8 | 896 | 219 | 761 | 127.1 | 1051 | 171.6 | 9700 |
| *PD18-10-595* | 67.8 | 740 | 78.6 | 443 | 376 | 123 | 855 | 180 | 1350 | 280 | 908 | 153 | 1238 | 193 | 13760 |
| *PD18-10-597* | 66.1 | 114.1 | 48.9 | 329 | 259 | 96.9 | 770 | 171 | 1444 | 354 | 1179 | 187 | 1492 | 241.9 | 12350 |
| *PD18-10-598* | 278.6 | 1223 | 190.2 | 1161 | 589 | 164.7 | 1144 | 162.4 | 1015 | 209.7 | 654 | 106.7 | 897 | 148.5 | 14500 |
| *PD18-10-599* | 6.8 | 90.8 | 7.39 | 51.1 | 58.1 | 21.4 | 145 | 35.8 | 273 | 67.3 | 256 | 45.8 | 425 | 84.2 | 12830 |
| *PD18-10-600* | 64.9 | 992 | 97.5 | 782 | 938 | 326 | 2326 | 496 | 3649 | 799 | 2471 | 370 | 2874 | 422 | 13740 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-10-601* | 0.356 | 36.7 | 0.85 | 11.8 | 16.9 | 7.1 | 60 | 13.8 | 129 | 35.5 | 144 | 23.9 | 215 | 38.5 | 10840 |
| *PD18-10-602* | 77.4 | 3044 | 188.8 | 1737 | 2288 | 870 | 6270 | 1530 | 11560 | 2403 | 6920 | 940 | 7060 | 900 | 19510 |
| *PD18-10-603* | 23.9 | 149.6 | 19.2 | 116.4 | 95.7 | 30 | 229 | 47.9 | 376 | 92.8 | 323 | 56.7 | 459 | 76.2 | 11840 |
| | | | | | | | | | | | | | | | |
| *PD18-05-611* | 6.86 | 174 | 14.1 | 104.4 | 90.9 | 40.2 | 254 | 58.7 | 473 | 111.4 | 383 | 63 | 535 | 89.2 | 10630 |
| *PD18-05-612* | 28.7 | 572 | 55.2 | 385 | 315 | 144 | 800 | 181 | 1405 | 317 | 1032 | 169 | 1356 | 214.3 | 10630 |
| *PD18-05-613* | 31.4 | 656 | 64.8 | 416 | 268.5 | 112.2 | 575 | 120.1 | 888 | 195.4 | 647 | 110.5 | 978 | 167.7 | 11470 |
| *PD18-05-614* | 14.57 | 262.5 | 26.4 | 174.1 | 125.8 | 51.1 | 272.1 | 55.3 | 419 | 96.5 | 344.9 | 62.5 | 594 | 112.9 | 14870 |
| *PD18-05-615* | 3.47 | 91.8 | 4.84 | 33 | 27 | 12.31 | 65.3 | 16.36 | 128.7 | 33.1 | 127.8 | 25.06 | 242.7 | 48.1 | 11390 |
| *PD18-05-616* | 43.7 | 521 | 59.5 | 306 | 177.4 | 71.8 | 334 | 67.3 | 505 | 105.2 | 347.1 | 59.4 | 517 | 84.2 | 12280 |
| *PD18-05-617* | 0.129 | 23.82 | 0.61 | 4.78 | 6.38 | 2.23 | 26.7 | 7.28 | 82.9 | 29.74 | 141.1 | 29.59 | 309.4 | 63.3 | 9930 |
| *PD18-05-618* | 9.7 | 277 | 18.8 | 125 | 99 | 45.7 | 245 | 55.4 | 440 | 98.9 | 333 | 55.9 | 482 | 79 | 12110 |
| *PD18-05-619* | 13.8 | 229 | 22.1 | 135 | 106 | 45.5 | 222 | 48.3 | 372 | 87.6 | 331 | 61.5 | 591 | 110.5 | 11630 |
| *PD18-05-620* | 0.202 | 50 | 0.347 | 3.41 | 4.4 | 1.94 | 18.42 | 4.91 | 53.8 | 19.34 | 95.7 | 21.68 | 235 | 49.2 | 9690 |
| *PD18-05-621* | 134.7 | 3070 | 292 | 1910 | 1287 | 563 | 2854 | 612 | 4480 | 892 | 2860 | 444 | 3620 | 538 | 18820 |
| *PD18-05-622* | 30.1 | 537 | 59.9 | 354 | 249 | 95.8 | 524 | 93.8 | 735 | 143.9 | 445 | 71.9 | 563 | 82 | 15810 |
| *PD18-05-623* | 1.93 | 74.3 | 3.08 | 24.7 | 25.7 | 11.99 | 79.6 | 18.66 | 164.5 | 47.3 | 193.8 | 36.8 | 345.1 | 67.4 | 9510 |
| *PD18-05-624* | 35.7 | 1004 | 74.2 | 489 | 310 | 126.6 | 622 | 124.8 | 886 | 195 | 619 | 99.6 | 783 | 122.7 | 9880 |
| *PD18-05-625* | 4.92 | 66.7 | 6.31 | 39.4 | 29.3 | 11.8 | 81.1 | 19.4 | 178 | 47.7 | 186 | 33.8 | 309 | 56 | 10200 |
| *PD18-05-626* | 5.39 | 118.2 | 8.55 | 63.3 | 59.7 | 28.5 | 177 | 40.4 | 324 | 74.9 | 261 | 43.9 | 395 | 65.3 | 11140 |
| *PD18-05-634* | 6.49 | 74.8 | 8.43 | 61.7 | 56.7 | 24.8 | 144 | 31.7 | 241 | 54.9 | 186.5 | 31.2 | 277 | 48.5 | 11880 |
| *PD18-05-635* | 6.8 | 92 | 9.6 | 63 | 50 | 21.6 | 116 | 24.5 | 200 | 47.6 | 180 | 33.9 | 328 | 64.6 | 12870 |
| *PD18-05-636* | 8.53 | 213.3 | 16.7 | 113.2 | 85.4 | 39.6 | 211.8 | 49.6 | 396 | 92.3 | 318 | 55.8 | 509 | 90.5 | 13160 |
| *PD18-05-637* | 184.4 | 4210 | 439 | 2840 | 1864 | 795 | 4200 | 846 | 6300 | 1275 | 3920 | 574 | 4610 | 665 | 12670 |
| *PD18-05-638* | 142.7 | 2220 | 240 | 1629 | 1294 | 568 | 3110 | 697 | 5340 | 1065 | 3340 | 518 | 4350 | 639 | 15530 |
| *PD18-05-639* | 0.0157 | 56.9 | 0.208 | 4.46 | 7.58 | 1.62 | 33.2 | 10.02 | 110.8 | 38.2 | 177 | 34.5 | 324 | 61.5 | 10680 |
| *PD18-05-640* | 2.47 | 49.7 | 4.17 | 30.2 | 25.1 | 11.03 | 73 | 18.43 | 168.2 | 48.7 | 211 | 41.1 | 403 | 80 | 11430 |
| *PD18-05-641* | 45.7 | 1007 | 105.7 | 643 | 410 | 172.9 | 901 | 189.5 | 1394 | 316 | 1032 | 175.6 | 1496 | 246 | 11050 |
| *PD18-05-642* | 96.6 | 1765 | 176.9 | 1190 | 932 | 423 | 2270 | 538 | 3970 | 848 | 2700 | 441 | 3510 | 517 | 12550 |
| *PD18-05-643* | 1.29 | 37.9 | 1.82 | 13.8 | 13.7 | 6.58 | 39.9 | 10 | 89.2 | 22.5 | 87.9 | 17.42 | 171.6 | 32.04 | 12870 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-05-644* | 64 | 214 | 18 | 77 | 24.5 | 7.1 | 49.1 | 10.3 | 82.7 | 23.4 | 99.9 | 19.4 | 181.8 | 34.5 | 11090 |
| *PD18-05-645* | 1.69 | 47.4 | 2.51 | 18.7 | 18.8 | 7.3 | 54.8 | 13.45 | 122 | 33.9 | 136.4 | 25.3 | 237.2 | 45.3 | 11610 |
| *PD18-05-646* | 8.1 | 172 | 17.4 | 109 | 59 | 24.3 | 122 | 24.1 | 190 | 52.9 | 230 | 47 | 497 | 104.1 | 12350 |
| *PD18-05-647* | 13.7 | 374 | 33.2 | 226 | 121.7 | 51 | 251 | 53.2 | 387 | 85.7 | 293 | 49.8 | 436 | 74.1 | 13370 |
| *PD18-05-648* | 0.168 | 12.9 | 0.324 | 2.97 | 4.15 | 1.41 | 16.5 | 5.08 | 59.4 | 21.29 | 101.9 | 20.75 | 203.3 | 39.61 | 11180 |
| *PD18-05-649* | 0.027 | 32.5 | 0.425 | 6.86 | 8.86 | 2.86 | 30.1 | 8.11 | 83.3 | 27.7 | 124 | 24.39 | 231 | 45.2 | 8950 |
| *PD18-05-657* | 0.089 | 62 | 0.66 | 10.1 | 15.7 | 5.9 | 56 | 13.1 | 130 | 38.7 | 156 | 28.7 | 268 | 50 | 11020 |
| *PD18-05-658* | 37.5 | 711 | 68.4 | 427 | 317 | 144.5 | 719 | 152 | 1152 | 249.1 | 823 | 135.2 | 1144 | 190.4 | 10890 |
| *PD18-05-659* | 56 | 833 | 93.8 | 555 | 347 | 141.3 | 675 | 132.5 | 930 | 192.3 | 634 | 107.1 | 953 | 161.3 | 11530 |
| *PD18-05-660* | 5.83 | 113.4 | 10.37 | 71.5 | 63.8 | 29.9 | 172 | 41.7 | 340 | 77.8 | 270 | 46.8 | 393 | 66.6 | 9250 |
| *PD18-05-661* | 0.87 | 49 | 1.53 | 14.5 | 18.1 | 6.75 | 64.3 | 18.09 | 191 | 61.5 | 281.9 | 57 | 580 | 117.6 | 9730 |
| *PD18-05-662* | 35.6 | 234 | 24.9 | 145 | 95.8 | 38.1 | 242 | 57.7 | 512 | 142.6 | 558 | 98.9 | 869 | 150.2 | 11330 |
| *PD18-05-663* | 18.3 | 168 | 15.9 | 120 | 69.2 | 3.81 | 121 | 20 | 168.7 | 48.5 | 207 | 39.5 | 377 | 71.3 | 11180 |
| *PD18-05-664* | 6.29 | 127.2 | 10.95 | 78 | 65.8 | 28.9 | 162.9 | 38.3 | 292 | 69.3 | 244 | 43.3 | 397 | 70.6 | 11060 |
| *PD18-05-665* | 4.51 | 171 | 10.74 | 76.7 | 59.1 | 26 | 147.6 | 34.7 | 276 | 67 | 233 | 38.5 | 323 | 52.3 | 13560 |
| *PD18-05-666* | 9.15 | 187.1 | 16.28 | 120 | 91.8 | 36.3 | 223.4 | 54.2 | 470 | 125.1 | 489 | 85.3 | 765 | 132.2 | 11540 |
| *PD18-05-667* | 53 | 1023 | 97 | 654 | 515 | 233.4 | 1294 | 301 | 2377 | 530 | 1763 | 290 | 2384 | 366 | 14730 |
| *PD18-05-668* | 29.7 | 611 | 59 | 400 | 291 | 132 | 714 | 160.4 | 1225 | 263 | 845 | 136.9 | 1135 | 181.1 | 11920 |
| *PD18-05-669* | 2.05 | 50.4 | 3.25 | 23.9 | 24.9 | 11.02 | 65.2 | 16.3 | 131.6 | 32.4 | 122.4 | 22.88 | 215 | 40.8 | 10570 |
| *PD18-05-670* | 1.13 | 36.1 | 1.72 | 14.8 | 21.1 | 9.88 | 76.1 | 18 | 155.9 | 40.9 | 155.5 | 27.62 | 244.1 | 45.1 | 9500 |
| *PD18-05-671* | 0.41 | 73.3 | 0.7 | 7.83 | 13.19 | 6.56 | 51.4 | 12.46 | 108.5 | 29.11 | 112.3 | 20.05 | 181.8 | 33.03 | 10570 |
| *PD18-05-672* | 20.8 | 591 | 54.9 | 381 | 232 | 97.7 | 508 | 107.7 | 833 | 178 | 604 | 90.5 | 749 | 117.2 | 13370 |
| *PD18-05-680* | 1.96 | 49.5 | 3.9 | 26.7 | 24 | 10.81 | 74.6 | 18.65 | 168.7 | 46 | 182.7 | 33.15 | 296.2 | 54.9 | 9090 |
| *PD18-05-681* | 105.5 | 3410 | 243.2 | 1717 | 1307 | 564 | 2979 | 639 | 4720 | 956 | 2986 | 461 | 3600 | 530 | 13690 |
| *PD18-05-682* | 0.25 | 14.7 | 0.57 | 5.47 | 7.43 | 3.37 | 33.4 | 9.29 | 94 | 29.1 | 121.2 | 22.54 | 210.4 | 39.5 | 9820 |
| *PD18-05-683* | 0.57 | 22.2 | 1.19 | 9 | 10.4 | 3.99 | 45.3 | 12.77 | 144.9 | 49.3 | 230 | 45.8 | 458 | 92.3 | 10560 |
| *PD18-05-684* | 128.6 | 1829 | 199.9 | 1293 | 942 | 438 | 2177 | 522 | 3989 | 871 | 2838 | 458 | 3721 | 554 | 10000 |
| *PD18-05-685* | 20.6 | 649 | 58.1 | 377 | 202 | 79.7 | 416 | 77 | 573 | 128 | 435 | 74.1 | 667 | 123.9 | 11330 |
| *PD18-05-686* | 0.085 | 7.75 | 0.229 | 2.4 | 4.29 | 1.89 | 25.9 | 8.4 | 106.8 | 39.2 | 190.9 | 38.8 | 381 | 78.3 | 8030 |
| *PD18-05-687* | 0.787 | 43.2 | 1.23 | 10.01 | 11.05 | 4.97 | 40.5 | 10.19 | 101.7 | 31.37 | 143.6 | 28.92 | 299 | 60.8 | 11140 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-05-688* | 1.77 | 30.9 | 1.66 | 10.34 | 7.4 | 3.09 | 20 | 4.56 | 46.9 | 14.83 | 70.5 | 15.39 | 166.7 | 36.4 | 11470 |
| *PD18-05-689* | 4.31 | 53.3 | 0.47 | 3.06 | 2.38 | 1.24 | 13.44 | 4.43 | 62.1 | 27.2 | 164 | 40.6 | 476 | 109.4 | 10300 |
| *PD18-05-690* | 60.5 | 927 | 102.3 | 620 | 394 | 169.7 | 876 | 181.6 | 1319 | 276 | 862 | 133.9 | 1065 | 161.1 | 12690 |
| *PD18-05-691* | 0.281 | 33.11 | 0.593 | 6.78 | 10.5 | 2.53 | 45.3 | 12.12 | 127.9 | 41 | 176.1 | 32.8 | 300 | 54.4 | 10220 |
| *PD18-05-692* | 31.3 | 649 | 67.4 | 397 | 221.3 | 95.1 | 471 | 91.9 | 685 | 152.9 | 534 | 94.1 | 854 | 153.6 | 11860 |
| *PD18-05-693* | 28 | 514 | 53 | 334 | 238 | 103.4 | 556 | 123.3 | 936 | 210.5 | 703 | 117.7 | 991 | 165.5 | 11180 |
| *PD18-05-694* | 5.24 | 93.4 | 9.88 | 85.4 | 80.4 | 21.7 | 250.8 | 52.2 | 418 | 99.1 | 326.8 | 51.1 | 413 | 72.9 | 11780 |
| *PD18-05-695* | 20.4 | 415 | 40.8 | 269 | 205 | 89.7 | 506 | 112.8 | 946 | 226 | 759 | 130.9 | 1131 | 182.9 | 12720 |
| *PD18-05-703* | 2 | 53.1 | 3.05 | 20.8 | 19.8 | 9.11 | 53.1 | 13.28 | 117.3 | 33.7 | 143.3 | 29.47 | 310.8 | 66 | 11170 |
| *PD18-05-704* | 57 | 786 | 85.2 | 578 | 449 | 195 | 1012 | 220 | 1610 | 342 | 1127 | 188 | 1630 | 264 | 11760 |
| *PD18-05-705* | 0.026 | 10.45 | 0.117 | 2.14 | 3.89 | 1.23 | 21.8 | 7.03 | 86.4 | 32.4 | 158.5 | 32.8 | 321 | 65.1 | 10360 |
| *PD18-05-706* | 3.14 | 15.1 | 0.52 | 2.17 | 1 | 0.217 | 6.7 | 2.09 | 30.8 | 12.5 | 66.4 | 15.9 | 174 | 39.9 | 14500 |
| *PD18-05-707* | 2.65 | 44.1 | 3.35 | 28.5 | 28.4 | 9.8 | 79 | 18.5 | 165 | 41.3 | 172 | 31.6 | 304 | 58 | 8640 |
| *PD18-05-708* | 0.68 | 28.6 | 0.75 | 6.5 | 8 | 2.58 | 26.1 | 7.2 | 73.4 | 24 | 107.8 | 20.97 | 204.9 | 39.7 | 9740 |
| *PD18-05-709* | 0.226 | 53.5 | 0.63 | 8 | 10.8 | 3.85 | 40.9 | 11.27 | 109.1 | 34.4 | 146.6 | 27.82 | 255.3 | 46.7 | 8790 |
| *PD18-05-710* | 8.3 | 125.8 | 6.25 | 42.1 | 33.4 | 12.2 | 96.6 | 23.5 | 210.1 | 58.5 | 232.8 | 41.8 | 386 | 68.8 | 10000 |
| *PD18-05-711* | 8.89 | 110.6 | 9.52 | 63.1 | 46.8 | 21.6 | 109.5 | 24.9 | 194 | 46.2 | 176 | 33.6 | 330 | 66 | 12710 |
| *PD18-05-712* | 1.67 | 47 | 2.43 | 18.2 | 19.3 | 7.37 | 53.9 | 13.41 | 122.9 | 34.8 | 144.7 | 28 | 264.8 | 49.9 | 10660 |
| *PD18-05-713* | 2.18 | 59 | 3.83 | 23.4 | 12.7 | 4.72 | 32.3 | 7.86 | 81.6 | 27.1 | 132.4 | 29.1 | 309 | 67.3 | 11240 |
| *PD18-05-714* | 0.623 | 37.9 | 1.89 | 12 | 7.74 | 3.2 | 22.6 | 5.5 | 57.3 | 19.8 | 99.6 | 21.95 | 243.4 | 55.1 | 11470 |
| *PD18-05-715* | 1.387 | 47.4 | 2.12 | 16.6 | 16.4 | 6.96 | 50.1 | 12 | 105.8 | 29.8 | 118.5 | 23.1 | 212 | 39.9 | 14180 |
| *PD18-05-716* | 10.44 | 147.3 | 15.49 | 87.8 | 52.1 | 21.7 | 108.4 | 21.7 | 173 | 41.7 | 160.1 | 31.5 | 321 | 67.5 | 13390 |
| *PD18-05-717* | 0.676 | 21.28 | 1.178 | 10.01 | 12.13 | 4.45 | 37.9 | 9.17 | 80 | 20.02 | 74.6 | 12.75 | 110.1 | 19.65 | 13610 |
| *PD18-05-718* | 11.6 | 436 | 25.1 | 180 | 124.7 | 58.8 | 329 | 75.8 | 601 | 159 | 661 | 126.8 | 1218 | 216.3 | 8400 |
| *PD18-05-726* | 0.291 | 43.2 | 1 | 14.2 | 14.8 | 4.78 | 58.9 | 14.7 | 139.3 | 45.3 | 184.1 | 34.9 | 313 | 56.7 | 10440 |
| *PD18-05-727* | 22.9 | 529 | 53.2 | 343 | 197 | 77.7 | 384 | 76.6 | 538 | 117.1 | 387 | 64.9 | 583 | 100.8 | 13480 |
| *PD18-05-728* | 0.0178 | 6.44 | 0.046 | 0.75 | 1.4 | 0.413 | 10.02 | 3.57 | 46.4 | 17.81 | 84.3 | 17.32 | 166.2 | 32.6 | 11000 |
| *PD18-05-729* | 0.369 | 33 | 0.82 | 8.3 | 9.7 | 3.43 | 30.2 | 7.35 | 73.4 | 21.9 | 96 | 18.8 | 186 | 37.4 | 12010 |
| *PD18-05-730* | 68.8 | 1866 | 140.8 | 976 | 720 | 319 | 1706 | 361 | 2651 | 553 | 1755 | 281.6 | 2341 | 359 | 13290 |
| *PD18-05-731* | 98.3 | 1710 | 170 | 1189 | 917 | 406 | 2340 | 526 | 4190 | 902 | 2910 | 464 | 3710 | 568 | 14430 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-05-732* | 0.144 | 19.67 | 0.231 | 2.49 | 3.32 | 0.76 | 14.99 | 4.58 | 55.1 | 20.59 | 102.2 | 21.38 | 215.8 | 41.5 | 11660 |
| *PD18-05-733* | 0.66 | 28.9 | 1.24 | 10.2 | 11.7 | 5.1 | 39.6 | 10.15 | 94 | 26.7 | 111 | 22.17 | 213.6 | 40.4 | 13520 |
| *PD18-05-734* | 2.91 | 35.1 | 4.09 | 29 | 28.2 | 11.5 | 69.7 | 16.1 | 135.8 | 35.4 | 138.4 | 25.78 | 242.8 | 46.3 | 12390 |
| *PD18-05-735* | 0.67 | 16.65 | 0.442 | 3.11 | 3.48 | 0.856 | 13.11 | 3.42 | 38.7 | 13 | 59.9 | 11.79 | 116.3 | 23.1 | 7060 |
| *PD18-05-736* | 7.34 | 154 | 12.4 | 80 | 68.3 | 31.1 | 161 | 39.2 | 289 | 68.1 | 217 | 35.3 | 305 | 51.3 | 11970 |
| *PD18-05-737* | 64.3 | 1337 | 112.3 | 732 | 565 | 245 | 1220 | 255 | 1850 | 390 | 1231 | 203 | 1759 | 288 | 11690 |
| *PD18-05-738* | 12.8 | 157.6 | 12.18 | 80.1 | 63.4 | 26.8 | 161.9 | 37.1 | 328 | 87.3 | 349 | 66.4 | 655 | 124.5 | 12530 |
| *PD18-05-739* | 234.3 | 5170 | 486 | 3458 | 2536 | 1088 | 5790 | 1238 | 9290 | 1850 | 5640 | 803 | 6310 | 889 | 20410 |
| *PD18-05-740* | 1.17 | 53.3 | 2.18 | 20.4 | 26.6 | 12.16 | 89.8 | 21.2 | 187 | 48.3 | 177.7 | 31.1 | 268 | 48.2 | 10230 |
| *PD18-05-741* | 2.42 | 82.7 | 3.51 | 27.5 | 28.1 | 12 | 77.1 | 19.69 | 182.5 | 52.9 | 230.3 | 47.1 | 487 | 100.3 | 13230 |
| *PD18-05-749* | 1.37 | 28.5 | 0.89 | 6.22 | 5.21 | 1.64 | 19.5 | 5.64 | 62.7 | 20.74 | 97.5 | 20.07 | 205.7 | 41.4 | 11540 |
| *PD18-05-750* | 44.5 | 927 | 92.5 | 625 | 495 | 214 | 1100 | 230 | 1720 | 382 | 1280 | 213 | 1790 | 299 | 12010 |
| *PD18-05-751* | 17.2 | 370 | 35.3 | 227 | 169 | 76.3 | 419 | 92.5 | 693 | 155 | 520 | 87.6 | 763 | 123 | 12850 |
| *PD18-05-752* | 15 | 309 | 28.2 | 178 | 100.4 | 43.4 | 205 | 38.4 | 271 | 60 | 212.4 | 39.2 | 385 | 77.4 | 13270 |
| *PD18-05-753* | 1.98 | 52.4 | 3.07 | 23.3 | 22 | 9.85 | 63 | 15.57 | 144.8 | 42.2 | 181 | 37 | 379.2 | 77.9 | 11090 |
| *PD18-05-754* | 1.61 | 62.3 | 3.42 | 25.7 | 22.1 | 9.6 | 58.9 | 14.5 | 131.2 | 38.2 | 164.5 | 33.15 | 340.7 | 71.8 | 11760 |
| *PD18-05-755* | 16.61 | 393 | 28.7 | 202 | 178 | 84 | 507 | 115 | 873 | 189.9 | 633 | 105.1 | 889 | 147.7 | 11480 |
| *PD18-05-756* | 18.09 | 468.4 | 41.4 | 269.7 | 181 | 77.8 | 383.3 | 81 | 588 | 122.6 | 398 | 64.6 | 551 | 89 | 12290 |
| *PD18-05-757* | 1.15 | 25.7 | 1.39 | 10 | 7.1 | 2.66 | 20.7 | 4.78 | 49.5 | 14.8 | 70.5 | 15.64 | 168.1 | 36.7 | 9570 |
| *PD18-05-758* | 2.61 | 54.4 | 2.7 | 17.8 | 17 | 6.52 | 51.4 | 12.9 | 120.9 | 35.7 | 148.2 | 28.3 | 262.5 | 49.5 | 11190 |
| *PD18-05-759* | 79.8 | 1686 | 158.1 | 1095 | 818 | 344 | 1864 | 426 | 3290 | 701 | 2228 | 352 | 2790 | 427 | 11250 |
| *PD18-05-760* | 0.012 | 2.42 | 0.032 | 0.46 | 1.01 | 0.543 | 7.87 | 2.75 | 38.6 | 15.61 | 81.4 | 17.45 | 178.1 | 37.16 | 8160 |
| *PD18-05-761* | 6.6 | 61.4 | 5.79 | 40.9 | 32.6 | 13.46 | 86.5 | 22.33 | 199.2 | 55.2 | 226.4 | 44.3 | 410 | 78.9 | 11320 |
| *PD18-05-762* | 79.8 | 1222 | 121.4 | 788 | 623 | 291.5 | 1512 | 352 | 2620 | 545 | 1761 | 277 | 2229 | 339 | 8110 |
| *PD18-05-763* | 1.77 | 35.4 | 2.58 | 24.7 | 27.8 | 11.6 | 79 | 18.2 | 154.8 | 40.2 | 142.5 | 24.34 | 206.2 | 35.2 | 11210 |
| *PD18-05-764* | 2.23 | 138.7 | 4.11 | 37 | 43.2 | 14.32 | 148.3 | 36.5 | 354 | 103.8 | 418 | 77.5 | 695 | 123.9 | 11440 |
| | | | | | | | | | | | | | | | |
| *KL18-8-772* | 23.68 | 408 | 45.3 | 328.5 | 178.3 | 73.9 | 311 | 61.2 | 480 | 111.1 | 379.3 | 65.1 | 564 | 96.5 | 12800 |
| *KL18-8-773* | 28.8 | 336 | 46.5 | 280 | 207 | 86 | 353 | 95.5 | 828 | 185.9 | 660 | 117.7 | 1028 | 151.6 | 9310 |
| *KL18-8-774* | 6.1 | 67.8 | 7.12 | 48.8 | 39.6 | 17.9 | 85.7 | 21.3 | 191 | 45.3 | 174.7 | 34.2 | 331 | 64.9 | 12100 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *KL18-8-775* | 54.4 | 600 | 65.7 | 469 | 337 | 164.5 | 711 | 146.3 | 918 | 186 | 556 | 83.4 | 710 | 118.4 | 11040 |
| *KL18-8-776* | 0.766 | 10.84 | 0.625 | 5.54 | 6.18 | 2.7 | 22.1 | 6.15 | 70.1 | 24.53 | 115.4 | 23.27 | 231 | 48.2 | 10250 |
| *KL18-8-777* | 7.42 | 85.9 | 9.82 | 97 | 97 | 49.4 | 260 | 53.8 | 425 | 96.2 | 327 | 54.5 | 482 | 92.9 | 11600 |
| *KL18-8-778* | 8.29 | 87.9 | 8.82 | 79.4 | 90.9 | 51.9 | 322 | 66 | 502 | 109.6 | 329 | 48.9 | 383 | 67.9 | 13630 |
| *KL18-8-779* | 4.12 | 71.9 | 4.14 | 37.9 | 37 | 18.3 | 104.9 | 25.7 | 225 | 58.1 | 226 | 40.3 | 374 | 69.6 | 10050 |
| *KL18-8-780* | 9.59 | 157 | 18.3 | 159 | 139 | 66 | 303 | 53.2 | 372 | 80.5 | 277 | 49 | 453 | 88.7 | 11410 |
| *KL18-8-781* | 45.9 | 584 | 68.5 | 538 | 344 | 165.1 | 713 | 135.1 | 971 | 190 | 584 | 91 | 747 | 121.5 | 13290 |
| *KL18-8-782* | 6.72 | 86.1 | 7.66 | 66.3 | 64.1 | 36.7 | 197.9 | 46.3 | 364 | 86 | 285 | 47.9 | 420 | 79.7 | 11430 |
| *KL18-8-783* | 17.3 | 225 | 24.3 | 189 | 148.9 | 71.2 | 332 | 69.7 | 533 | 116.7 | 403 | 68.5 | 629 | 111.3 | 10990 |
| *KL18-8-784* | 1.35 | 31.2 | 1.07 | 11.1 | 9.24 | 2.8 | 29.1 | 6.95 | 73.3 | 22.9 | 96.3 | 18.17 | 166.3 | 30.5 | 10240 |
| *KL18-8-785* | 9.93 | 150 | 12.3 | 85.7 | 65.3 | 31.8 | 130 | 29.7 | 250 | 65.6 | 264 | 52.2 | 510 | 100.1 | 12960 |
| *KL18-8-786* | 14.8 | 194 | 29.6 | 260 | 180 | 76.5 | 324 | 59.7 | 412 | 87.1 | 275.6 | 46.2 | 398 | 69 | 11830 |
| *KL18-8-787* | 0.76 | 26.5 | 0.94 | 8.3 | 8.2 | 3.82 | 24.4 | 5.88 | 56.3 | 17.38 | 81.2 | 17.27 | 180 | 41.3 | 12160 |
| *KL18-8-795* | 6.56 | 95.9 | 7.94 | 60.9 | 48.2 | 22.9 | 123.9 | 28.2 | 234 | 55.7 | 196.3 | 33.9 | 298.1 | 52.9 | 11680 |
| *KL18-8-796* | 1.36 | 47.1 | 1.22 | 11.56 | 13.3 | 4.69 | 42.3 | 10.95 | 107.3 | 32.6 | 139 | 26.64 | 258.8 | 48.2 | 11770 |
| *KL18-8-797* | 4.8 | 59.1 | 3.78 | 23.4 | 13.1 | 5.16 | 28.6 | 6.01 | 53.5 | 16.9 | 78.4 | 16.71 | 176.4 | 38.5 | 11430 |
| *KL18-8-798* | 11.9 | 122.7 | 23.5 | 212 | 169 | 80.3 | 411 | 74.5 | 529 | 111.3 | 359 | 54.5 | 440 | 72.7 | 10060 |
| *KL18-8-799* | 6.51 | 126.5 | 12.67 | 109.6 | 90 | 40.2 | 211.1 | 40 | 309 | 77.2 | 283.9 | 50.5 | 443.2 | 78.5 | 11810 |
| *KL18-8-800* | 15.1 | 209 | 22.4 | 161 | 124 | 58.1 | 277 | 54 | 391 | 85.3 | 282 | 46.9 | 416 | 66.6 | 12510 |
| *KL18-8-801* | 3.68 | 43 | 3.98 | 30.8 | 24.8 | 13.7 | 59.3 | 13 | 112.8 | 29 | 123 | 25.3 | 237 | 46 | 11740 |
| *KL18-8-802* | 83.8 | 1281 | 161.7 | 1169 | 655 | 286.6 | 1181 | 223.6 | 1584 | 321.9 | 969 | 145.5 | 1186 | 185.9 | 13880 |
| *KL18-8-803* | 4.05 | 46.6 | 3.81 | 30.2 | 26.5 | 14 | 68 | 15.1 | 125.8 | 27.8 | 96.8 | 17.5 | 164.7 | 31.5 | 11940 |
| *KL18-8-804* | 5.5 | 76.8 | 6.54 | 53.1 | 39.7 | 19.4 | 97.5 | 21.4 | 186 | 50.6 | 215 | 43.7 | 439 | 87.6 | 13010 |
| *KL18-8-805* | 5.26 | 94.4 | 7.09 | 54.1 | 44.1 | 19.09 | 97.5 | 24.4 | 211.2 | 53.5 | 200.9 | 36 | 327 | 58.8 | 11980 |
| *KL18-8-806* | 5.3 | 50.8 | 7.56 | 65.5 | 66.2 | 35.1 | 198.6 | 42.7 | 344 | 81.7 | 282.7 | 45.8 | 391.3 | 70 | 10830 |
| *KL18-8-807* | 1.72 | 24 | 2.68 | 19.4 | 16.4 | 8.7 | 46.1 | 9.5 | 77.9 | 23.4 | 103.6 | 21.6 | 233 | 51.8 | 11560 |
| *KL18-8-808* | 1.69 | 75.7 | 2.37 | 27.4 | 33.1 | 10.93 | 118.4 | 30.2 | 305.4 | 91.6 | 371 | 66.5 | 591 | 104.9 | 10490 |
| *KL18-8-809* | 16.5 | 237 | 21 | 153.6 | 110.3 | 61.4 | 295 | 65 | 499 | 111.9 | 362 | 61.6 | 528 | 88.6 | 11630 |
| *KL18-8-810* | 0.017 | 4.57 | 0.023 | 0.159 | 0.255 | 0.179 | 1.79 | 0.636 | 10.39 | 5.38 | 35.1 | 9.69 | 134.6 | 38.93 | 14050 |
| *KL18-8-818* | 0 | 0.688 | 0.0078 | 0.056 | 0.097 | 0.137 | 1.54 | 0.612 | 10.49 | 4.82 | 29.1 | 7.34 | 90.4 | 22.6 | 11950 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *KL18-8-819* | 27.3 | 375 | 43.4 | 325 | 173.4 | 73.6 | 321 | 62.9 | 479 | 111.7 | 397 | 70.3 | 669 | 127 | 12310 |
| *KL18-8-820* | 1.52 | 38.3 | 1.94 | 15.5 | 13.6 | 6.84 | 36.4 | 9.62 | 93.5 | 29.2 | 131.8 | 27.1 | 289.8 | 60 | 12950 |
| *KL18-8-821* | 5.37 | 72.3 | 5.82 | 46.5 | 40.9 | 19.5 | 98.6 | 22.7 | 187 | 46 | 183.3 | 34.5 | 344 | 66.8 | 12400 |
| *KL18-8-822* | 8.77 | 86 | 14.02 | 124.3 | 111.7 | 54.1 | 310 | 59.3 | 439 | 96.2 | 308 | 48.8 | 409 | 66.6 | 12420 |
| *KL18-8-823* | 6.44 | 78.4 | 7.01 | 57.5 | 44.5 | 20.28 | 86.9 | 18.29 | 137.1 | 32.9 | 125.4 | 23.92 | 239.9 | 49 | 12590 |
| *KL18-8-824* | 35.3 | 394 | 37.3 | 298 | 273 | 147.5 | 684 | 151.1 | 1084 | 233.2 | 707 | 112.6 | 947 | 154.2 | 11920 |
| *KL18-8-825* | 0 | 17.24 | 0.094 | 2.04 | 5.02 | 0.834 | 32.9 | 10.05 | 121.3 | 42.1 | 198.5 | 38.9 | 379 | 75 | 11610 |
| *KL18-8-826* | 11.37 | 130 | 13.1 | 105.1 | 95.1 | 51.6 | 264 | 58.4 | 464 | 97.6 | 309 | 46.6 | 375 | 62.8 | 12530 |
| *KL18-8-827* | 66 | 1036 | 137.4 | 932 | 416 | 176.6 | 644 | 122.4 | 874 | 187.4 | 614 | 104.4 | 945 | 171.9 | 10970 |
| *KL18-8-828* | 21.9 | 249 | 26.2 | 231 | 225 | 131 | 730 | 154 | 1200 | 244 | 716 | 105 | 749 | 115 | 10060 |
| *KL18-8-829* | 8.29 | 102.4 | 10.22 | 83.1 | 66.8 | 34.2 | 165 | 33.1 | 260 | 64.5 | 251 | 47.2 | 475 | 95.7 | 11840 |
| *KL18-8-830* | 15.4 | 207 | 25 | 164 | 80.1 | 33.4 | 196 | 40.3 | 338 | 82.2 | 307 | 53.2 | 458 | 80.9 | 10940 |
| *KL18-8-831* | 0.078 | 46.6 | 0.56 | 8.97 | 11.53 | 4.34 | 41.6 | 10.79 | 112.4 | 35 | 152.6 | 29 | 273 | 51.1 | 10110 |
| *KL18-8-832* | 16.1 | 163 | 25.5 | 202 | 147 | 70.7 | 345 | 67.8 | 519 | 119.2 | 420 | 71.1 | 661 | 118.6 | 13010 |
| *KL18-8-833* | 27.7 | 359 | 41.3 | 313 | 203.1 | 87 | 348 | 76.5 | 609 | 138 | 504 | 92 | 833 | 148.9 | 12520 |
| *KL18-8-841* | 11.65 | 138.9 | 13.53 | 109.6 | 100.2 | 54.4 | 256 | 53 | 380 | 78.3 | 255 | 41.56 | 363 | 66.7 | 13950 |
| *KL18-8-842* | 1.195 | 62.7 | 1.44 | 13.54 | 15.39 | 5.41 | 51 | 12.79 | 128.7 | 38.8 | 165.5 | 31.11 | 289.3 | 54.1 | 10940 |
| *KL18-8-843* | 7.81 | 91.8 | 7.42 | 49.4 | 43.7 | 24.7 | 85.7 | 16.4 | 113.1 | 26.2 | 111.8 | 23.9 | 270 | 64 | 13070 |
| *KL18-8-844* | 11.78 | 188 | 21.7 | 174 | 114.2 | 46.8 | 191 | 40.2 | 317.3 | 76.7 | 279 | 51.4 | 475 | 92.7 | 11200 |
| *KL18-8-845* | 2.63 | 44.5 | 3.18 | 27.2 | 26.1 | 13.58 | 77.6 | 17.39 | 145.1 | 36.1 | 135.9 | 25.27 | 247 | 51.2 | 11100 |
| *KL18-8-846* | 2.49 | 23.39 | 3.46 | 40.4 | 51.7 | 31.5 | 195.2 | 41.7 | 323 | 71.8 | 208.1 | 29.02 | 216.5 | 33.88 | 10330 |
| *KL18-8-847* | 3.06 | 54.9 | 3.14 | 22.12 | 20.9 | 9.36 | 43.9 | 11.12 | 99.9 | 28.43 | 127.4 | 26.72 | 290.7 | 64.1 | 11400 |
| *KL18-8-848* | 9.64 | 143.8 | 15.2 | 119.1 | 95 | 43.8 | 217 | 43.8 | 330 | 75.3 | 267.3 | 46.9 | 447 | 85 | 12010 |
| *KL18-8-849* | 4.87 | 77.9 | 6.4 | 46.9 | 32 | 13.1 | 64.1 | 15.5 | 135 | 36.7 | 160.1 | 32.1 | 335 | 67.5 | 11450 |
| *KL18-8-850* | 1.84 | 46.6 | 2.07 | 20.6 | 22.2 | 10.05 | 74.6 | 17.68 | 161.7 | 44.9 | 177.7 | 31.77 | 290.1 | 53.8 | 10490 |
| *KL18-8-851* | 6.22 | 107.9 | 10.8 | 91.3 | 62.3 | 29.1 | 137 | 23.8 | 176 | 44.7 | 182.5 | 36.6 | 388.5 | 87.9 | 11590 |
| *KL18-8-852* | 143.8 | 1731 | 154.8 | 1191 | 867 | 459 | 1849 | 390 | 2995 | 644 | 2165 | 352 | 2910 | 446 | 14700 |
| *KL18-8-853* | 40.8 | 223.2 | 29.3 | 216 | 126.1 | 54.8 | 245 | 45.5 | 356 | 83.5 | 302 | 53.6 | 503 | 92 | 11830 |
| *KL18-8-854* | 1.31 | 30.5 | 1.54 | 10.4 | 10.5 | 4.9 | 26.3 | 6.68 | 73.4 | 27.49 | 144.8 | 33.07 | 376.1 | 85 | 12660 |
| *KL18-8-855* | 6.36 | 74.9 | 9.63 | 84.4 | 68.7 | 35.2 | 179 | 33 | 251 | 60.1 | 226.2 | 43 | 435 | 92.6 | 12410 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *KL18-8-856* | 19.59 | 184.2 | 21.36 | 192.8 | 188 | 103 | 470 | 101.3 | 763 | 173 | 556 | 88.3 | 761 | 126.8 | 11870 |
| *KL18-8-857* | 5.94 | 95.5 | 7.23 | 62.6 | 71.2 | 38.2 | 226 | 50.4 | 400 | 92.7 | 282 | 45.5 | 355 | 57.6 | 10120 |
| *KL18-8-858* | 4.98 | 47 | 5.32 | 47.7 | 56.6 | 33.3 | 189 | 38.6 | 305 | 60.8 | 178 | 26.3 | 214 | 36 | 12150 |
| *KL18-8-866* | 9.61 | 142.4 | 11.66 | 96.1 | 86.8 | 44 | 202 | 41.6 | 339 | 80.9 | 303 | 53.9 | 521 | 106.8 | 12140 |
| *KL18-8-867* | 53 | 640 | 67.4 | 510 | 310 | 145.5 | 590 | 114.8 | 797 | 162.8 | 489 | 72.4 | 648 | 120.2 | 13980 |
| *KL18-8-868* | 324 | 3760 | 374 | 2870 | 2433 | 1310 | 5260 | 1272 | 9670 | 1971 | 5930 | 840 | 6780 | 902 | 11710 |
| *KL18-8-869* | 340 | 3500 | 338 | 2590 | 2046 | 1079 | 4290 | 878 | 6720 | 1366 | 4230 | 636 | 5100 | 769 | 18730 |
| *KL18-8-870* | 2.48 | 20.2 | 3.24 | 40.4 | 60.3 | 36 | 258 | 47 | 408 | 91 | 268 | 38.3 | 281 | 43.4 | 13660 |
| *KL18-8-871* | 11.54 | 216 | 21.4 | 168.6 | 118.3 | 55.4 | 275 | 56.7 | 436 | 103.2 | 363 | 63.4 | 580 | 104.7 | 11810 |
| *KL18-8-872* | 3.67 | 54.9 | 3.95 | 33.2 | 32.5 | 16.95 | 93.8 | 20.65 | 172.5 | 43.3 | 164.5 | 31.3 | 313 | 64.2 | 11170 |
| *KL18-8-873* | 4.62 | 59.7 | 4.63 | 34.4 | 34.5 | 17.6 | 89 | 19.8 | 165 | 40.8 | 158 | 30.6 | 345 | 78.9 | 16840 |
| *KL18-8-874* | 194.9 | 2970 | 330 | 2470 | 1420 | 653 | 2810 | 536 | 3680 | 744 | 2240 | 368 | 3040 | 498 | 19460 |
| *KL18-8-875* | 4.5 | 76.9 | 6.77 | 59.1 | 55.1 | 25.3 | 130.5 | 25.2 | 186 | 48.1 | 181.3 | 33.7 | 307 | 56.4 | 11100 |
| *KL18-8-876* | 4.94 | 70 | 5.99 | 57.8 | 64.5 | 35 | 203.6 | 44.2 | 346 | 76 | 244.2 | 39.3 | 322.5 | 52.5 | 10410 |
| *KL18-8-877* | 5.97 | 100.6 | 8.36 | 74.5 | 71.6 | 35.8 | 189.8 | 46.8 | 375 | 81.9 | 273.4 | 43.9 | 367 | 58.7 | 11510 |
| *KL18-8-878* | 2.68 | 36.7 | 3.64 | 36.8 | 48.3 | 27.4 | 172.3 | 39.2 | 306 | 72.5 | 245.7 | 39.6 | 332 | 60.8 | 10520 |
| *KL18-8-879* | 0.141 | 26.66 | 0.384 | 6.2 | 8.61 | 1.83 | 33.9 | 8.8 | 95.9 | 31.3 | 139.6 | 26.73 | 252.7 | 48.5 | 11140 |
| *KL18-8-880* | 16 | 100.2 | 27.1 | 231 | 178 | 87 | 476 | 97 | 740 | 170 | 574 | 92 | 759 | 119.1 | 12870 |
| *KL18-8-881* | 3.26 | 63.3 | 4.06 | 34.9 | 31.8 | 12.87 | 96.8 | 23.12 | 215.6 | 60.6 | 243.6 | 44.1 | 411 | 72.3 | 9840 |
| *KL18-8-882* | 13.69 | 169 | 15.4 | 119.1 | 105.5 | 56.7 | 306 | 72.7 | 553 | 126.1 | 426 | 69.9 | 612 | 110.2 | 11500 |
| *KL18-8-890* | 0.141 | 18.42 | 0.253 | 2.58 | 3.41 | 1.23 | 12.8 | 3.44 | 39 | 14.09 | 67 | 14.14 | 148.3 | 30.21 | 12110 |
| *KL18-8-891* | 30.7 | 402 | 43.2 | 325 | 191 | 82.9 | 351 | 64.9 | 516 | 124.3 | 477 | 87.4 | 814 | 150 | 12670 |
| *KL18-8-892* | 0.243 | 6.71 | 0.363 | 4.04 | 5.09 | 1.87 | 20.3 | 6.2 | 77.2 | 28.5 | 136.2 | 27.1 | 267 | 54.5 | 9900 |
| *KL18-8-893* | 0.18 | 30.6 | 0.43 | 4.01 | 5.77 | 0.9 | 26.2 | 7.85 | 92.3 | 31.13 | 142.8 | 27.7 | 260 | 47.8 | 11350 |
| *KL18-8-894* | 20.82 | 375 | 39.1 | 330 | 268 | 123 | 502 | 94.8 | 650 | 135.2 | 438 | 71.1 | 606 | 103.2 | 10410 |
| *KL18-8-895* | 7.49 | 86.7 | 10.05 | 89.7 | 88.3 | 47.3 | 259 | 57 | 439.5 | 97.5 | 316.7 | 50.7 | 441 | 80.8 | 11930 |
| *KL18-8-896* | 33.2 | 520 | 59 | 420 | 215 | 97 | 443 | 92 | 704 | 164 | 546 | 91 | 804 | 145 | 12210 |
| *KL18-8-897* | 3.32 | 92.6 | 3.92 | 31 | 29 | 11.94 | 86.8 | 21.4 | 212 | 61.2 | 260 | 49.2 | 458 | 84.3 | 11420 |
| *KL18-8-898* | 10.7 | 179 | 15.9 | 113 | 77.1 | 32.5 | 146 | 33 | 286 | 72.7 | 295 | 56.2 | 549 | 109.2 | 11350 |
| *KL18-8-899* | 16.3 | 258 | 25.5 | 195 | 103.9 | 47.4 | 200 | 41 | 317 | 76.5 | 316 | 61.7 | 584 | 117.6 | 9970 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *KL18-8-900* | 1.8 | 18.5 | 1.65 | 13.5 | 12.9 | 6.29 | 35.2 | 8.37 | 76 | 20.92 | 87.1 | 16.74 | 164.6 | 31.8 | 12190 |
| *KL18-8-901* | 0.268 | 9.07 | 0.42 | 3.98 | 4.76 | 1.32 | 26.8 | 9.49 | 136.8 | 53.5 | 263 | 52.5 | 505 | 97.3 | 13880 |
| *KL18-8-902* | 0.92 | 25.46 | 1.36 | 13.7 | 13.63 | 5.22 | 44.8 | 10.99 | 110.2 | 35.3 | 158 | 30.5 | 291 | 56.9 | 11480 |
| *KL18-8-903* | 44.9 | 652 | 72.5 | 608 | 505 | 243 | 967 | 169 | 1102 | 209.4 | 594 | 92.6 | 769 | 119.7 | 12140 |
| *KL18-8-904* | 43.7 | 480 | 63.6 | 558 | 594 | 339 | 2080 | 417 | 3100 | 656 | 1811 | 251 | 1760 | 243 | 11620 |
| *KL18-8-905* | 1.11 | 39.3 | 1.67 | 16.63 | 26.2 | 13.5 | 95.1 | 19.4 | 158 | 40.3 | 153.8 | 27.91 | 260.1 | 48.28 | 9660 |
| | | | | | | | | | | | | | | | |
| *PD18-12-921* | 308 | 840 | 119.7 | 839 | 506 | 217.1 | 790 | 168.8 | 1316 | 290.7 | 1018 | 171.8 | 1484 | 228.3 | 11060 |
| *PD18-12-922* | 1.96 | 63 | 6.55 | 58.4 | 45.5 | 16.1 | 119.6 | 30.1 | 296.9 | 90.2 | 359.4 | 63.2 | 539 | 96.5 | 8130 |
| *PD18-12-923* | 1.6 | 37 | 0.71 | 7.68 | 9.08 | 1.74 | 33.2 | 8.65 | 92.7 | 29.8 | 125.5 | 23.2 | 206 | 37.1 | 9160 |
| *PD18-12-924* | 104 | 261 | 28 | 138 | 30.2 | 2.13 | 39.3 | 7.95 | 80.7 | 27 | 123.6 | 23.82 | 222.7 | 42.23 | 10780 |
| *PD18-12-925* | 0.375 | 24.87 | 1.22 | 12.39 | 10.21 | 4.6 | 28.7 | 6.77 | 67 | 20.4 | 88.2 | 17 | 165.2 | 31.98 | 9910 |
| *PD18-12-926* | 0.632 | 44.7 | 2.62 | 25.3 | 20 | 6.76 | 43.2 | 9.72 | 89.7 | 25.39 | 102 | 18.71 | 171.1 | 31.99 | 9190 |
| *PD18-12-928* | 19.7 | 381 | 66.6 | 574 | 368 | 154.7 | 506 | 105.4 | 810 | 174.2 | 604 | 104.5 | 883 | 134.8 | 9380 |
| *PD18-12-929* | 2.86 | 98.3 | 11.54 | 125.5 | 94.2 | 43 | 129.9 | 25.4 | 180.3 | 42.7 | 141.6 | 23.5 | 213 | 35.9 | 11660 |
| *PD18-12-930* | 0.024 | 18.8 | 0.071 | 1.11 | 1.66 | 0.74 | 8.5 | 2.4 | 31 | 12.1 | 62.9 | 14.2 | 153 | 34.5 | 10020 |
| *PD18-12-931* | 24.3 | 404 | 76.4 | 642 | 408 | 168.7 | 566 | 116.2 | 853 | 183 | 603 | 103.2 | 879 | 130.6 | 10540 |
| *PD18-12-932* | 6.4 | 146.5 | 26.3 | 222 | 148.8 | 63.3 | 208.1 | 44.7 | 353 | 82.9 | 308 | 57.9 | 530 | 88.1 | 13080 |
| *PD18-12-933* | 9.3 | 241.8 | 36.7 | 325 | 235 | 105.6 | 343 | 70.7 | 568 | 125.2 | 464 | 83 | 776 | 134.8 | 8440 |
| *PD18-12-934* | 1.13 | 20.2 | 0.43 | 3.9 | 4.8 | 1.04 | 21.4 | 6.14 | 67 | 22.31 | 96.3 | 18.95 | 174.6 | 32.67 | 9420 |
| *PD18-12-935* | 7.22 | 219 | 30.4 | 293 | 210 | 98 | 288 | 58.8 | 440 | 98.8 | 328 | 57.2 | 517 | 85.7 | 11980 |
| *PD18-12-936* | 12.6 | 340 | 46.4 | 455 | 311 | 144.4 | 445 | 93.4 | 721 | 172.8 | 649 | 119.8 | 1057 | 172.4 | 11700 |
| *PD18-12-944* | 6.1 | 189 | 24.8 | 226 | 171 | 73.3 | 245 | 53.8 | 409 | 103.8 | 384 | 67.2 | 581 | 96.6 | 9930 |
| *PD18-12-945* | 1.193 | 48.6 | 4.52 | 39.6 | 28.5 | 12.12 | 60.6 | 14.79 | 143.6 | 43.35 | 190 | 38.37 | 376.8 | 72.1 | 10160 |
| *PD18-12-946* | 9.57 | 233.8 | 36.7 | 332 | 232 | 99.3 | 347 | 74.1 | 586 | 141.1 | 509 | 90.4 | 802 | 120.5 | 10470 |
| *PD18-12-947* | 74.8 | 1843 | 292.7 | 2850 | 2014 | 934 | 2855 | 583 | 4376 | 880 | 2908 | 484 | 4124 | 613 | 11630 |
| *PD18-12-948* | 26.27 | 421 | 86.1 | 715 | 457 | 185.5 | 629 | 134.4 | 1058 | 236.4 | 834 | 148.8 | 1287 | 201.3 | 10330 |
| *PD18-12-949* | 155.1 | 2974 | 495.4 | 4443 | 3150 | 1432 | 4898 | 1078 | 8410 | 1733 | 5640 | 892 | 7900 | 1052 | 16500 |
| *PD18-12-950* | 64.9 | 1710 | 267 | 2570 | 1698 | 788 | 2510 | 521 | 3870 | 789 | 2580 | 416 | 3450 | 503 | 14990 |
| *PD18-12-951* | 8.34 | 167.8 | 24.8 | 214 | 139 | 56.6 | 221 | 52.4 | 442 | 114.1 | 476 | 86.9 | 815 | 142.2 | 11320 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-12-952* | 8.83 | 184.7 | 30.2 | 261.2 | 180.6 | 75.6 | 263.1 | 57.5 | 461 | 112.8 | 440 | 82.8 | 768 | 137.2 | 11120 |
| *PD18-12-953* | 0.81 | 31.7 | 2.9 | 24.1 | 18.6 | 7.51 | 38.5 | 9.85 | 96.6 | 27.5 | 115.1 | 22.7 | 209.7 | 36.4 | 10760 |
| *PD18-12-954* | 29.8 | 745 | 117.6 | 1124 | 768 | 363 | 1086 | 218 | 1630 | 337 | 1084 | 176 | 1460 | 210 | 4800 |
| *PD18-12-955* | 42.8 | 1355 | 193.3 | 2049 | 1419 | 673 | 1787 | 350 | 2442 | 504 | 1604 | 263.2 | 2141 | 314.9 | 8350 |
| *PD18-12-956* | 73.2 | 1832 | 266.3 | 2563 | 1796 | 840 | 2634 | 542 | 3980 | 835 | 2710 | 449 | 3721 | 537 | 9670 |
| *PD18-12-957* | 13.08 | 416 | 59.7 | 600 | 405 | 185.5 | 524 | 100.6 | 722 | 155.1 | 528 | 88 | 731 | 116.9 | 12610 |
| *PD18-12-958* | 0.304 | 37.1 | 0.96 | 10.1 | 11.2 | 3.94 | 37.9 | 9.91 | 105.8 | 33.1 | 144.7 | 27.3 | 255 | 48.4 | 10130 |
| *PD18-12-959* | 3.54 | 79.1 | 12.2 | 103.4 | 57.7 | 22.3 | 77.5 | 15.3 | 112.6 | 29.5 | 110 | 21.23 | 212 | 41.6 | 11750 |
| *PD18-12-960* | 2.99 | 59 | 7.78 | 60 | 37.9 | 14.37 | 54.3 | 11.83 | 101.9 | 30 | 129.9 | 27.4 | 303 | 60.7 | 11380 |
| *PD18-12-968* | 10.58 | 246 | 36.8 | 336 | 232 | 102.9 | 330 | 71.1 | 554 | 132.8 | 506 | 90.9 | 813 | 137.4 | 10020 |
| *PD18-12-969* | 20 | 347 | 58.4 | 483 | 330 | 133.6 | 493 | 103.4 | 825 | 194.6 | 720 | 134.9 | 1253 | 209.8 | 9510 |
| *PD18-12-970* | 0.78 | 39 | 2.21 | 20 | 15.51 | 5.87 | 35.1 | 8.97 | 91.7 | 27.74 | 119.7 | 23.24 | 216.3 | 39.1 | 10700 |
| *PD18-12-971* | 1.81 | 33.5 | 4.72 | 42.4 | 28.3 | 11.58 | 54.3 | 12.67 | 113.9 | 32 | 130.2 | 24.3 | 224 | 40.9 | 10470 |
| *PD18-12-972* | 0.197 | 27.4 | 0.791 | 8.4 | 8.36 | 2.72 | 23.9 | 5.73 | 57.5 | 17.42 | 73.2 | 13.94 | 133.2 | 25.39 | 9160 |
| *PD18-12-973* | 17.31 | 491 | 74.4 | 765 | 542 | 245 | 711 | 135.2 | 992 | 212.3 | 694 | 117.3 | 1015 | 155.7 | 10230 |
| *PD18-12-974* | 58.4 | 1637 | 233.3 | 2420 | 1677 | 803 | 2280 | 448 | 3250 | 671 | 2131 | 361 | 3010 | 448 | 12470 |
| *PD18-12-975* | 7.99 | 547 | 62.8 | 763 | 508 | 256 | 615 | 110.3 | 828 | 195 | 665 | 115.1 | 1016 | 167.1 | 10390 |
| *PD18-12-976* | 17.35 | 303.3 | 57.6 | 476 | 308 | 126.1 | 446 | 100.2 | 820 | 202.2 | 755 | 137.8 | 1215 | 199.6 | 11290 |
| *PD18-12-977* | 7.1 | 159.2 | 23.53 | 202 | 132 | 54 | 180.2 | 37.4 | 289.8 | 63.2 | 226.8 | 41.29 | 392.7 | 66.6 | 11340 |
| *PD18-12-978* | 0.394 | 36.6 | 1.35 | 11.7 | 9.27 | 3.52 | 20 | 4.85 | 44.9 | 12.76 | 51.1 | 9.9 | 95.4 | 18.36 | 9810 |
| *PD18-12-979* | 0.255 | 12.6 | 1.07 | 9.4 | 6.6 | 2.74 | 14.9 | 3.59 | 37 | 12.69 | 60.7 | 13.01 | 136.2 | 27.6 | 11310 |
| *PD18-12-980* | 5.59 | 149 | 21.7 | 187 | 125 | 51.4 | 197 | 41.1 | 356 | 95 | 382 | 71.8 | 672 | 118.1 | 9710 |
| *PD18-12-981* | 1.191 | 38.8 | 4.13 | 34.6 | 24.4 | 11.11 | 50.9 | 12.1 | 112.8 | 33.3 | 141.8 | 27.9 | 271.4 | 51.8 | 9690 |
| *PD18-12-982* | 2.58 | 143 | 14.1 | 158 | 129 | 59 | 181 | 38.6 | 343 | 97.9 | 411 | 80.3 | 762 | 132.8 | 14430 |
| *PD18-12-983* | 0.068 | 16.69 | 0.394 | 5.66 | 6.92 | 3.16 | 20.32 | 4.73 | 45.9 | 13.74 | 59 | 12 | 125.4 | 25.76 | 9090 |
| *PD18-12-984* | 2.05 | 80 | 7.44 | 61 | 42.1 | 17.7 | 73 | 15.8 | 128.4 | 32.7 | 121.2 | 22.2 | 198 | 33.7 | 10010 |
| *PD18-12-992* | 31.1 | 754 | 120.5 | 1140 | 809 | 376 | 1160 | 235 | 1720 | 370 | 1193 | 195 | 1650 | 247 | 13370 |
| *PD18-12-993* | 41 | 186 | 34.6 | 187 | 68.9 | 10.24 | 99 | 22.4 | 235 | 82.1 | 389 | 79.8 | 764 | 140.4 | 13710 |
| *PD18-12-994* | 125.9 | 2636 | 457 | 3990 | 2673 | 1261 | 4240 | 916 | 7150 | 1494 | 4850 | 755 | 6620 | 896 | 14280 |
| *PD18-12-995* | 8.83 | 186 | 34.6 | 296 | 191 | 81.2 | 280 | 61 | 487 | 115.6 | 447 | 79.2 | 716 | 120.8 | 10640 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-12-996* | Below LOD | 10.21 | 0.021 | 0.291 | 0.66 | 0.144 | 4.29 | 1.544 | 19.36 | 7.37 | 36.2 | 8.19 | 95.2 | 22.72 | 12920 |
| *PD18-12-997* | 11.14 | 514 | 68.3 | 788 | 517 | 248.5 | 649 | 116.7 | 821 | 171.1 | 546 | 91.9 | 768 | 120.4 | 11850 |
| *PD18-12-998* | 36.3 | 859 | 136.8 | 1251 | 882 | 417 | 1269 | 257.4 | 1911 | 396 | 1318 | 214 | 1750 | 254.8 | 12950 |
| *PD18-12-999* | 5.69 | 147.5 | 17.71 | 164.7 | 113.7 | 50.1 | 165.7 | 35.2 | 278.3 | 67.2 | 253.3 | 48.1 | 462 | 83.4 | 11580 |
| *PD18-12-1000* | 4.39 | 103.4 | 14.03 | 122.6 | 82.5 | 35.9 | 129.6 | 28.01 | 226.1 | 53.7 | 201.3 | 36.3 | 334.1 | 56.4 | 11020 |
| *PD18-12-1001* | 0.078 | 20.9 | 0.615 | 9.25 | 12.31 | 2.54 | 44.9 | 11.41 | 121.7 | 38.1 | 160.9 | 29.3 | 260.3 | 46 | 9590 |
| *PD18-12-1002* | 175 | 1503 | 239.5 | 2048 | 1402 | 640 | 2107 | 444 | 3374 | 717 | 2326 | 394 | 3270 | 480 | 10680 |
| *PD18-12-1003* | 1.01 | 32.5 | 3.06 | 27.5 | 19.2 | 7.51 | 49 | 13.7 | 146.6 | 49.7 | 224.8 | 43.8 | 415 | 72.1 | 11570 |
| *PD18-12-1004* | 154.1 | 2760 | 498 | 4315 | 2921 | 1361 | 4700 | 1047 | 8080 | 1659 | 5390 | 847 | 7380 | 1004 | 13400 |
| *PD18-12-1005* | 4.65 | 148.7 | 17.27 | 171.2 | 121.5 | 54.2 | 162.3 | 32.86 | 260.5 | 64.8 | 255 | 48.6 | 480 | 90.5 | 11820 |
| *PD18-12-1006* | 11.64 | 257.4 | 42.8 | 370 | 246 | 100.1 | 329 | 66.3 | 493 | 105.8 | 361 | 63 | 558 | 89.4 | 11090 |
| *PD18-12-1007* | 26.1 | 597 | 99.6 | 919 | 626 | 292 | 919 | 193.5 | 1479 | 316 | 1053 | 180.8 | 1563 | 237.1 | 13520 |
| *PD18-12-1008* | 1.56 | 146.4 | 10.57 | 142.8 | 122.3 | 58.6 | 160.9 | 29.1 | 227 | 57.7 | 221.8 | 42.9 | 417 | 84.4 | 11550 |
| *PD18-12-1016* | 9.44 | 277 | 36.1 | 330 | 232 | 103.6 | 323 | 65.6 | 488 | 107.5 | 374 | 67.1 | 611 | 104.6 | 11890 |
| *PD18-12-1017* | 0.038 | 7.46 | 0.186 | 2.03 | 2.97 | 0.458 | 14.87 | 4.74 | 58.7 | 21.42 | 103.3 | 20.32 | 195.2 | 35.8 | 11500 |
| *PD18-12-1018* | 64.8 | 1426 | 227.1 | 2030 | 1416 | 655 | 2209 | 475 | 3550 | 750 | 2481 | 414 | 3500 | 508 | 16490 |
| *PD18-12-1019* | 159.5 | 3043 | 510 | 4412 | 3051 | 1448 | 5060 | 1094 | 8550 | 1788 | 5780 | 902 | 7870 | 1052 | 16010 |
| *PD18-12-1020* | 9.45 | 211 | 32.6 | 291 | 207 | 89.4 | 317 | 69.1 | 580 | 148.3 | 569 | 101.5 | 911 | 150.3 | 12320 |
| *PD18-12-1021* | 157.6 | 2700 | 481.9 | 4121 | 2739 | 1313 | 4580 | 1015 | 8060 | 1683 | 5440 | 852 | 7340 | 1000 | 18450 |
| *PD18-12-1022* | 3.4 | 80.4 | 12.35 | 109.2 | 67.2 | 30.3 | 102.8 | 22.6 | 174 | 40.3 | 143.3 | 25.7 | 244 | 40.8 | 14440 |
| *PD18-12-1023* | 2.36 | 63.6 | 9.19 | 85.8 | 56.9 | 22.8 | 96.1 | 22.5 | 191.2 | 51.2 | 196.7 | 35.8 | 316.1 | 54.8 | 9720 |
| *PD18-12-1024* | 69.8 | 1946 | 279.4 | 2954 | 2820 | 1309 | 4010 | 777 | 5920 | 1218 | 4020 | 617 | 5320 | 761 | 19360 |
| *PD18-12-1025* | 18.6 | 661 | 89 | 909 | 616 | 289 | 800 | 154 | 1104 | 232 | 757 | 127.1 | 1086 | 165.2 | 13800 |
| *PD18-12-1026* | 3.43 | 27.3 | 1.1 | 9.03 | 7.64 | 1.81 | 29.7 | 8.1 | 87.2 | 28.6 | 122.3 | 23.14 | 210.7 | 38.11 | 9580 |
| *PD18-12-1027* | 31 | 722 | 116.3 | 1063 | 763 | 352 | 1133 | 236.2 | 1740 | 355 | 1144 | 193.6 | 1756 | 290.5 | 19170 |
| *PD18-12-1028* | 45.2 | 741 | 139 | 1111 | 649 | 281 | 927 | 192 | 1512 | 337 | 1187 | 208 | 1880 | 284 | 11600 |
| *PD18-12-1029* | 8.84 | 260 | 36 | 367 | 309 | 145 | 422 | 82.6 | 616 | 140.5 | 504 | 86.5 | 751 | 121.1 | 13520 |
| *PD18-12-1030* | 110.7 | 2390 | 383 | 3520 | 2340 | 1065 | 3640 | 783 | 5970 | 1237 | 3970 | 626 | 5150 | 739 | 15030 |
| *PD18-12-1031* | 0.93 | 26 | 2.44 | 26.1 | 15.9 | 7.13 | 35.6 | 8.76 | 89.1 | 29.1 | 129.4 | 25.67 | 246.5 | 48.8 | 9430 |
| *PD18-12-1032* | 1.071 | 60.3 | 3.04 | 30.7 | 25.2 | 9.46 | 58.8 | 14.55 | 152.2 | 47.81 | 209.9 | 40.03 | 374.5 | 69.3 | 10370 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-12-1040* | 22.08 | 914 | 121.6 | 1307 | 947 | 442 | 1188 | 221.1 | 1561 | 326.4 | 1051 | 175.5 | 1476 | 225.7 | 11390 |
| *PD18-12-1041* | 45.3 | 896 | 37.8 | 231 | 156 | 5.66 | 305 | 77.9 | 650 | 155 | 588 | 96.9 | 803 | 135.3 | 14470 |
| *PD18-12-1042* | 95.8 | 2623 | 408 | 3720 | 2651 | 1286 | 4110 | 876 | 6870 | 1427 | 4607 | 723 | 6440 | 877 | 16870 |
| *PD18-12-1043* | 1.67 | 66.6 | 6.62 | 60.1 | 40.2 | 19.17 | 75.1 | 18.75 | 164 | 43 | 172.1 | 32.07 | 294.1 | 49.6 | 11040 |
| *PD18-12-1044* | 0.47 | 31.4 | 1.44 | 16 | 16.8 | 4.5 | 62.5 | 18.7 | 217 | 73.5 | 330 | 64.6 | 588 | 104 | 10150 |
| *PD18-12-1045* | 149.1 | 2733 | 492 | 4290 | 3069 | 1420 | 4940 | 1063 | 8360 | 1679 | 5480 | 861 | 7480 | 995 | 13830 |
| *PD18-12-1046* | 9.25 | 199.2 | 30.15 | 256 | 169.3 | 70.8 | 241.3 | 49.4 | 376.1 | 84.4 | 297.4 | 54 | 497 | 83.4 | 11350 |
| *PD18-12-1047* | 8.77 | 201.5 | 28.53 | 247.4 | 167.2 | 74.1 | 232.8 | 48.2 | 362 | 79.8 | 284.7 | 50.8 | 460 | 79.2 | 11050 |
| *PD18-12-1048* | 2.68 | 28.1 | 1.8 | 15.1 | 13.4 | 4.14 | 37 | 9.25 | 95.5 | 29.9 | 129.2 | 24.1 | 228 | 44.1 | 10810 |
| *PD18-12-1049* | 7.86 | 122.6 | 24 | 207 | 142.9 | 61.8 | 206 | 43.4 | 332 | 72.6 | 256 | 46.2 | 413 | 65.9 | 14080 |
| *PD18-12-1050* | 76.3 | 1167 | 185 | 1670 | 1144 | 527 | 1640 | 339 | 2490 | 514 | 1680 | 272 | 2280 | 330 | 11090 |
| *PD18-12-1051* | 2.54 | 78.2 | 9.86 | 85.5 | 61.6 | 24.72 | 103.1 | 21.57 | 174.5 | 41.16 | 145.4 | 25.13 | 221.9 | 36.9 | 9820 |
| *PD18-12-1052* | 13.38 | 298.4 | 51.4 | 460 | 316 | 137.2 | 415 | 85.9 | 629 | 131.8 | 453.6 | 78.6 | 708 | 113.6 | 13090 |
| *PD18-12-1053* | 14.46 | 553 | 71.4 | 748 | 564 | 259 | 740 | 147.3 | 1154 | 265 | 957 | 167.1 | 1436 | 237.1 | 11970 |
| *PD18-12-1054* | 20.2 | 785 | 96.2 | 1024 | 808 | 369 | 980 | 178.1 | 1261 | 254 | 840 | 137.5 | 1165 | 171.1 | 13490 |
| *PD18-12-1055* | 114.7 | 2711 | 420 | 3986 | 2707 | 1284 | 3941 | 824 | 6420 | 1324 | 4320 | 686 | 5940 | 822 | 18050 |
| *PD18-12-1063* | 4.6 | 91.1 | 14.1 | 126 | 82.9 | 38.1 | 120 | 23.6 | 185 | 41.1 | 143.7 | 27.3 | 249 | 41.7 | 12160 |
| *PD18-12-1064* | 1.54 | 48.4 | 3.41 | 32.4 | 23.2 | 9.1 | 54.4 | 11.65 | 100 | 28.3 | 105.7 | 18.6 | 169 | 29.2 | 10000 |
| *PD18-12-1065* | 18.06 | 422 | 61.4 | 565 | 385 | 171 | 526 | 110.2 | 820 | 174 | 596 | 104.2 | 900 | 147 | 11650 |
| *PD18-12-1066* | 19.3 | 123.4 | 9.61 | 53.7 | 32.4 | 1.44 | 80.3 | 22.4 | 232 | 69.7 | 309.2 | 58 | 543 | 95.6 | 13330 |
| *PD18-12-1067* | 58.8 | 400 | 45.3 | 399 | 271 | 118.6 | 365 | 71.3 | 562 | 129.8 | 468.2 | 81.8 | 712 | 117.3 | 12000 |
| *PD18-12-1068* | 32.3 | 1053 | 142.9 | 1443 | 1030 | 487 | 1391 | 272 | 1937 | 403 | 1289 | 209.7 | 1759 | 258.5 | 13100 |
| *PD18-12-1069* | 9.55 | 188 | 31.1 | 278 | 188 | 77.9 | 259 | 53.6 | 409 | 91.6 | 317 | 57.9 | 543 | 85 | 13090 |
| *PD18-12-1070* | 3.46 | 24.6 | 1.72 | 12.6 | 7.09 | 3 | 23.3 | 6.46 | 68.8 | 22.11 | 99.3 | 18.76 | 174.4 | 31.9 | 9410 |
| *PD18-12-1071* | 20 | 726 | 99.3 | 1027 | 742 | 350 | 969 | 182 | 1367 | 292 | 936 | 158.1 | 1324 | 198 | 12700 |
| | | | | | | | | | | | | | | | |
| *PD18-13-1072* | 21.32 | 666 | 90.6 | 882 | 660 | 313 | 923 | 199.5 | 1483 | 307 | 1001 | 164 | 1347 | 199.9 | 15800 |
| *PD18-13-1073* | 9.87 | 336 | 45.6 | 447 | 329 | 150 | 462 | 103.2 | 802 | 183 | 655 | 113 | 1008 | 163.6 | 14080 |
| *PD18-13-1074* | 5.8 | 430 | 42 | 490 | 370 | 154 | 430 | 82 | 580 | 121 | 397 | 66.4 | 562 | 87 | 13480 |
| *PD18-13-1075* | 3.5 | 161 | 18.6 | 219 | 146 | 73 | 213 | 38.3 | 300 | 71 | 229 | 40.2 | 359 | 62.9 | 13190 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-13-1076* | 23.6 | 1263 | 145.3 | 1609 | 1198 | 551 | 1465 | 287 | 2112 | 423 | 1345 | 218.5 | 1767 | 264.3 | 18410 |
| *PD18-13-1077* | 14.23 | 356 | 52 | 457 | 332 | 154 | 510 | 113.6 | 909 | 197.6 | 679 | 120.4 | 1039 | 166 | 11770 |
| *PD18-13-1078* | 120.2 | 2340 | 355.2 | 2802 | 2012 | 1009 | 3911 | 970 | 7930 | 1669 | 5660 | 900 | 7930 | 1113 | 20910 |
| *PD18-13-1079* | 105.9 | 2394 | 369.2 | 3219 | 2344 | 1138 | 3808 | 872 | 6880 | 1408 | 4642 | 720 | 5990 | 864 | 16960 |
| *PD18-13-1087* | 13.05 | 543 | 65.6 | 657 | 492 | 223 | 612 | 130.4 | 955 | 199 | 646 | 108.4 | 900 | 139.8 | 10610 |
| *PD18-13-1088* | 49.7 | 1318 | 196.2 | 1788 | 1265 | 591 | 1828 | 413 | 3060 | 628 | 2019 | 335 | 2770 | 401 | 11480 |
| *PD18-13-1089* | 37.5 | 1197 | 164 | 1583 | 1212 | 570 | 1700 | 370.3 | 2753 | 563 | 1839 | 304.1 | 2485 | 362.2 | 7010 |
| *PD18-13-1090* | 6.74 | 188.4 | 28.7 | 242.2 | 171.7 | 72.3 | 246.4 | 54.7 | 438 | 102.3 | 371 | 65.4 | 575 | 94.8 | 10010 |
| *PD18-13-1091* | 61.1 | 1499 | 227.3 | 2051 | 1501 | 718 | 2250 | 507 | 3760 | 788 | 2575 | 416 | 3470 | 504 | 13960 |
| *PD18-13-1092* | 30.9 | 36 | 13.05 | 147.2 | 130.9 | 59.8 | 328 | 72.7 | 670 | 192.1 | 877 | 203.9 | 2248 | 426.2 | 19370 |
| *PD18-13-1093* | 4.04 | 117.5 | 14 | 119.9 | 82.9 | 34.9 | 124.8 | 27.3 | 226 | 52.9 | 206 | 36.7 | 337 | 58.1 | 12370 |
| *PD18-13-1094* | 17.08 | 1075 | 132.3 | 1455 | 989 | 469 | 1131 | 217 | 1521 | 308 | 970 | 157.6 | 1298 | 202.2 | 15980 |
| *PD18-13-1095* | 9.47 | 766 | 81.8 | 1021 | 912 | 441.5 | 1255 | 255.1 | 1858 | 400.1 | 1293 | 207.3 | 1671 | 262 | 10720 |
| *PD18-13-1096* | 4.1 | 84.4 | 7.53 | 73.8 | 55.6 | 23.4 | 88.3 | 19.2 | 161.6 | 39.7 | 141.8 | 25.6 | 216.3 | 36.2 | 9540 |
| *PD18-13-1097* | 13.4 | 405 | 58.3 | 539 | 420 | 186.8 | 613 | 128.8 | 1006 | 227 | 755 | 129.5 | 1100 | 173.6 | 14300 |
| *PD18-13-1098* | 13.32 | 408 | 57.4 | 550 | 400 | 178 | 556 | 126.6 | 943 | 208 | 705 | 120 | 1008 | 156.3 | 12360 |
| *PD18-13-1099* | 4.84 | 180.6 | 22.3 | 211.2 | 147.9 | 65.8 | 212.3 | 47.9 | 369 | 84.5 | 315 | 58.7 | 517 | 91.1 | 8770 |
| *PD18-13-1100* | 2.92 | 78 | 9.9 | 85 | 60 | 26.5 | 99 | 22.9 | 199 | 49.2 | 200 | 37.7 | 363 | 71.6 | 9410 |
| *PD18-13-1101* | 39.5 | 1796 | 213.2 | 2300 | 1796 | 839 | 2320 | 482 | 3480 | 730 | 2310 | 373 | 3060 | 444 | 10370 |
| *PD18-13-1102* | 3.4 | 141 | 15.6 | 161 | 116.3 | 50.9 | 194.3 | 44.4 | 379 | 95 | 348 | 59.8 | 511 | 85.8 | 10300 |
| *PD18-13-1103* | 6.24 | 207 | 29 | 291 | 228 | 109 | 312 | 64.2 | 481 | 102.8 | 349 | 60.3 | 509 | 81.1 | 12990 |
| *PD18-13-1111* | 19.9 | 414 | 63.3 | 539 | 370 | 183 | 588 | 145.2 | 1126 | 241 | 818 | 137.2 | 1145 | 175.6 | 14720 |
| *PD18-13-1112* | 2.96 | 101.3 | 12.03 | 109.3 | 90.8 | 36.6 | 141.2 | 32.3 | 272 | 65.3 | 239.9 | 42.4 | 372 | 60.5 | 9130 |
| *PD18-13-1113* | 9.89 | 378 | 46.8 | 451 | 337 | 155 | 434 | 88.4 | 675 | 138.5 | 465 | 79.8 | 695 | 114.2 | 13170 |
| *PD18-13-1114* | 13.43 | 517 | 64.5 | 667 | 481 | 217.6 | 618 | 129.1 | 985 | 213 | 704 | 119 | 1034 | 164.7 | 12190 |
| *PD18-13-1115* | 55.2 | 1267 | 185.6 | 1681 | 1269 | 595 | 1940 | 453 | 3350 | 718 | 2351 | 394 | 3360 | 521 | 14490 |
| *PD18-13-1116* | 5.89 | 201 | 25.9 | 237 | 168.1 | 72.6 | 241 | 52.5 | 426 | 102.8 | 411 | 77.9 | 719 | 123.7 | 14710 |
| *PD18-13-1117* | 127.5 | 2557 | 424 | 3563 | 2579 | 1234 | 4250 | 1008 | 8030 | 1647 | 5440 | 839 | 7020 | 983 | 18020 |
| *PD18-13-1118* | 7.08 | 366.5 | 38.2 | 391 | 291.2 | 136.1 | 398 | 81.9 | 654 | 149.2 | 561 | 99.8 | 908 | 160.8 | 11130 |
| *PD18-13-1119* | 7.24 | 233.2 | 30 | 287 | 222 | 93.1 | 297 | 61.9 | 483 | 111 | 407 | 70.9 | 654 | 115 | 11860 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-13-1120* | 5.36 | 154.7 | 23.18 | 207.4 | 151.7 | 68.5 | 214 | 46.8 | 375 | 91 | 385 | 84.1 | 934 | 190.4 | 16690 |
| *PD18-13-1121* | 3.54 | 187 | 23.6 | 255 | 251 | 124.1 | 340 | 71.5 | 539 | 123.5 | 426 | 71.9 | 610 | 102.3 | 10400 |
| *PD18-13-1122* | 7.13 | 416 | 50.3 | 531 | 391 | 176 | 476 | 95.2 | 724 | 150 | 501 | 81.1 | 687 | 108.6 | 10990 |
| *PD18-13-1123* | 74 | 1820 | 280 | 2340 | 1632 | 756 | 2530 | 579 | 4510 | 932 | 2980 | 494 | 4130 | 578 | 13520 |
| *PD18-13-1124* | 1.78 | 18.86 | 0.856 | 9.19 | 10.64 | 2.17 | 47 | 14.91 | 188.2 | 67.3 | 321 | 66 | 624 | 109.7 | 13590 |
| *PD18-13-1125* | 12.9 | 305 | 39.9 | 340 | 233 | 105.2 | 333 | 74.3 | 603 | 136.4 | 490 | 87.9 | 790 | 138.9 | 11250 |
| *PD18-13-1126* | 2.51 | 90.9 | 10.07 | 87.9 | 68.3 | 30.2 | 126.3 | 30.69 | 262.4 | 64.9 | 245.9 | 43.03 | 374.1 | 62.1 | 10350 |
| *PD18-13-1127* | 4.79 | 135.5 | 15.6 | 137.6 | 93.9 | 39.7 | 131.5 | 27.9 | 223.9 | 54.9 | 206.3 | 39.2 | 381 | 71.1 | 11850 |
| *PD18-13-1135* | 6.31 | 267.3 | 32.7 | 319 | 256.7 | 109.5 | 335 | 68.1 | 538 | 115.6 | 391 | 69.2 | 589 | 94.5 | 11060 |
| *PD18-13-1136* | 19.63 | 898 | 119.2 | 1225 | 888 | 415.9 | 1108 | 228.5 | 1678 | 343.9 | 1124 | 185.6 | 1539 | 236.9 | 14460 |
| *PD18-13-1137* | 12 | 437 | 60 | 560 | 408 | 189 | 576 | 125.4 | 988 | 217 | 772 | 132.4 | 1156 | 189.5 | 13070 |
| *PD18-13-1138* | 9.85 | 305.3 | 43.3 | 392 | 286.3 | 127.2 | 398 | 86.5 | 653 | 139.5 | 468 | 80.8 | 706 | 113.6 | 17850 |
| *PD18-13-1139* | 1.45 | 76 | 6.94 | 80.7 | 71.2 | 31.7 | 127.2 | 29.2 | 300.7 | 92.5 | 405.3 | 77.3 | 722 | 134.8 | 11920 |
| *PD18-13-1140* | 11.57 | 400 | 47.9 | 460 | 342 | 152.7 | 466 | 97.6 | 738 | 162.4 | 563 | 96.4 | 859 | 146.7 | 12620 |
| *PD18-13-1141* | 6.7 | 224 | 26.8 | 257 | 185 | 85.2 | 251 | 57.5 | 470 | 111.6 | 419 | 75.7 | 668 | 121.2 | 11030 |
| *PD18-13-1142* | 106.7 | 2458 | 380 | 3338 | 2375 | 1136 | 3750 | 865 | 6980 | 1440 | 4660 | 721 | 6110 | 855 | 17150 |
| *PD18-13-1143* | 8.77 | 366 | 43.7 | 456 | 333 | 152.4 | 429 | 94 | 717 | 163.1 | 575 | 102.7 | 908 | 155 | 14470 |
| *PD18-13-1144* | 6.76 | 216 | 28.4 | 267 | 202 | 89 | 262 | 57 | 442 | 99.8 | 349 | 61.4 | 552 | 90 | 13230 |
| *PD18-13-1145* | 0.324 | 20.2 | 1.48 | 14.6 | 12.9 | 4.84 | 29.7 | 8.23 | 86.3 | 28.9 | 136.7 | 28.49 | 290.6 | 58.9 | 11590 |
| *PD18-13-1146* | 3.74 | 223.8 | 20.98 | 221.3 | 173.3 | 75.8 | 231.7 | 49.3 | 387.7 | 93.3 | 351.7 | 61.7 | 563 | 98.6 | 10390 |
| *PD18-13-1147* | 3.8 | 136.6 | 14.01 | 131.2 | 101.2 | 46.8 | 151 | 34.4 | 277 | 67.7 | 260 | 49.4 | 461 | 84.1 | 12300 |
| *PD18-13-1148* | 43.8 | 1128 | 164.8 | 1504 | 1140 | 530 | 1651 | 365 | 2870 | 581 | 1930 | 321 | 2659 | 391 | 13050 |
| *PD18-13-1149* | 2.84 | 104.6 | 8.74 | 89.3 | 125.4 | 62.9 | 222 | 40.3 | 323 | 85 | 352 | 67.9 | 684 | 136.4 | 10660 |
| *PD18-13-1150* | 1.49 | 66.8 | 5.71 | 54.9 | 39.8 | 18.8 | 60 | 14.1 | 106.9 | 25.9 | 96.5 | 17.7 | 153.1 | 26.52 | 11750 |
| *PD18-13-1151* | 146.4 | 2925 | 463 | 3812 | 2618 | 1180 | 4210 | 993 | 7960 | 1608 | 5350 | 850 | 6950 | 988 | 14840 |
| *PD18-13-1152* | 4.09 | 115.7 | 14.08 | 120.1 | 95.3 | 43.1 | 164.7 | 39.1 | 326.9 | 78.4 | 285.6 | 50.1 | 441 | 71.9 | 9890 |
| *PD18-13-1153* | 4.19 | 135 | 16.6 | 145 | 102.7 | 44.5 | 161 | 35.2 | 283 | 64.8 | 229 | 39.9 | 355 | 58.3 | 9790 |
| *PD18-13-1161* | 50.3 | 1591 | 208.3 | 2044 | 1561 | 727 | 2149 | 473 | 3474 | 720 | 2351 | 386 | 3208 | 467 | 15780 |
| *PD18-13-1162* | 1.57 | 42.3 | 5.84 | 50.3 | 34.5 | 14 | 52.3 | 12.01 | 102 | 26.6 | 106.6 | 19.22 | 191.3 | 34.5 | 10690 |
| *PD18-13-1163* | 18.1 | 694 | 90.1 | 900 | 671 | 309 | 874 | 184 | 1370 | 278 | 907 | 149 | 1260 | 187 | 15410 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-13-1164* | 28.24 | 1145 | 158.5 | 1562 | 1164 | 534 | 1514 | 322 | 2396 | 503 | 1737 | 289.6 | 2476 | 380.9 | 11370 |
| *PD18-13-1165* | 18.19 | 470 | 69.2 | 626 | 458 | 216.1 | 694 | 156.4 | 1186 | 252.5 | 849 | 144.3 | 1210 | 184.7 | 14150 |
| *PD18-13-1166* | 5.85 | 185 | 22.58 | 197.3 | 144.9 | 61.7 | 205.2 | 44.9 | 364 | 85.9 | 330.8 | 60.9 | 587 | 106.4 | 12050 |
| *PD18-13-1167* | 9.02 | 650 | 64.2 | 716 | 530 | 241 | 643 | 129 | 968 | 225 | 784 | 135.6 | 1184 | 193 | 11640 |
| *PD18-13-1168* | 17.66 | 681 | 88.4 | 890 | 639 | 292 | 829 | 173.6 | 1270 | 281 | 953 | 161.5 | 1392 | 223.5 | 12140 |
| *PD18-13-1169* | 16.87 | 641 | 82.1 | 826 | 645 | 295 | 883 | 192 | 1472 | 314 | 1074 | 179 | 1499 | 226 | 11100 |
| *PD18-13-1170* | 35.6 | 912 | 139 | 1272 | 949 | 444 | 1409 | 316 | 2439 | 509 | 1677 | 276.7 | 2339 | 357 | 14580 |
| *PD18-13-1172* | 4.1 | 108 | 14.4 | 130 | 97 | 40.6 | 143 | 37.9 | 373 | 106.7 | 484 | 103.8 | 1057 | 200 | 15760 |
| *PD18-13-1173* | 60.8 | 1513 | 219 | 2100 | 1633 | 749 | 2330 | 515 | 3820 | 788 | 2550 | 420 | 3400 | 497 | 14870 |
| *PD18-13-1174* | 20.3 | 564 | 91.9 | 789 | 567 | 250.3 | 766 | 164.8 | 1215 | 247.8 | 800 | 133.1 | 1117 | 163.1 | 14640 |
| *PD18-13-1175* | 40 | 1138 | 168.4 | 1619 | 1224 | 582 | 1706 | 373 | 2750 | 572 | 1935 | 328 | 2960 | 485 | 13140 |
| *PD18-13-1176* | 127.1 | 2516 | 414.4 | 3464 | 2429 | 1161 | 4053 | 973 | 7850 | 1599 | 5280 | 817 | 6710 | 957 | 17830 |
| *PD18-13-1177* | 27.8 | 928 | 133.5 | 1264 | 902 | 421 | 1199 | 262.8 | 1926 | 401 | 1325 | 220.6 | 1815 | 277 | 14200 |
| *PD18-13-1185* | 9.72 | 300 | 37.8 | 355 | 270 | 128 | 390 | 85.4 | 640 | 144.5 | 543 | 104.9 | 1044 | 203.3 | 13840 |
| *PD18-13-1186* | 9.94 | 264 | 44.6 | 375 | 261 | 114.7 | 380 | 83.7 | 662 | 153.8 | 566 | 107.5 | 1003 | 163.9 | 14830 |
| *PD18-13-1187* | 67.5 | 2860 | 209.6 | 2558 | 2359 | 1098 | 3300 | 650 | 4780 | 1034 | 3250 | 487 | 3740 | 560 | 16340 |
| *PD18-13-1188* | 24.7 | 807 | 113.8 | 1096 | 811 | 371 | 1081 | 229.7 | 1661 | 350 | 1127 | 184.9 | 1508 | 214.6 | 12660 |
| *PD18-13-1189* | 4.03 | 138.8 | 17.3 | 149.7 | 105.2 | 47.1 | 158.8 | 35.8 | 283.5 | 68.2 | 254.2 | 46.1 | 417 | 72.6 | 10920 |
| *PD18-13-1190* | 111.2 | 2508 | 395.8 | 3457 | 2483 | 1167 | 3882 | 901 | 7120 | 1436 | 4760 | 751 | 6190 | 883 | 14520 |
| *PD18-13-1191* | 3.32 | 100.1 | 11.98 | 104.3 | 71.7 | 31.6 | 115.9 | 26.2 | 213.1 | 51.1 | 195.1 | 35.2 | 323 | 57.6 | 12690 |
| *PD18-13-1192* | 6.14 | 194.9 | 24.8 | 241 | 189.3 | 86.9 | 284 | 65.3 | 513 | 121.7 | 454 | 81 | 704 | 117.9 | 14170 |
| *PD18-13-1193* | 0.108 | 15.98 | 0.241 | 2.7 | 2.99 | 1.32 | 12.09 | 3.61 | 44.3 | 17.05 | 85.6 | 18.91 | 203.7 | 44.4 | 11990 |
| *PD18-13-1194* | 0.96 | 42.8 | 3.71 | 34.2 | 23.2 | 10.3 | 38 | 9 | 79 | 22.4 | 91.4 | 18.8 | 187 | 35.6 | 14220 |
| *PD18-13-1195* | 2.22 | 71.2 | 5.96 | 52.2 | 39.7 | 17.6 | 92.2 | 22.53 | 203.6 | 54.1 | 210.8 | 39.1 | 353 | 62.2 | 11290 |
| *PD18-13-1196* | 4.12 | 175.8 | 17.1 | 163.4 | 125.6 | 56.6 | 181 | 39.3 | 309 | 71.7 | 262 | 47.6 | 440 | 77 | 11060 |
| *PD18-13-1197* | 6.61 | 242 | 27.8 | 253 | 193 | 80.2 | 284 | 64.4 | 527 | 127 | 483 | 84.5 | 732 | 118.8 | 10560 |
| | | | | | | | | | | | | | | | |
| *PD18-14-1198* | 1.31 | 28.2 | 3.24 | 11.9 | 2.31 | 0.87 | 12.5 | 6.5 | 108.2 | 45.2 | 258.7 | 69.9 | 857 | 179.9 | 14770 |
| *PD18-14-1199* | 0.97 | 46.8 | 3.88 | 37.9 | 30.6 | 8.55 | 71.2 | 19.6 | 217 | 73.9 | 342 | 68.2 | 661 | 126.2 | 11280 |
| *PD18-14-1200* | 2.26 | 181 | 20.1 | 205 | 106.9 | 33.2 | 139 | 29 | 235 | 57.8 | 218 | 40.8 | 379 | 66.1 | 15220 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-14-1201* | 62.2 | 2812 | 338 | 2893 | 1897 | 666 | 3064 | 702 | 5520 | 1160 | 3950 | 678 | 5870 | 834 | 13220 |
| *PD18-14-1209* | 0.13 | 50.5 | 0.238 | 2.5 | 3.35 | 1.31 | 17.2 | 4.59 | 54.3 | 19.9 | 102.1 | 22.54 | 249.4 | 53.9 | 11740 |
| *PD18-14-1210* | 13.54 | 494 | 64.1 | 548 | 343 | 124 | 526 | 120.5 | 933 | 203.8 | 699 | 124.1 | 1055 | 156.7 | 12750 |
| *PD18-14-1211* | 4.59 | 388 | 38.6 | 399 | 228 | 68 | 303 | 62.6 | 499 | 116.8 | 442 | 82.6 | 832 | 145.8 | 14910 |
| *PD18-14-1212* | 7.85 | 474 | 56.9 | 550 | 320 | 102.6 | 422 | 87.9 | 692 | 156.1 | 549 | 102.6 | 940 | 155.8 | 13340 |
| *PD18-14-1213* | 2.42 | 107 | 12 | 104 | 73 | 22.8 | 134 | 31.2 | 293 | 79.2 | 319 | 59.2 | 508 | 85.1 | 11590 |
| *PD18-14-1214* | 6.58 | 253.3 | 31.17 | 265.8 | 164.6 | 55.4 | 219.9 | 49.1 | 410 | 96.1 | 364.6 | 68.2 | 642 | 114.4 | 10300 |
| *PD18-14-1215* | 10.89 | 491 | 53.5 | 518 | 328 | 111 | 475 | 99 | 766 | 171.8 | 577 | 94.4 | 824 | 123.2 | 11490 |
| *PD18-14-1216* | 0.044 | 18.61 | 0.214 | 2.22 | 2.07 | 0.701 | 8.96 | 2.53 | 32.7 | 11.35 | 54 | 11.15 | 112.3 | 22.66 | 13640 |
| *PD18-14-1217* | 46 | 2130 | 258.9 | 2252 | 1469 | 507 | 2307 | 525 | 4090 | 867 | 2948 | 512 | 4390 | 626 | 15800 |
| *PD18-14-1218* | 21.6 | 1133 | 136.9 | 1290 | 816 | 274 | 1172 | 254 | 1976 | 433 | 1487 | 257.4 | 2182 | 324 | 10990 |
| *PD18-14-1219* | 7.33 | 673 | 71.3 | 742 | 387 | 118.7 | 470 | 96.8 | 744 | 158.3 | 539 | 93.4 | 822 | 127.9 | 13420 |
| *PD18-14-1220* | 8.8 | 485 | 55 | 512 | 309 | 100.7 | 439 | 93 | 744 | 163.9 | 569 | 100 | 881 | 139.6 | 11980 |
| *PD18-14-1221* | 13.28 | 489 | 64.8 | 560 | 365 | 130.1 | 508 | 115.5 | 944 | 213.4 | 773 | 140.5 | 1245 | 197.6 | 10960 |
| *PD18-14-1222* | 1.56 | 68.4 | 8.02 | 74.7 | 54.3 | 18.2 | 79.2 | 17.4 | 147 | 37.8 | 145.1 | 27 | 254 | 47.4 | 11490 |
| *PD18-14-1223* | Below LOD | 25.98 | 0.19 | 3.41 | 5.66 | 1.28 | 22.2 | 5.66 | 64 | 21.92 | 102.8 | 20.91 | 212.8 | 43.7 | 9520 |
| *PD18-14-1224* | 62.1 | 2730 | 350.6 | 3085 | 2120 | 749 | 3413 | 781 | 6180 | 1296 | 4490 | 753 | 6520 | 928 | 16630 |
| *PD18-14-1225* | 4.56 | 259 | 26.7 | 232 | 141 | 49.7 | 195 | 43.1 | 350 | 80 | 304 | 57.5 | 544 | 95.4 | 12760 |
| *PD18-14-1233* | 42.08 | 2486 | 279 | 2621 | 1679 | 580 | 2533 | 577 | 4460 | 958 | 3283 | 562 | 4770 | 691 | 13530 |
| *PD18-14-1234* | 9.58 | 537 | 61.7 | 579 | 342 | 112 | 450 | 98.7 | 792 | 178.5 | 677 | 124.2 | 1156 | 191.8 | 11610 |
| *PD18-14-1235* | 5.45 | 490 | 50.2 | 510 | 295 | 93.6 | 384 | 83.1 | 677 | 167.1 | 696 | 133.3 | 1307 | 216 | 15230 |
| *PD18-14-1236* | 0.134 | 17.38 | 0.645 | 7.09 | 5.91 | 1.8 | 16.66 | 4.48 | 47.9 | 16.33 | 77.2 | 16.22 | 166.7 | 32.85 | 11020 |
| *PD18-14-1237* | 1.79 | 96.8 | 10.91 | 105.6 | 63 | 20.5 | 114.5 | 26.5 | 267 | 78.7 | 342 | 64.8 | 613 | 112.9 | 10220 |
| *PD18-14-1238* | 0.0113 | 12.16 | 0.055 | 0.76 | 1.39 | 0.532 | 8.29 | 2.58 | 32.6 | 11.86 | 61.6 | 13.26 | 139.3 | 29.4 | 11370 |
| *PD18-14-1239* | 40.04 | 1897 | 241.2 | 2162 | 1449 | 489 | 2143 | 485 | 3780 | 815 | 2804 | 481 | 4110 | 607 | 17820 |
| *PD18-14-1240* | 10.94 | 1041 | 99 | 947 | 475 | 143.6 | 589 | 123.7 | 963 | 217 | 782 | 136.2 | 1194 | 188.3 | 9240 |
| *PD18-14-1241* | 29.6 | 1020 | 147.9 | 1189 | 706 | 248 | 1011 | 220.2 | 1751 | 362 | 1238 | 209.4 | 1806 | 251.4 | 10500 |
| *PD18-14-1242* | 6.76 | 341 | 36.3 | 319 | 216 | 72.6 | 305 | 68.7 | 561 | 125 | 454 | 84.6 | 733 | 116.8 | 9730 |
| *PD18-14-1243* | 5.21 | 406 | 28 | 215 | 99.6 | 36.2 | 130.2 | 27.3 | 230 | 58.3 | 238 | 47.1 | 468 | 89.7 | 12590 |
| *PD18-14-1244* | 38.9 | 2066 | 246.1 | 2253 | 1350 | 464 | 2014 | 451 | 3446 | 746 | 2574 | 439 | 3750 | 539 | 13250 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PD18-14-1245* | 12.4 | 501 | 46.6 | 513 | 256 | 67.9 | 273 | 44.6 | 344 | 86.4 | 352 | 66.1 | 688 | 130.9 | 15870 |
| *PD18-14-1246* | 16.73 | 809 | 102.2 | 909 | 562 | 189.5 | 842 | 182.1 | 1413 | 314 | 1074 | 187.7 | 1648 | 251.8 | 15860 |
| *PD18-14-1247* | 1.12 | 59.5 | 5.21 | 49.7 | 38.6 | 10.8 | 91.7 | 23.7 | 237 | 68.2 | 283 | 51 | 448 | 77.9 | 9410 |
| *PD18-14-1248* | 708 | 3490 | 412 | 3013 | 1857 | 639 | 2788 | 632 | 4860 | 1034 | 3490 | 605 | 5200 | 737 | 11830 |
| *PD18-14-1249* | 4.28 | 155 | 14.9 | 127.1 | 82.7 | 28.7 | 129.4 | 28.8 | 238 | 55.8 | 207 | 37.1 | 329 | 56.3 | 10380 |
| *PD18-14-1257* | 144.5 | 502 | 67.4 | 337 | 89.2 | 14.75 | 102.8 | 19 | 171 | 58.4 | 318 | 77.2 | 867 | 176.6 | 15730 |
| *PD18-14-1258* | 6.7 | 315 | 36.1 | 347 | 216 | 76.4 | 324 | 75.7 | 603 | 130 | 464 | 84 | 746 | 119.8 | 12810 |
| *PD18-14-1259* | 9.83 | 325 | 40.6 | 332 | 204.8 | 71.8 | 278 | 60.3 | 467 | 101.7 | 368 | 66.5 | 604 | 101.2 | 13020 |
| *PD18-14-1260* | 14.29 | 522 | 70.8 | 588 | 369 | 127 | 489 | 107 | 837 | 182 | 639 | 114.7 | 995 | 151.2 | 13540 |
| *PD18-14-1261* | 1.13 | 59.6 | 5.69 | 51.7 | 34.9 | 11.6 | 63.8 | 16.62 | 173.8 | 54.1 | 249.8 | 50.2 | 488.2 | 91.3 | 12970 |
| *PD18-14-1262* | 12.52 | 502.5 | 68.9 | 612 | 412 | 144.7 | 591 | 137.5 | 1119 | 245.7 | 863 | 151.9 | 1301 | 194.9 | 8970 |
| *PD18-14-1263* | 110.7 | 3110 | 366 | 3180 | 2190 | 772 | 3410 | 798 | 6480 | 1381 | 4730 | 795 | 7220 | 975 | 14910 |
| *PD18-14-1264* | 6.21 | 848 | 83 | 909 | 447 | 120 | 485 | 90.1 | 658 | 138.9 | 468 | 80.2 | 701 | 110.7 | 13880 |
| *PD18-14-1265* | 57 | 2627 | 321 | 2860 | 1879 | 640 | 2742 | 612 | 4910 | 998 | 3540 | 574 | 5050 | 703 | 14310 |
| *PD18-14-1266* | 2.82 | 257.6 | 28.6 | 312 | 186.6 | 55.2 | 231.3 | 45.6 | 354 | 84.3 | 345 | 73.7 | 752 | 148.5 | 14340 |
| *PD18-14-1267* | 12.23 | 589 | 69.3 | 619 | 400 | 137.8 | 612 | 138.5 | 1127 | 248 | 851 | 150.3 | 1283 | 196.8 | 11880 |
| *PD18-14-1268* | 9.9 | 684 | 78.7 | 749 | 490 | 162 | 654 | 150 | 1134 | 253 | 888 | 163 | 1471 | 222 | 14200 |
| *PD18-14-1269* | 0.421 | 17.5 | 2.78 | 18.6 | 8.61 | 2.52 | 19.5 | 4.45 | 42.9 | 12.95 | 54.2 | 10.23 | 100.5 | 19.34 | 12890 |
| *PD18-14-1270* | 57.6 | 2265 | 307.8 | 2594 | 1810 | 664 | 3161 | 725 | 5900 | 1248 | 4302 | 733 | 6410 | 937 | 36990 |
| *PD18-14-1271* | 0.61 | 50.2 | 3.54 | 32.8 | 24.1 | 7.06 | 56.2 | 14.57 | 143.4 | 41.5 | 175.6 | 32.8 | 305 | 52.4 | 12210 |
| *PD18-14-1272* | 0.405 | 42.2 | 2.11 | 18.9 | 13.08 | 4.67 | 33 | 7.88 | 76 | 21.96 | 92.1 | 17.91 | 166.4 | 30.67 | 11060 |
| *PD18-14-1273* | 0.0111 | 13.36 | 0.108 | 1.99 | 4.4 | 1.29 | 23.36 | 6.87 | 80.2 | 27.87 | 126.7 | 23.84 | 228.9 | 43.04 | 10820 |
| *PD18-14-1281* | 9.64 | 271.1 | 37.9 | 317 | 189.9 | 66.9 | 264 | 58.1 | 459 | 98.3 | 344 | 62.3 | 538 | 82.4 | 14560 |
| *PD18-14-1282* | 1.66 | 86 | 8.5 | 81 | 55.3 | 17.8 | 111 | 32.1 | 377 | 125.1 | 573 | 108.4 | 1036 | 182.3 | 13790 |
| *PD18-14-1283* | 26.3 | 737 | 111.4 | 918 | 595 | 204.3 | 776 | 161.6 | 1243 | 247 | 821 | 136.4 | 1151 | 163.2 | 20100 |
| *PD18-14-1284* | 3.43 | 161 | 19.1 | 176 | 122 | 40.5 | 183 | 40.9 | 344 | 77.3 | 288 | 52.2 | 462 | 72.4 | 11510 |
| *PD18-14-1285* | 26.05 | 1544 | 193.5 | 1868 | 1077 | 345 | 1451 | 309.9 | 2394 | 496 | 1746 | 304 | 2722 | 416 | 18120 |

## Appendix 5.1 Zircon U-Pb age data – Chapter 5

| Zircon Grain | $^{207}Pb/^{235}U$ | 2σ | $^{206}Pb/^{238}U$ | 2σ | Error Correlation (ρ) | $^{207}Pb/^{235}U$ Age (Ma) | Age Error 2σ | $^{206}Pb/^{238}U$ Age (Ma) | Age Error 2σ | $^{207}Pb/^{206}Pb$ Age (Ma) | Age 2σ | Age conc. | Age 2σ | Concordance | Th/U |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CO17-26Z-4 | 0.949 | 0.03 | 0.1071 | 0.0021 | 0.21349 | 678 | 16 | 656 | 12 | 750 | 71 | 663 | 11 | 87.41 | 0.22 |
| CO17-26Z-7 | 0.947 | 0.056 | 0.1071 | 0.0022 | 0.14294 | 677 | 29 | 656 | 13 | 746 | 126 | 658 | 12 | 87.92 | 1.56 |
| CO17-26Z-20 | 0.997 | 0.047 | 0.1082 | 0.003 | 0.4111 | 702 | 24 | 662 | 18 | 833 | 91 | 672 | 17 | 79.56 | 0.94 |
| CO17-26Z-6 | 0.917 | 0.04 | 0.1085 | 0.0024 | 0.098707 | 661 | 21 | 664 | 14 | 650 | 101 | 663 | 12 | 102.15 | 0.88 |
| CO17-26Z-19 | 0.938 | 0.051 | 0.1097 | 0.0026 | 0.12787 | 672 | 27 | 671 | 15 | 675 | 121 | 671 | 14 | 99.41 | 1.54 |
| CO17-26Z-11 | 1.112 | 0.057 | 0.119 | 0.0025 | 0.30867 | 759 | 27 | 725 | 14 | 862 | 102 | 729 | 14 | 84.08 | 0.68 |
| CO17-26Z-8 | 1.282 | 0.067 | 0.1228 | 0.0031 | 0.33909 | 838 | 30 | 747 | 18 | 1088 | 100 | 759 | 18 | 68.66 | 0.84 |
| CO17-26Z-12 | 1.187 | 0.082 | 0.1257 | 0.0032 | 0.059535 | 795 | 38 | 763 | 18 | 883 | 149 | 769 | 17 | 86.44 | 0.93 |
| CO17-26Z-16 | 1.148 | 0.04 | 0.1266 | 0.0022 | 0.30976 | 776 | 19 | 768 | 13 | 799 | 71 | 770 | 12 | 96.17 | 0.18 |
| CO17-26Z-3 | 1.618 | 0.087 | 0.1271 | 0.0025 | 0.22675 | 977 | 34 | 771 | 14 | 1474 | 100 | 781 | 14 | 52.33 | 0.90 |
| CO17-26Z-15 | 1.128 | 0.039 | 0.1271 | 0.0024 | 0.080105 | 767 | 19 | 771 | 14 | 754 | 80 | 770 | 11 | 102.34 | 0.20 |
| CO17-26Z-1 | 1.355 | 0.067 | 0.1287 | 0.003 | 0.038227 | 870 | 29 | 780 | 17 | 1104 | 108 | 801 | 15 | 70.69 | 1.11 |
| CO17-26Z-18 | 1.163 | 0.047 | 0.1288 | 0.002 | 0.04428 | 783 | 22 | 781 | 11 | 790 | 90 | 782 | 10 | 98.85 | 1.38 |
| CO17-26Z-25 | 1.227 | 0.031 | 0.1296 | 0.002 | 0.19649 | 813 | 14 | 786 | 11 | 889 | 56 | 795 | 10 | 88.40 | 0.35 |
| CO17-26Z-2 | 1.23 | 0.045 | 0.13 | 0.0022 | 0.067543 | 814 | 21 | 788 | 13 | 887 | 81 | 795 | 11 | 88.79 | 0.10 |
| CO17-26Z-23 | 1.155 | 0.059 | 0.1303 | 0.0025 | 0.050723 | 780 | 28 | 790 | 14 | 751 | 113 | 788 | 13 | 105.14 | 1.22 |
| CO17-26Z-22 | 1.175 | 0.045 | 0.1304 | 0.0022 | 0.032692 | 789 | 21 | 790 | 13 | 786 | 87 | 790 | 11 | 100.56 | 1.51 |
| CO17-26Z-17 | 1.192 | 0.084 | 0.1306 | 0.0038 | 0.12275 | 797 | 39 | 791 | 22 | 813 | 152 | 792 | 20 | 97.33 | 0.92 |
| CO17-26Z-27 | 1.315 | 0.089 | 0.1308 | 0.0039 | 0.12939 | 852 | 39 | 792 | 22 | 1012 | 143 | 804 | 21 | 78.30 | 0.97 |
| CO17-26Z-29 | 1.222 | 0.049 | 0.1309 | 0.0026 | 0.084195 | 811 | 22 | 793 | 15 | 860 | 90 | 798 | 13 | 92.25 | 1.29 |
| CO17-26Z-13 | 1.52 | 0.11 | 0.1313 | 0.0041 | 0.11968 | 939 | 44 | 795 | 23 | 1292 | 147 | 817 | 22 | 61.56 | 0.70 |
| CO17-26Z-30 | 1.31 | 0.053 | 0.1318 | 0.0034 | 0.21704 | 850 | 23 | 798 | 19 | 988 | 88 | 817 | 17 | 80.75 | 0.75 |
| CO17-26Z-28 | 1.301 | 0.07 | 0.1342 | 0.004 | 0.052258 | 846 | 31 | 812 | 23 | 937 | 123 | 823 | 19 | 86.64 | 1.14 |
| CO17-26Z-14 | 1.244 | 0.027 | 0.1354 | 0.0019 | 0.38949 | 821 | 12 | 819 | 11 | 826 | 43 | 819 | 10 | 99.06 | 0.51 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CO17-26Z-24 | 1.229 | 0.041 | 0.1357 | 0.002 | 0.15688 | 814 | 19 | 820 | 11 | 796 | 72 | 819 | 10 | 103.00 | 0.52 |
| CO17-26Z-9 | 1.34 | 0.1 | 0.136 | 0.0049 | 0.13046 | 863 | 43 | 822 | 28 | 971 | 160 | 832 | 25 | 84.65 | 0.94 |
| CO17-26Z-21 | 1.43 | 0.11 | 0.1362 | 0.0033 | 0.21727 | 902 | 46 | 823 | 19 | 1099 | 151 | 828 | 19 | 74.90 | 0.70 |
| CO17-26Z-5 | 1.259 | 0.069 | 0.1389 | 0.0029 | 0.025475 | 828 | 31 | 838 | 16 | 798 | 122 | 836 | 15 | 105.06 | 0.88 |
| CO17-26Z-26 | 1.844 | 0.065 | 0.1527 | 0.0033 | 0.11648 | 1061 | 23 | 916 | 19 | 1373 | 75 | 964 | 16 | 66.70 | 0.80 |
| CO17-26Z-10 | 21.5 | 0.35 | 0.6044 | 0.0076 | 0.71591 | 3161 | 16 | 3048 | 31 | 3235 | 18 | 3184 | 15 | 94.22 | 0.50 |
| | | | | | | | | | | | | | | | |
| CO17-55Z-1 | 23.44 | 0.47 | 0.6485 | 0.0086 | 0.78495 | 3245 | 20 | 3222 | 34 | 3260 | 20 | 3252 | 19 | 98.85 | 0.53 |
| CO17-55Z-2 | 22.25 | 0.38 | 0.6328 | 0.0085 | 0.4857 | 3195 | 17 | 3161 | 34 | 3216 | 25 | 3194 | 17 | 98.27 | 0.70 |
| CO17-55Z-3 | 23.34 | 0.3 | 0.6362 | 0.0073 | 0.7586 | 3241 | 13 | 3174 | 29 | 3283 | 13 | 3259 | 11 | 96.68 | 0.36 |
| CO17-55Z-4 | 22.14 | 0.84 | 0.595 | 0.02 | 0.98612 | 3190 | 37 | 3010 | 81 | 3305 | 12 | 3322 | 9 | 91.06 | 0.06 |
| CO17-55Z-5 | 25.56 | 0.38 | 0.6619 | 0.0081 | 0.40592 | 3330 | 15 | 3275 | 31 | 3363 | 23 | 3328 | 15 | 97.36 | 0.77 |
| CO17-55Z-6 | 20.06 | 0.29 | 0.5822 | 0.0074 | 0.65661 | 3094 | 14 | 2958 | 30 | 3184 | 18 | 3114 | 14 | 92.89 | 0.55 |
| CO17-55Z-7 | 26.29 | 0.41 | 0.6772 | 0.0091 | 0.74616 | 3357 | 15 | 3334 | 35 | 3372 | 16 | 3363 | 14 | 98.87 | 0.60 |
| CO17-55Z-8 | 25.16 | 0.33 | 0.643 | 0.0067 | 0.3451 | 3314 | 13 | 3201 | 26 | 3384 | 21 | 3305 | 13 | 94.59 | 0.54 |
| CO17-55Z-9 | 18.32 | 0.41 | 0.5271 | 0.009 | 0.88042 | 3007 | 22 | 2729 | 38 | 3198 | 17 | 3163 | 16 | 85.34 | 0.53 |
| CO17-55Z-10 | 24.14 | 0.34 | 0.6454 | 0.0072 | 0.49582 | 3274 | 14 | 3210 | 28 | 3313 | 20 | 3274 | 14 | 96.89 | 0.40 |
| CO17-55Z-11 | 25.48 | 0.35 | 0.6758 | 0.0069 | 0.4669 | 3327 | 13 | 3328 | 27 | 3326 | 20 | 3327 | 13 | 100.07 | 0.99 |
| CO17-55Z-12 | 25.17 | 0.34 | 0.6791 | 0.0069 | 0.70605 | 3315 | 13 | 3341 | 27 | 3299 | 15 | 3310 | 13 | 101.27 | 0.34 |
| CO17-55Z-13 | 21.61 | 0.65 | 0.59 | 0.016 | 0.93628 | 3166 | 29 | 2989 | 65 | 3281 | 17 | 3271 | 15 | 91.13 | 0.65 |
| CO17-55Z-14 | 23.31 | 0.87 | 0.603 | 0.016 | 0.9835 | 3240 | 36 | 3042 | 64 | 3365 | 19 | 3440 | 10 | 90.40 | 0.42 |
| CO17-55Z-15 | 28.15 | 0.39 | 0.7245 | 0.008 | 0.29378 | 3424 | 14 | 3513 | 30 | 3373 | 23 | 3431 | 13 | 104.15 | 0.65 |
| CO17-55Z-16 | 20.84 | 0.33 | 0.5808 | 0.0082 | 0.76626 | 3131 | 15 | 2952 | 33 | 3248 | 16 | 3181 | 13 | 90.88 | 0.69 |
| CO17-55Z-17 | 19.43 | 0.35 | 0.5297 | 0.0091 | 0.80717 | 3063 | 17 | 2740 | 38 | 3283 | 17 | 3174 | 14 | 83.47 | 0.27 |
| CO17-55Z-18 | 23.41 | 0.34 | 0.6349 | 0.0076 | 0.36051 | 3244 | 14 | 3169 | 30 | 3291 | 24 | 3239 | 14 | 96.29 | 0.83 |
| CO17-55Z-19 | 29.63 | 0.48 | 0.7139 | 0.0093 | 0.31231 | 3475 | 16 | 3473 | 35 | 3476 | 27 | 3475 | 16 | 99.93 | 0.32 |
| CO17-55Z-20 | 19.19 | 0.39 | 0.5351 | 0.0098 | 0.83817 | 3051 | 20 | 2763 | 41 | 3247 | 18 | 3168 | 15 | 85.08 | 0.21 |
| CO17-55Z-21 | 25.71 | 0.39 | 0.6659 | 0.0079 | 0.61391 | 3336 | 15 | 3290 | 31 | 3363 | 19 | 3340 | 15 | 97.83 | 0.47 |
| CO17-55Z-22 | 24.59 | 0.44 | 0.665 | 0.013 | 0.88892 | 3292 | 18 | 3287 | 50 | 3295 | 14 | 3294 | 11 | 99.73 | 0.61 |
| CO17-55Z-23 | 26.93 | 0.4 | 0.6928 | 0.0096 | 0.49561 | 3381 | 15 | 3393 | 37 | 3374 | 23 | 3380 | 14 | 100.58 | 0.94 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CO17-55Z-24 | 23.83 | 0.33 | 0.6394 | 0.0073 | 0.70277 | 3262 | 14 | 3187 | 29 | 3308 | 16 | 3276 | 13 | 96.34 | 0.53 |
| CO17-55Z-25 | 23.81 | 0.33 | 0.6399 | 0.0082 | 0.38212 | 3261 | 14 | 3189 | 32 | 3305 | 23 | 3259 | 14 | 96.47 | 0.70 |
| CO17-55Z-26 | 24.5 | 0.34 | 0.631 | 0.0079 | 0.74887 | 3289 | 14 | 3154 | 31 | 3372 | 15 | 3323 | 12 | 93.53 | 0.17 |
| CO17-55Z-27 | 26.09 | 0.35 | 0.6471 | 0.0071 | 0.81045 | 3350 | 13 | 3217 | 28 | 3431 | 12 | 3397 | 11 | 93.77 | 0.13 |
| CO17-55Z-28 | 22.71 | 0.4 | 0.6307 | 0.0093 | 0.83198 | 3215 | 17 | 3152 | 37 | 3254 | 15 | 3239 | 14 | 96.89 | 1.06 |
| CO17-55Z-29 | 25.69 | 0.38 | 0.6917 | 0.0088 | 0.42404 | 3335 | 15 | 3389 | 34 | 3302 | 23 | 3335 | 14 | 102.63 | 0.81 |
| CO17-55Z-30 | 25.2 | 0.37 | 0.6595 | 0.0092 | 0.68354 | 3316 | 14 | 3265 | 36 | 3347 | 18 | 3325 | 13 | 97.56 | 1.17 |
| CO17-55Z-31 | 19.57 | 0.37 | 0.5945 | 0.0082 | 0.71677 | 3070 | 18 | 3008 | 33 | 3112 | 21 | 3082 | 18 | 96.66 | 0.29 |
| CO17-55Z-32 | 27.82 | 0.49 | 0.7051 | 0.011 | 0.62961 | 3413 | 17 | 3440 | 42 | 3397 | 22 | 3409 | 17 | 101.27 | 0.66 |
| | | | | | | | | | | | | | | | |
| CO17-58Z-1 | 21.93 | 0.45 | 0.597 | 0.012 | 0.94745 | 3181 | 20 | 3018 | 48 | 3285 | 10 | 3270 | 9 | 91.86 | 0.07 |
| CO17-58Z-2 | 21.8 | 0.49 | 0.6 | 0.014 | 0.96966 | 3175 | 22 | 3030 | 56 | 3268 | 9 | 3254 | 8 | 92.72 | 0.09 |
| CO17-58Z-3 | 18.41 | 0.44 | 0.5341 | 0.0073 | 0.82056 | 3011 | 23 | 2759 | 31 | 3185 | 24 | 3048 | 27 | 86.62 | 0.09 |
| CO17-58Z-4 | 29.61 | 0.45 | 0.7432 | 0.01 | 0.79226 | 3474 | 15 | 3582 | 37 | 3412 | 15 | 3442 | 13 | 104.99 | 2.27 |
| CO17-58Z-5 | 22.78 | 0.37 | 0.6313 | 0.0085 | 0.86974 | 3218 | 16 | 3155 | 34 | 3257 | 13 | 3247 | 12 | 96.86 | 0.24 |
| CO17-58Z-6 | 24.59 | 0.48 | 0.6634 | 0.011 | 0.95655 | 3292 | 19 | 3280 | 43 | 3299 | 10 | 3300 | 9 | 99.43 | 0.08 |
| CO17-58Z-7 | 20.4 | 0.48 | 0.548 | 0.012 | 0.96559 | 3111 | 23 | 2817 | 50 | 3306 | 10 | 3303 | 8 | 85.20 | 0.23 |
| CO17-58Z-8 | 20 | 0.27 | 0.6093 | 0.0065 | 0.44932 | 3091 | 13 | 3067 | 26 | 3107 | 21 | 3091 | 13 | 98.72 | 0.41 |
| CO17-58Z-9 | 19.88 | 0.29 | 0.5892 | 0.0072 | 0.58481 | 3086 | 14 | 2986 | 29 | 3151 | 20 | 3093 | 14 | 94.77 | 0.45 |
| CO17-58Z-10 | 27.86 | 0.37 | 0.7073 | 0.008 | 0.88127 | 3414 | 13 | 3448 | 30 | 3394 | 10 | 3399 | 10 | 101.59 | 0.20 |
| CO17-58Z-11 | 22.85 | 0.34 | 0.6298 | 0.0079 | 0.90171 | 3221 | 15 | 3149 | 31 | 3266 | 10 | 3259 | 10 | 96.42 | 0.55 |
| CO17-58Z-12 | 15.54 | 0.3 | 0.4369 | 0.0071 | 0.94076 | 2849 | 18 | 2337 | 32 | 3234 | 11 | 3239 | 7 | 72.25 | 0.38 |
| CO17-58Z-13 | 24.79 | 0.35 | 0.6513 | 0.0078 | 0.70186 | 3300 | 14 | 3233 | 30 | 3341 | 16 | 3313 | 13 | 96.78 | 0.14 |
| CO17-58Z-14 | 25.37 | 0.33 | 0.6449 | 0.0071 | 0.74812 | 3323 | 13 | 3208 | 28 | 3392 | 14 | 3352 | 12 | 94.57 | 0.34 |
| CO17-58Z-15 | 21 | 0.31 | 0.5959 | 0.0073 | 0.89041 | 3139 | 14 | 3013 | 30 | 3220 | 11 | 3205 | 10 | 93.59 | 0.17 |
| CO17-58Z-16 | 25.45 | 0.35 | 0.665 | 0.0076 | 0.77331 | 3326 | 13 | 3287 | 29 | 3349 | 14 | 3337 | 12 | 98.12 | 0.10 |
| CO17-58Z-17 | 24.99 | 0.38 | 0.6673 | 0.0096 | 0.85748 | 3308 | 15 | 3295 | 37 | 3315 | 12 | 3313 | 11 | 99.40 | 0.10 |
| CO17-58Z-18 | 16.03 | 0.3 | 0.4414 | 0.0087 | 0.9357 | 2879 | 18 | 2357 | 39 | 3267 | 11 | 3175 | 7 | 72.14 | 0.17 |
| CO17-58Z-19 | 14.96 | 0.28 | 0.5194 | 0.0066 | 0.65231 | 2813 | 18 | 2697 | 28 | 2897 | 23 | 2813 | 19 | 93.08 | 0.17 |
| CO17-58Z-20 | 22.2 | 0.45 | 0.5542 | 0.011 | 0.82596 | 3193 | 20 | 2843 | 46 | 3420 | 18 | 3318 | 15 | 83.11 | 0.31 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CO17-58Z-21 | 19.69 | 0.33 | 0.5444 | 0.0084 | 0.9079 | 3076 | 16 | 2802 | 35 | 3261 | 11 | 3223 | 9 | 85.93 | 0.08 |
| CO17-58Z-22 | 21.99 | 0.28 | 0.6259 | 0.0067 | 0.7786 | 3183 | 12 | 3133 | 27 | 3215 | 13 | 3198 | 11 | 97.46 | 0.06 |
| CO17-58Z-23 | 24.38 | 0.73 | 0.639 | 0.018 | 0.97652 | 3284 | 29 | 3185 | 71 | 3345 | 10 | 3345 | 10 | 95.23 | 0.15 |
| CO17-58Z-24 | 24.97 | 0.33 | 0.6529 | 0.0072 | 0.71604 | 3307 | 13 | 3240 | 28 | 3348 | 15 | 3322 | 12 | 96.75 | 0.09 |
| CO17-58Z-25 | 25.98 | 0.34 | 0.6864 | 0.0077 | 0.66644 | 3346 | 13 | 3369 | 29 | 3332 | 16 | 3342 | 12 | 101.11 | 0.10 |
| CO17-58Z-26 | 23.27 | 0.33 | 0.618 | 0.0069 | 0.66268 | 3238 | 14 | 3102 | 28 | 3324 | 17 | 3257 | 14 | 93.32 | 0.26 |
| CO17-58Z-27 | 16.7 | 0.32 | 0.5152 | 0.0091 | 0.90433 | 2918 | 18 | 2679 | 39 | 3087 | 13 | 3048 | 11 | 86.78 | 0.04 |
| CO17-58Z-28 | 25.51 | 0.36 | 0.6723 | 0.0087 | 0.4954 | 3328 | 14 | 3315 | 34 | 3336 | 21 | 3329 | 14 | 99.36 | 0.22 |
| CO17-58Z-30 | 25.01 | 0.39 | 0.6282 | 0.0098 | 0.90863 | 3309 | 15 | 3143 | 39 | 3411 | 10 | 3384 | 9 | 92.13 | 0.10 |
| CO17-58Z-31 | 16.38 | 0.29 | 0.4795 | 0.0073 | 0.90937 | 2899 | 17 | 2525 | 32 | 3171 | 12 | 3131 | 10 | 79.64 | 0.10 |
| CO17-58Z-32 | 22.41 | 0.3 | 0.6181 | 0.0071 | 0.8188 | 3202 | 13 | 3102 | 28 | 3265 | 12 | 3238 | 11 | 95.03 | 0.24 |
| CO17-58Z-33 | 27.1 | 0.36 | 0.7006 | 0.0079 | 0.44708 | 3387 | 13 | 3423 | 30 | 3366 | 20 | 3387 | 13 | 101.69 | 0.10 |
| | | | | | | | | | | | | | | | |
| I16-07Z-2 | 18.43 | 0.3 | 0.6078 | 0.0093 | 0.58458 | 3013 | 16 | 3061 | 37 | 2980 | 23 | 3008 | 15 | 102.72 | 0.81 |
| I16-07Z-16 | 18.65 | 0.3 | 0.6 | 0.0074 | 0.53312 | 3024 | 16 | 3030 | 30 | 3020 | 23 | 3024 | 16 | 100.33 | 1.02 |
| I16-07Z-8 | 15.56 | 0.3 | 0.5226 | 0.0099 | 0.81475 | 2850 | 18 | 2710 | 42 | 2951 | 19 | 2899 | 15 | 91.85 | 0.42 |
| I16-07Z-5 | 13.19 | 0.41 | 0.451 | 0.015 | 0.89842 | 2693 | 29 | 2400 | 67 | 2922 | 24 | 2837 | 17 | 82.13 | 0.79 |
| I16-07Z-4 | 14.86 | 0.34 | 0.4522 | 0.0093 | 0.94054 | 2806 | 22 | 2405 | 41 | 3109 | 13 | 3087 | 10 | 77.36 | 0.34 |
| I16-07Z-9 | 12.04 | 0.27 | 0.4074 | 0.0088 | 0.78907 | 2608 | 21 | 2203 | 40 | 2939 | 23 | 2738 | 18 | 74.97 | 0.19 |
| I16-07Z-12 | 9.78 | 0.29 | 0.3602 | 0.0098 | 0.97023 | 2414 | 27 | 1983 | 46 | 2801 | 12 | 2804 | 8 | 70.80 | 1.49 |
| I16-07Z-17 | 7.15 | 0.14 | 0.2841 | 0.0049 | 0.82849 | 2130 | 17 | 1612 | 25 | 2676 | 18 | 2302 | 20 | 60.24 | 0.79 |
| I16-07Z-6 | 8.15 | 0.26 | 0.2908 | 0.0082 | 0.95387 | 2248 | 29 | 1646 | 41 | 2853 | 16 | 439 | 21 | 57.68 | 0.47 |
| I16-07Z-11 | 5.854 | 0.1 | 0.237 | 0.0044 | 0.38898 | 1954 | 15 | 1371 | 23 | 2645 | 33 | 1768 | 19 | 51.84 | 0.43 |
| I16-07Z-15 | 4.802 | 0.092 | 0.2078 | 0.0039 | 0.8648 | 1785 | 16 | 1217 | 21 | 2534 | 17 | 530 | 21 | 48.03 | 0.69 |
| I16-07Z-1 | 3.435 | 0.1 | 0.1701 | 0.0052 | 0.74378 | 1512 | 23 | 1013 | 29 | 2305 | 37 | 1094 | 54 | 43.93 | 0.09 |
| I16-07Z-14 | 4.41 | 0.15 | 0.1882 | 0.0055 | 0.97771 | 1714 | 28 | 1112 | 30 | 2557 | 14 | 278 | 10 | 43.47 | 0.24 |
| I16-07Z-7 | 4.55 | 0.4 | 0.189 | 0.012 | 0.99504 | 1740 | 73 | 1116 | 65 | 2602 | 43 | 433 | 10 | 42.89 | 0.48 |
| I16-07Z-13 | 3.229 | 0.048 | 0.1515 | 0.0022 | 0.73612 | 1464 | 12 | 909 | 12 | 2397 | 18 | 710 | 15 | 37.94 | 0.27 |
| I16-07Z-3 | 1.445 | 0.039 | 0.0836 | 0.0021 | 0.97347 | 908 | 16 | 518 | 13 | 2034 | 11 | 98 | 5 | 25.45 | 0.63 |
| I16-07Z-10 | 2.312 | 0.05 | 0.0966 | 0.0019 | 0.97641 | 1216 | 15 | 595 | 11 | 2593 | 8 | 103 | 4 | 22.93 | 1.32 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I16-17Z-10 | 21.99 | 0.32 | 0.6365 | 0.0073 | 0.78366 | 3183 | 14 | 3175 | 29 | 3188 | 14 | 3186 | 13 | 99.59 | 0.63 |
| I16-17Z-8 | 22.16 | 0.34 | 0.6274 | 0.0081 | 0.66385 | 3191 | 15 | 3139 | 32 | 3223 | 19 | 3199 | 14 | 97.39 | 0.30 |
| I16-17Z-7 | 20.55 | 0.32 | 0.6036 | 0.009 | 0.63504 | 3118 | 15 | 3044 | 36 | 3165 | 21 | 3128 | 15 | 96.18 | 0.55 |
| I16-17Z-11 | 20.45 | 0.33 | 0.5904 | 0.011 | 0.62904 | 3113 | 16 | 2991 | 45 | 3192 | 24 | 3130 | 15 | 93.69 | 0.44 |
| I16-17Z-14 | 21.31 | 0.42 | 0.5909 | 0.011 | 0.81592 | 3153 | 19 | 2993 | 45 | 3256 | 18 | 3208 | 15 | 91.92 | 0.44 |
| I16-17Z-2 | 21.01 | 0.44 | 0.586 | 0.015 | 0.81073 | 3139 | 20 | 2973 | 61 | 3247 | 24 | 3185 | 15 | 91.57 | 0.39 |
| I16-17Z-5 | 17.86 | 0.61 | 0.538 | 0.012 | 0.79575 | 2982 | 33 | 2775 | 50 | 3125 | 34 | 3034 | 33 | 88.80 | 0.40 |
| I16-17Z-9 | 15.96 | 0.28 | 0.479 | 0.0061 | 0.67281 | 2874 | 17 | 2523 | 27 | 3131 | 21 | 2878 | 19 | 80.58 | 0.35 |
| I16-17Z-1 | 13.63 | 0.25 | 0.4354 | 0.0085 | 0.88362 | 2724 | 17 | 2330 | 38 | 3031 | 15 | 2911 | 11 | 76.86 | 0.65 |
| I16-17Z-12 | 13.6 | 0.23 | 0.4225 | 0.0077 | 0.87309 | 2722 | 16 | 2272 | 35 | 3076 | 14 | 2927 | 10 | 73.86 | 0.45 |
| I16-17Z-13 | 8.52 | 0.25 | 0.2713 | 0.0085 | 0.96712 | 2288 | 27 | 1547 | 43 | 3036 | 13 | 0 | 18 | 50.96 | 0.33 |
| I16-17Z-6 | 4.675 | 0.1 | 0.1729 | 0.0036 | 0.8806 | 1763 | 18 | 1028 | 20 | 2794 | 17 | 316 | 15 | 36.80 | 0.28 |
| I16-17Z-15 | 1.663 | 0.045 | 0.047 | 0.0016 | 0.97276 | 995 | 17 | 296 | 10 | 3226 | 16 | 0 | 3 | 9.18 | 0.17 |
| | | | | | | | | | | | | | | | |
| I16-18Z-27 | 22.21 | 0.35 | 0.7021 | 0.0088 | 0.86237 | 3193 | 15 | 3429 | 33 | 3048 | 13 | 3089 | 13 | 112.48 | 0.87 |
| I16-18Z-23 | 17.46 | 0.23 | 0.5765 | 0.007 | 0.49028 | 2961 | 13 | 2935 | 29 | 2978 | 21 | 2961 | 13 | 98.53 | 0.79 |
| I16-18Z-2 | 20.06 | 0.36 | 0.6081 | 0.0083 | 0.64705 | 3094 | 17 | 3062 | 33 | 3115 | 22 | 3098 | 17 | 98.31 | 0.70 |
| I16-18Z-28 | 16.97 | 0.24 | 0.5601 | 0.0064 | 0.6478 | 2933 | 14 | 2867 | 26 | 2979 | 18 | 2941 | 13 | 96.25 | 0.51 |
| I16-18Z-26 | 16.73 | 0.36 | 0.5562 | 0.01 | 0.96007 | 2920 | 21 | 2851 | 41 | 2967 | 11 | 2972 | 10 | 96.08 | 0.56 |
| I16-18Z-13 | 15.82 | 0.25 | 0.5249 | 0.0062 | 0.87174 | 2866 | 15 | 2720 | 26 | 2970 | 13 | 2944 | 12 | 91.57 | 0.69 |
| I16-18Z-29 | 11.46 | 0.19 | 0.4077 | 0.0054 | 0.83461 | 2561 | 16 | 2204 | 25 | 2857 | 15 | 2711 | 14 | 77.15 | 0.84 |
| I16-18Z-6 | 11.404 | 0.16 | 0.4004 | 0.0052 | 0.81183 | 2557 | 13 | 2171 | 24 | 2879 | 14 | 2700 | 11 | 75.41 | 0.52 |
| I16-18Z-14 | 10.83 | 0.16 | 0.3884 | 0.0047 | 0.84482 | 2509 | 14 | 2115 | 22 | 2844 | 13 | 2690 | 12 | 74.37 | 0.26 |
| I16-18Z-21 | 11.05 | 0.22 | 0.3884 | 0.0078 | 0.94814 | 2527 | 19 | 2115 | 36 | 2877 | 11 | 2813 | 8 | 73.53 | 0.25 |
| I16-18Z-31 | 12.538 | 0.16 | 0.398 | 0.0046 | 0.7429 | 2646 | 12 | 2160 | 21 | 3041 | 14 | 2750 | 12 | 71.01 | 0.50 |
| I16-18Z-25 | 9.245 | 0.13 | 0.3296 | 0.0038 | 0.63021 | 2363 | 13 | 1836 | 18 | 2854 | 18 | 2219 | 19 | 64.35 | 0.07 |
| I16-18Z-15 | 7.8 | 0.14 | 0.2994 | 0.0042 | 0.9036 | 2208 | 16 | 1688 | 21 | 2733 | 13 | 889 | 17 | 61.77 | 0.49 |
| I16-18Z-16 | 6.184 | 0.085 | 0.2627 | 0.0028 | 0.69711 | 2002 | 12 | 1504 | 14 | 2565 | 17 | 1567 | 21 | 58.62 | 0.26 |
| I16-18Z-8 | 6.551 | 0.11 | 0.2683 | 0.0043 | 0.67807 | 2053 | 15 | 1532 | 22 | 2626 | 22 | 1985 | 21 | 58.35 | 0.52 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I16-18Z-10 | 8.66 | 0.17 | 0.2983 | 0.0048 | 0.83917 | 2303 | 18 | 1683 | 24 | 2910 | 17 | 1019 | 26 | 57.84 | 0.27 |
| I16-18Z-7 | 5.993 | 0.11 | 0.2522 | 0.0027 | 0.55353 | 1975 | 16 | 1450 | 14 | 2581 | 26 | 1427 | 16 | 56.18 | 0.52 |
| I16-18Z-5 | 5.372 | 0.08 | 0.237 | 0.0027 | 0.62531 | 1880 | 13 | 1371 | 14 | 2501 | 20 | 1423 | 18 | 54.81 | 0.44 |
| I16-18Z-22 | 4.076 | 0.088 | 0.2023 | 0.0031 | 0.87178 | 1650 | 18 | 1188 | 17 | 2301 | 19 | 788 | 15 | 51.61 | 0.44 |
| I16-18Z-12 | 4.211 | 0.068 | 0.2031 | 0.0025 | 0.90171 | 1676 | 13 | 1192 | 13 | 2350 | 13 | 664 | 10 | 50.72 | 0.59 |
| I16-18Z-19 | 6.59 | 0.31 | 0.2446 | 0.0085 | 0.96037 | 2058 | 42 | 1411 | 44 | 2788 | 27 | 597 | 20 | 50.59 | 0.71 |
| I16-18Z-18 | 3.781 | 0.082 | 0.1908 | 0.0044 | 0.90195 | 1589 | 17 | 1126 | 24 | 2273 | 17 | 1948 | 12 | 49.54 | 0.49 |
| I16-18Z-4 | 3.289 | 0.087 | 0.1698 | 0.0034 | 0.91232 | 1479 | 21 | 1011 | 19 | 2233 | 20 | 544 | 13 | 45.27 | 0.55 |
| I16-18Z-17 | 3.615 | 0.07 | 0.1749 | 0.0022 | 0.81762 | 1553 | 15 | 1039 | 12 | 2345 | 20 | 756 | 11 | 44.32 | 0.64 |
| I16-18Z-1 | 3.001 | 0.045 | 0.1583 | 0.002 | 0.30258 | 1408 | 11 | 947 | 11 | 2196 | 29 | 1080 | 11 | 43.14 | 0.08 |
| I16-18Z-3 | 5.18 | 0.12 | 0.1993 | 0.0033 | 0.86077 | 1849 | 20 | 1172 | 18 | 2729 | 20 | 685 | 14 | 42.93 | 0.25 |
| I16-18Z-9 | 6.4 | 0.23 | 0.2143 | 0.0066 | 0.82269 | 2032 | 32 | 1252 | 35 | 2956 | 33 | 648 | 32 | 42.35 | 0.57 |
| I16-18Z-30 | 2.93 | 0.1 | 0.1512 | 0.004 | 0.95901 | 1390 | 26 | 908 | 22 | 2234 | 20 | 377 | 11 | 40.63 | 0.12 |
| I16-18Z-11 | 4.75 | 0.16 | 0.1606 | 0.0052 | 0.62207 | 1776 | 28 | 960 | 29 | 2940 | 46 | 751 | 33 | 32.66 | 0.21 |
| | | | | | | | | | | | | | | | |
| I16-32Z-2 | 19.09 | 0.32 | 0.622 | 0.0077 | 0.82472 | 3046 | 16 | 3118 | 31 | 3000 | 15 | 3019 | 15 | 103.94 | 0.62 |
| I16-32Z-21 | 25.03 | 0.32 | 0.6896 | 0.007 | 0.50786 | 3309 | 13 | 3381 | 27 | 3266 | 18 | 3307 | 12 | 103.52 | 0.54 |
| I16-32Z-3 | 24.53 | 0.42 | 0.6732 | 0.0091 | 0.8267 | 3290 | 17 | 3318 | 35 | 3272 | 15 | 3279 | 14 | 101.40 | 0.66 |
| I16-32Z-5 | 6.51 | 0.2 | 0.262 | 0.0056 | 0.86342 | 2047 | 27 | 1500 | 29 | 2655 | 27 | 990 | 26 | 56.51 | 0.95 |
| I16-32Z-22 | 3.576 | 0.055 | 0.1996 | 0.0024 | 0.61718 | 1544 | 12 | 1173 | 13 | 2097 | 22 | 1260 | 15 | 55.94 | 0.57 |
| I16-32Z-13 | 3.633 | 0.057 | 0.1946 | 0.0026 | 0.62506 | 1557 | 13 | 1146 | 14 | 2169 | 22 | 1264 | 17 | 52.84 | 0.66 |
| I16-32Z-10 | 3.016 | 0.047 | 0.1716 | 0.0019 | 0.4695 | 1412 | 12 | 1021 | 11 | 2063 | 25 | 1077 | 11 | 49.48 | 0.71 |
| I16-32Z-12 | 5.246 | 0.08 | 0.2169 | 0.0028 | 0.47239 | 1860 | 13 | 1266 | 15 | 2610 | 24 | 1418 | 17 | 48.49 | 0.57 |
| I16-32Z-27 | 3.686 | 0.086 | 0.1846 | 0.0036 | 0.89479 | 1568 | 19 | 1092 | 20 | 2286 | 18 | 561 | 16 | 47.78 | 0.85 |
| I16-32Z-14 | 4.35 | 0.12 | 0.1982 | 0.0056 | 0.9428 | 1703 | 23 | 1166 | 30 | 2447 | 16 | 160 | 18 | 47.63 | 0.66 |
| I16-32Z-1 | 3.19 | 0.11 | 0.172 | 0.0036 | 0.96702 | 1455 | 27 | 1023 | 20 | 2158 | 27 | 614 | 8 | 47.42 | 0.66 |
| I16-32Z-18 | 3.374 | 0.062 | 0.1764 | 0.0026 | 0.67802 | 1498 | 14 | 1047 | 14 | 2211 | 24 | 1004 | 18 | 47.36 | 0.73 |
| I16-32Z-9 | 2.976 | 0.058 | 0.166 | 0.0021 | 0.84637 | 1402 | 15 | 990 | 12 | 2098 | 19 | 731 | 10 | 47.18 | 0.66 |
| I16-32Z-26 | 3.1 | 0.11 | 0.1671 | 0.0035 | 0.88885 | 1433 | 27 | 996 | 19 | 2158 | 34 | 702 | 14 | 46.15 | 0.63 |
| I16-32Z-7 | 4.01 | 0.13 | 0.1863 | 0.0036 | 0.8223 | 1636 | 26 | 1101 | 20 | 2414 | 34 | 818 | 17 | 45.62 | 0.66 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I16-32Z-20 | 3.167 | 0.066 | 0.1651 | 0.0029 | 0.59645 | 1449 | 16 | 985 | 16 | 2216 | 30 | 1014 | 19 | 44.45 | 0.65 |
| I16-32Z-6 | 5.65 | 0.15 | 0.2109 | 0.0057 | 0.8804 | 1924 | 23 | 1234 | 30 | 2779 | 22 | 350 | 25 | 44.39 | 0.89 |
| I16-32Z-19 | 4.522 | 0.093 | 0.1924 | 0.0022 | 0.5744 | 1735 | 17 | 1134 | 12 | 2562 | 28 | 1037 | 13 | 44.27 | 0.59 |
| I16-32Z-24 | 4.14 | 0.12 | 0.1839 | 0.0045 | 0.89473 | 1662 | 24 | 1088 | 25 | 2490 | 22 | 497 | 19 | 43.70 | 0.40 |
| I16-32Z-15 | 3.979 | 0.1 | 0.1791 | 0.0051 | 0.44306 | 1630 | 20 | 1062 | 28 | 2468 | 48 | 1374 | 27 | 43.04 | 0.65 |
| I16-32Z-8 | 4.15 | 0.11 | 0.1807 | 0.0045 | 0.88999 | 1664 | 22 | 1071 | 25 | 2523 | 20 | 398 | 20 | 42.43 | 0.60 |
| I16-32Z-25 | 3.269 | 0.058 | 0.1601 | 0.0026 | 0.44137 | 1474 | 14 | 957 | 14 | 2324 | 31 | 1083 | 16 | 41.19 | 0.53 |
| I16-32Z-4 | 3.97 | 0.12 | 0.1703 | 0.0034 | 0.9092 | 1628 | 25 | 1014 | 19 | 2549 | 25 | 580 | 12 | 39.78 | 0.62 |
| I16-32Z-23 | 2.511 | 0.044 | 0.1383 | 0.0018 | 0.80257 | 1275 | 13 | 835 | 10 | 2121 | 18 | 608 | 10 | 39.38 | 1.33 |
| I16-32Z-17 | 4.085 | 0.073 | 0.171 | 0.0021 | 0.6405 | 1651 | 15 | 1018 | 12 | 2589 | 23 | 863 | 12 | 39.30 | 0.81 |
| I16-32Z-11 | 3.58 | 0.12 | 0.1602 | 0.0061 | 0.9037 | 1545 | 27 | 958 | 34 | 2477 | 28 | 116 | 26 | 38.67 | 0.52 |
| I16-32Z-16 | 2.446 | 0.064 | 0.1174 | 0.0017 | 0.69359 | 1256 | 19 | 716 | 10 | 2359 | 33 | 581 | 9 | 30.34 | 0.42 |
| | | | | | | | | | | | | | | | |
| I16-34Z-22 | 14.68 | 0.39 | 0.4541 | 0.01 | 0.66377 | 2795 | 25 | 2414 | 44 | 3083 | 33 | 2824 | 27 | 78.29 | 0.30 |
| I16-34Z-20 | 20.91 | 0.42 | 0.603 | 0.012 | 0.75695 | 3134 | 20 | 3042 | 48 | 3194 | 22 | 3158 | 17 | 95.23 | 0.29 |
| I16-34Z-18 | 21.3 | 0.37 | 0.5974 | 0.01 | 0.49695 | 3152 | 17 | 3019 | 40 | 3238 | 27 | 3158 | 17 | 93.25 | 0.49 |
| I16-34Z-4 | 21.83 | 0.4 | 0.629 | 0.012 | 0.83664 | 3176 | 18 | 3146 | 48 | 3196 | 17 | 3187 | 14 | 98.44 | 0.32 |
| I16-34Z-9 | 22.26 | 0.37 | 0.6234 | 0.0079 | 0.71095 | 3195 | 16 | 3123 | 31 | 3241 | 19 | 3209 | 16 | 96.39 | 0.47 |
| I16-34Z-23 | 22.56 | 0.31 | 0.6214 | 0.0068 | 0.52668 | 3208 | 13 | 3116 | 27 | 3267 | 19 | 3210 | 14 | 95.37 | 0.56 |
| I16-34Z-21 | 23.03 | 0.38 | 0.6313 | 0.0091 | 0.72872 | 3228 | 16 | 3155 | 36 | 3274 | 18 | 3245 | 15 | 96.35 | 0.62 |
| I16-34Z-11 | 23.09 | 0.35 | 0.6391 | 0.0072 | 0.3966 | 3231 | 15 | 3186 | 28 | 3259 | 23 | 3227 | 15 | 97.74 | 0.43 |
| I16-34Z-24 | 23.41 | 0.33 | 0.6511 | 0.0088 | 0.36608 | 3244 | 14 | 3233 | 34 | 3251 | 25 | 3244 | 14 | 99.42 | 0.31 |
| I16-34Z-17 | 23.57 | 0.34 | 0.646 | 0.0079 | 0.42104 | 3251 | 14 | 3213 | 31 | 3274 | 23 | 3250 | 14 | 98.11 | 0.55 |
| I16-34Z-8 | 23.72 | 0.33 | 0.6558 | 0.0066 | 0.49805 | 3257 | 14 | 3251 | 26 | 3261 | 20 | 3257 | 14 | 99.70 | 0.43 |
| I16-34Z-14 | 23.73 | 0.38 | 0.6579 | 0.0086 | 0.51898 | 3257 | 16 | 3259 | 33 | 3256 | 23 | 3257 | 16 | 100.08 | 0.41 |
| I16-34Z-28 | 23.73 | 0.34 | 0.6442 | 0.008 | 0.55864 | 3257 | 14 | 3206 | 31 | 3289 | 20 | 3261 | 14 | 97.45 | 0.48 |
| I16-34Z-30 | 23.75 | 0.33 | 0.6513 | 0.0067 | 0.32846 | 3258 | 14 | 3233 | 26 | 3274 | 23 | 3256 | 13 | 98.77 | 0.62 |
| I16-34Z-2 | 23.77 | 0.37 | 0.6585 | 0.0084 | 0.71615 | 3259 | 15 | 3261 | 33 | 3258 | 17 | 3259 | 14 | 100.11 | 0.58 |
| I16-34Z-15 | 23.87 | 0.33 | 0.6611 | 0.0074 | 0.092661 | 3263 | 14 | 3271 | 29 | 3258 | 27 | 3264 | 13 | 100.41 | 0.70 |
| I16-34Z-7 | 24.07 | 0.32 | 0.661 | 0.008 | 0.22512 | 3271 | 13 | 3271 | 31 | 3271 | 25 | 3271 | 13 | 99.99 | 0.38 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I16-34Z-13 | 24.09 | 0.35 | 0.663 | 0.0078 | 0.46305 | 3272 | 14 | 3279 | 30 | 3268 | 22 | 3272 | 14 | 100.33 | 0.59 |
| I16-34Z-10 | 24.25 | 0.4 | 0.6698 | 0.011 | 0.61912 | 3279 | 16 | 3305 | 43 | 3262 | 23 | 3275 | 15 | 101.31 | 0.55 |
| I16-34Z-12 | 24.31 | 0.4 | 0.6684 | 0.0071 | 0.57368 | 3281 | 16 | 3300 | 27 | 3269 | 21 | 3281 | 16 | 100.93 | 0.38 |
| I16-34Z-27 | 24.41 | 0.34 | 0.6697 | 0.008 | 0.50841 | 3285 | 14 | 3305 | 31 | 3273 | 20 | 3284 | 14 | 100.97 | 0.41 |
| I16-34Z-1 | 24.6 | 0.38 | 0.6723 | 0.0093 | 0.34752 | 3293 | 15 | 3315 | 36 | 3279 | 26 | 3293 | 15 | 101.09 | 0.42 |
| I16-34Z-16 | 24.6 | 0.39 | 0.6724 | 0.0081 | 0.38248 | 3293 | 16 | 3315 | 31 | 3279 | 25 | 3294 | 15 | 101.11 | 0.59 |
| I16-34Z-6 | 24.64 | 0.37 | 0.6823 | 0.0089 | 0.50573 | 3294 | 15 | 3353 | 34 | 3258 | 22 | 3291 | 15 | 102.91 | 0.59 |
| I16-34Z-29 | 24.8 | 0.31 | 0.6793 | 0.0076 | 0.65735 | 3300 | 12 | 3342 | 29 | 3275 | 16 | 3294 | 12 | 102.02 | 0.49 |
| I16-34Z-5 | 25.09 | 0.37 | 0.6766 | 0.0081 | 0.49598 | 3312 | 14 | 3331 | 31 | 3300 | 21 | 3311 | 14 | 100.95 | 0.37 |
| I16-34Z-25 | 25.31 | 0.35 | 0.6911 | 0.0077 | 0.37345 | 3320 | 14 | 3387 | 29 | 3280 | 22 | 3323 | 13 | 103.25 | 0.50 |
| I16-34Z-19 | 25.65 | 0.42 | 0.7081 | 0.011 | 0.77557 | 3333 | 16 | 3451 | 42 | 3263 | 17 | 3301 | 14 | 105.77 | 0.53 |
| I16-34Z-26 | 25.96 | 0.9 | 0.711 | 0.023 | 0.78319 | 3345 | 34 | 3462 | 87 | 3276 | 35 | 3312 | 29 | 105.70 | 0.37 |
| | | | | | | | | | | | | | | | |
| I16-46Z-1 | 21.77 | 0.37 | 0.6216 | 0.0085 | 0.92957 | 3174 | 17 | 3116 | 34 | 3210 | 11 | 3211 | 10 | 97.08 | 0.14 |
| I16-46Z-2 | 18.96 | 0.28 | 0.5685 | 0.0081 | 0.74134 | 3040 | 14 | 2902 | 33 | 3132 | 17 | 3074 | 13 | 92.64 | 0.18 |
| I16-46Z-3 | 18.08 | 0.33 | 0.545 | 0.011 | 0.84857 | 2994 | 18 | 2804 | 46 | 3124 | 17 | 3062 | 12 | 89.77 | 0.24 |
| I16-46Z-4 | 22.35 | 0.33 | 0.6302 | 0.0084 | 0.79929 | 3199 | 14 | 3150 | 33 | 3230 | 14 | 3215 | 12 | 97.54 | 0.38 |
| I16-46Z-5 | 20.74 | 0.35 | 0.5841 | 0.0092 | 0.91249 | 3127 | 16 | 2966 | 37 | 3232 | 11 | 3210 | 10 | 91.77 | 1.85 |
| I16-46Z-6 | 21.51 | 0.33 | 0.6243 | 0.0078 | 0.87511 | 3162 | 15 | 3127 | 31 | 3184 | 12 | 3179 | 11 | 98.21 | 0.18 |
| I16-46Z-7 | 20.8 | 0.3 | 0.6241 | 0.0069 | 0.79649 | 3129 | 14 | 3126 | 27 | 3131 | 14 | 3130 | 13 | 99.84 | 0.45 |
| I16-46Z-8 | 21.09 | 0.32 | 0.6002 | 0.0067 | 0.86069 | 3143 | 15 | 3031 | 27 | 3215 | 13 | 3197 | 12 | 94.26 | 0.15 |
| I16-46Z-9 | 21.3 | 0.45 | 0.6055 | 0.011 | 0.93717 | 3152 | 21 | 3052 | 44 | 3217 | 12 | 3215 | 11 | 94.87 | 0.46 |
| I16-46Z-10 | 21.1 | 0.25 | 0.6303 | 0.0073 | 0.66643 | 3143 | 12 | 3151 | 29 | 3138 | 15 | 3142 | 11 | 100.40 | 0.08 |
| I16-46Z-11 | 21.86 | 0.3 | 0.6143 | 0.008 | 0.76294 | 3178 | 13 | 3087 | 32 | 3235 | 15 | 3202 | 12 | 95.43 | 0.31 |
| I16-46Z-12 | 21.62 | 0.35 | 0.6271 | 0.008 | 0.8729 | 3167 | 16 | 3138 | 32 | 3185 | 13 | 3181 | 12 | 98.53 | 0.05 |
| I16-46Z-13 | 19.52 | 0.28 | 0.6023 | 0.007 | 0.59698 | 3068 | 14 | 3039 | 28 | 3087 | 19 | 3070 | 14 | 98.45 | 0.11 |
| I16-46Z-14 | 20.52 | 0.32 | 0.61 | 0.0071 | 0.71558 | 3116 | 15 | 3070 | 28 | 3146 | 17 | 3125 | 15 | 97.58 | 0.09 |
| I16-46Z-15 | 21.96 | 0.33 | 0.63 | 0.0082 | 0.8331 | 3182 | 15 | 3150 | 32 | 3202 | 13 | 3194 | 12 | 98.35 | 0.15 |
| I16-46Z-16 | 22.4 | 0.41 | 0.6462 | 0.0094 | 0.84534 | 3201 | 18 | 3213 | 37 | 3194 | 16 | 3196 | 15 | 100.61 | 0.21 |
| I16-46Z-17 | 20.89 | 0.27 | 0.6173 | 0.0071 | 0.64079 | 3134 | 13 | 3099 | 28 | 3156 | 17 | 3138 | 12 | 98.21 | 0.15 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I16-46Z-18 | 20.88 | 0.28 | 0.6 | 0.0063 | 0.79987 | 3133 | 13 | 3030 | 25 | 3200 | 13 | 3168 | 12 | 94.69 | 0.39 |
| I16-46Z-19 | 22.07 | 0.27 | 0.6317 | 0.0067 | 0.42026 | 3187 | 12 | 3156 | 27 | 3206 | 20 | 3186 | 12 | 98.45 | 0.22 |
| I16-46Z-20 | 22.68 | 0.29 | 0.6619 | 0.0073 | 0.73252 | 3213 | 12 | 3275 | 28 | 3175 | 14 | 3199 | 12 | 103.12 | 0.09 |
| I16-46Z-21 | 13.04 | 0.56 | 0.416 | 0.016 | 0.97288 | 2683 | 41 | 2242 | 73 | 3033 | 17 | 3054 | 11 | 73.92 | 0.29 |
| I16-46Z-22 | 24.86 | 0.42 | 0.7001 | 0.01 | 0.9063 | 3303 | 17 | 3421 | 38 | 3232 | 11 | 3242 | 12 | 105.86 | 0.14 |
| I16-46Z-23 | 20.51 | 0.28 | 0.6003 | 0.0066 | 0.75002 | 3116 | 13 | 3031 | 27 | 3171 | 14 | 3137 | 12 | 95.59 | 0.29 |
| I16-46Z-24 | 25.14 | 0.36 | 0.6782 | 0.0082 | 0.73835 | 3314 | 14 | 3337 | 32 | 3299 | 15 | 3308 | 13 | 101.15 | 1.08 |
| I16-46Z-25 | 19.32 | 0.28 | 0.5902 | 0.008 | 0.58552 | 3058 | 14 | 2990 | 32 | 3103 | 20 | 3065 | 14 | 96.37 | 0.33 |
| I16-46Z-26 | 18.92 | 0.31 | 0.5655 | 0.009 | 0.83475 | 3038 | 16 | 2889 | 37 | 3138 | 15 | 3093 | 12 | 92.09 | 0.21 |
| I16-46Z-27 | 21.07 | 0.28 | 0.6049 | 0.0068 | 0.58355 | 3142 | 13 | 3050 | 27 | 3201 | 18 | 3149 | 13 | 95.26 | 0.15 |
| I16-46Z-28 | 19.47 | 0.3 | 0.5742 | 0.0075 | 0.75109 | 3065 | 15 | 2925 | 31 | 3159 | 16 | 3101 | 14 | 92.60 | 0.14 |
| I16-46Z-29 | 11.08 | 0.18 | 0.4201 | 0.0064 | 0.73464 | 2530 | 15 | 2261 | 29 | 2753 | 19 | 2590 | 14 | 82.12 | 0.14 |
| I16-46Z-30 | 19.64 | 0.28 | 0.6005 | 0.0064 | 0.8953 | 3074 | 14 | 3032 | 26 | 3101 | 11 | 3098 | 11 | 97.76 | 0.15 |
| | | | | | | | | | | | | | | | |
| I16-52Z-13 | 0.964 | 0.076 | 0.1048 | 0.0034 | 0.52561 | 685 | 39 | 643 | 20 | 829 | 141 | 641 | 20 | 77.50 | 0.47 |
| I16-52Z-31 | 0.959 | 0.027 | 0.1079 | 0.0017 | 0.20317 | 683 | 14 | 661 | 10 | 757 | 62 | 667 | 9 | 87.28 | 1.01 |
| I16-52Z-19 | 0.983 | 0.034 | 0.1115 | 0.0023 | 0.27172 | 695 | 17 | 682 | 13 | 740 | 74 | 686 | 12 | 92.13 | 0.46 |
| I16-52Z-12 | 0.998 | 0.031 | 0.1127 | 0.0023 | 0.45276 | 703 | 16 | 688 | 13 | 749 | 60 | 693 | 12 | 91.90 | 0.64 |
| I16-52Z-24 | 1.18 | 0.043 | 0.1247 | 0.0025 | 0.37625 | 791 | 20 | 758 | 14 | 888 | 71 | 766 | 14 | 85.35 | 0.47 |
| I16-52Z-29 | 1.124 | 0.038 | 0.1252 | 0.0024 | 0.10456 | 765 | 18 | 760 | 14 | 778 | 78 | 762 | 12 | 97.74 | 0.44 |
| I16-52Z-4 | 1.184 | 0.029 | 0.1255 | 0.0022 | 0.57514 | 793 | 14 | 762 | 13 | 881 | 42 | 775 | 12 | 86.46 | 0.80 |
| I16-52Z-20 | 1.204 | 0.036 | 0.1266 | 0.002 | 0.14707 | 802 | 17 | 768 | 11 | 898 | 65 | 778 | 10 | 85.57 | 0.55 |
| I16-52Z-28 | 1.201 | 0.054 | 0.1275 | 0.0024 | 0.44323 | 801 | 25 | 774 | 14 | 878 | 83 | 775 | 14 | 88.09 | 0.53 |
| I16-52Z-1 | 1.275 | 0.056 | 0.128 | 0.0022 | 0.091777 | 835 | 25 | 776 | 13 | 993 | 93 | 786 | 12 | 78.20 | 0.44 |
| I16-52Z-18 | 1.182 | 0.06 | 0.1298 | 0.0035 | 0.20729 | 792 | 28 | 787 | 20 | 808 | 109 | 788 | 18 | 97.36 | 0.40 |
| I16-52Z-27 | 1.199 | 0.038 | 0.1299 | 0.0019 | 0.05407 | 800 | 18 | 787 | 11 | 836 | 71 | 791 | 9 | 94.17 | 0.46 |
| I16-52Z-10 | 1.189 | 0.038 | 0.1304 | 0.0018 | 0.007874 | 796 | 18 | 790 | 10 | 811 | 73 | 791 | 9 | 97.48 | 0.54 |
| I16-52Z-11 | 1.254 | 0.032 | 0.1304 | 0.002 | 0.18943 | 825 | 14 | 790 | 11 | 921 | 56 | 802 | 10 | 85.80 | 0.53 |
| I16-52Z-23 | 1.195 | 0.047 | 0.1312 | 0.0022 | 0.49487 | 798 | 22 | 795 | 13 | 808 | 72 | 795 | 13 | 98.33 | 0.51 |
| I16-52Z-3 | 1.238 | 0.043 | 0.1312 | 0.0021 | 0.058756 | 818 | 20 | 795 | 12 | 882 | 77 | 801 | 11 | 90.12 | 0.43 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I16-52Z-22 | 1.208 | 0.028 | 0.1314 | 0.0017 | 0.12909 | 804 | 13 | 796 | 10 | 828 | 52 | 799 | 8 | 96.15 | 0.52 |
| I16-52Z-14 | 1.207 | 0.037 | 0.1318 | 0.0021 | 0.08566 | 804 | 17 | 798 | 12 | 820 | 70 | 800 | 10 | 97.38 | 0.42 |
| I16-52Z-25 | 1.227 | 0.042 | 0.1319 | 0.0019 | 0.19654 | 813 | 19 | 799 | 11 | 852 | 72 | 801 | 10 | 93.71 | 0.41 |
| I16-52Z-2 | 1.213 | 0.049 | 0.132 | 0.0022 | 0.22302 | 807 | 23 | 799 | 13 | 827 | 84 | 801 | 12 | 96.67 | 1.46 |
| I16-52Z-16 | 1.262 | 0.048 | 0.1322 | 0.0024 | 0.19747 | 829 | 22 | 800 | 14 | 906 | 80 | 807 | 13 | 88.36 | 0.40 |
| I16-52Z-34 | 1.243 | 0.044 | 0.1327 | 0.0021 | 0.055554 | 820 | 20 | 803 | 12 | 867 | 79 | 808 | 11 | 92.70 | 0.47 |
| I16-52Z-6 | 1.24 | 0.037 | 0.1343 | 0.002 | 0.013051 | 819 | 17 | 812 | 11 | 837 | 69 | 814 | 9 | 97.08 | 0.45 |
| I16-52Z-15 | 1.272 | 0.05 | 0.1371 | 0.0027 | 0.46802 | 833 | 22 | 828 | 15 | 847 | 72 | 829 | 15 | 97.80 | 0.46 |
| I16-52Z-8 | 1.263 | 0.05 | 0.1374 | 0.0022 | 0.23655 | 829 | 22 | 830 | 13 | 827 | 81 | 830 | 12 | 100.30 | 0.53 |
| I16-52Z-33 | 1.312 | 0.029 | 0.1401 | 0.0018 | 0.48339 | 851 | 13 | 845 | 10 | 866 | 40 | 847 | 10 | 97.59 | 0.70 |
| I16-52Z-7 | 1.285 | 0.026 | 0.141 | 0.0016 | 0.43916 | 839 | 12 | 850 | 9 | 810 | 38 | 847 | 8 | 105.04 | 0.65 |
| I16-52Z-17 | 10.58 | 0.2 | 0.3677 | 0.0053 | 0.27611 | 2487 | 18 | 2019 | 25 | 2895 | 33 | 2308 | 20 | 69.72 | 0.29 |
| I16-52Z-32 | 12.74 | 0.23 | 0.4282 | 0.0051 | 0.78353 | 2661 | 17 | 2298 | 23 | 2950 | 19 | 2664 | 23 | 77.90 | 0.05 |
| I16-52Z-26 | 16.89 | 0.51 | 0.51 | 0.013 | 0.96969 | 2929 | 29 | 2657 | 56 | 3121 | 13 | 3149 | 10 | 85.11 | 0.84 |
| I16-52Z-5 | 17.04 | 0.82 | 0.512 | 0.02 | 0.9806 | 2937 | 46 | 2665 | 85 | 3129 | 20 | 3181 | 13 | 85.17 | 0.42 |
| I16-52Z-21 | 23.01 | 0.29 | 0.6375 | 0.0066 | 0.53484 | 3227 | 12 | 3179 | 26 | 3257 | 18 | 3229 | 12 | 97.60 | 0.21 |
| I16-52Z-9 | 22.83 | 0.6 | 0.6573 | 0.011 | 0.90467 | 3220 | 26 | 3257 | 43 | 3197 | 21 | 3195 | 21 | 101.87 | 0.31 |
| | | | | | | | | | | | | | | | |
| I16-54Z-1 | 17.67 | 0.39 | 0.5129 | 0.0098 | 0.93457 | 2972 | 21 | 2669 | 42 | 3184 | 13 | 3173 | 11 | 83.83 | 0.03 |
| I16-54Z-2 | 23.61 | 0.32 | 0.6689 | 0.0074 | 0.46762 | 3252 | 13 | 3302 | 29 | 3222 | 20 | 3252 | 13 | 102.46 | 0.41 |
| I16-54Z-4 | 23.31 | 0.35 | 0.6564 | 0.0072 | 0.37318 | 3240 | 15 | 3253 | 28 | 3232 | 24 | 3241 | 14 | 100.66 | 0.31 |
| I16-54Z-6 | 25.27 | 0.38 | 0.7265 | 0.0086 | 0.82148 | 3319 | 15 | 3520 | 32 | 3199 | 14 | 3246 | 13 | 110.04 | 0.72 |
| I16-54Z-7 | 26.19 | 0.35 | 0.6809 | 0.0074 | 0.62172 | 3354 | 13 | 3348 | 28 | 3357 | 17 | 3354 | 13 | 99.72 | 0.10 |
| I16-54Z-8 | 22.05 | 0.32 | 0.6346 | 0.0071 | 0.61679 | 3186 | 14 | 3168 | 28 | 3197 | 18 | 3188 | 14 | 99.07 | 0.10 |
| I16-54Z-9 | 22.02 | 0.32 | 0.6424 | 0.0083 | 0.88637 | 3185 | 14 | 3198 | 33 | 3176 | 11 | 3178 | 10 | 100.71 | 0.02 |
| I16-54Z-10 | 19.02 | 0.31 | 0.5493 | 0.0088 | 0.92062 | 3043 | 16 | 2822 | 37 | 3192 | 10 | 3158 | 9 | 88.42 | 0.01 |
| I16-54Z-11 | 22.93 | 0.36 | 0.6541 | 0.0087 | 0.65164 | 3224 | 15 | 3244 | 34 | 3211 | 19 | 3221 | 15 | 101.02 | 0.59 |
| I16-54Z-12 | 21.68 | 0.27 | 0.6329 | 0.0067 | 0.6659 | 3170 | 12 | 3161 | 27 | 3175 | 15 | 3171 | 12 | 99.56 | 0.18 |
| I16-54Z-14 | 23.16 | 0.3 | 0.667 | 0.0073 | 0.75083 | 3234 | 13 | 3294 | 28 | 3196 | 14 | 3218 | 12 | 103.07 | 0.48 |
| I16-54Z-15 | 22.37 | 0.37 | 0.6367 | 0.0096 | 0.80067 | 3200 | 16 | 3176 | 38 | 3215 | 16 | 3208 | 14 | 98.79 | 0.55 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I16-54Z-16 | 22.73 | 0.29 | 0.6589 | 0.0076 | 0.72121 | 3216 | 12 | 3263 | 30 | 3186 | 15 | 3205 | 11 | 102.41 | 0.01 |
| I16-54Z-17 | 22.84 | 0.31 | 0.6645 | 0.0075 | 0.75354 | 3220 | 13 | 3285 | 29 | 3180 | 14 | 3203 | 12 | 103.28 | 0.05 |
| I16-54Z-18 | 19.82 | 0.31 | 0.6135 | 0.0089 | 0.91309 | 3083 | 15 | 3084 | 36 | 3082 | 10 | 3082 | 10 | 100.07 | 0.06 |
| I16-54Z-19 | 19.79 | 0.29 | 0.5748 | 0.0071 | 0.85254 | 3081 | 14 | 2928 | 29 | 3183 | 12 | 3149 | 11 | 91.98 | 0.04 |
| I16-54Z-20 | 21.06 | 0.31 | 0.6383 | 0.0074 | 0.83984 | 3141 | 14 | 3182 | 29 | 3115 | 13 | 3125 | 12 | 102.15 | 0.03 |
| I16-54Z-21 | 17.08 | 0.3 | 0.5329 | 0.008 | 0.93991 | 2939 | 17 | 2754 | 34 | 3069 | 10 | 3067 | 9 | 89.73 | 0.01 |
| I16-54Z-22 | 22.48 | 0.32 | 0.6547 | 0.0078 | 0.78452 | 3205 | 14 | 3247 | 30 | 3179 | 14 | 3192 | 12 | 102.14 | 0.08 |
| I16-54Z-23 | 21.49 | 0.29 | 0.6373 | 0.0074 | 0.81732 | 3161 | 13 | 3178 | 29 | 3150 | 12 | 3155 | 11 | 100.90 | 0.02 |
| I16-54Z-24 | 21.74 | 0.33 | 0.6284 | 0.0093 | 0.76865 | 3172 | 15 | 3143 | 37 | 3191 | 16 | 3180 | 13 | 98.52 | 0.02 |
| | | | | | | | | | | | | | | | |
| I16-62Z-10 | 0.893 | 0.027 | 0.1066 | 0.0022 | 0.53814 | 648 | 15 | 653 | 13 | 631 | 56 | 651 | 12 | 103.55 | 0.55 |
| I16-62Z-7 | 0.965 | 0.025 | 0.1103 | 0.0021 | 0.47697 | 686 | 13 | 675 | 12 | 723 | 50 | 680 | 11 | 93.24 | 0.05 |
| I16-62Z-9 | 0.995 | 0.025 | 0.1118 | 0.002 | 0.46237 | 701 | 13 | 683 | 12 | 760 | 49 | 691 | 10 | 89.94 | 0.26 |
| I16-62Z-28 | 1.022 | 0.029 | 0.1178 | 0.0022 | 0.35054 | 715 | 15 | 718 | 13 | 706 | 60 | 717 | 11 | 101.74 | 0.67 |
| I16-62Z-21 | 1.165 | 0.031 | 0.1206 | 0.0019 | 0.23589 | 784 | 15 | 734 | 11 | 930 | 57 | 749 | 10 | 78.92 | 1.15 |
| I16-62Z-24 | 1.125 | 0.034 | 0.1219 | 0.0022 | 0.36804 | 765 | 16 | 742 | 13 | 836 | 60 | 749 | 12 | 88.73 | 0.77 |
| I16-62Z-6 | 1.159 | 0.042 | 0.122 | 0.0024 | 0.025795 | 782 | 20 | 742 | 14 | 896 | 84 | 754 | 12 | 82.84 | 0.75 |
| I16-62Z-31 | 1.1 | 0.054 | 0.1221 | 0.0028 | 0.006263 | 753 | 26 | 743 | 16 | 785 | 114 | 746 | 14 | 94.60 | 1.41 |
| I16-62Z-27 | 1.143 | 0.028 | 0.1227 | 0.0017 | 0.13636 | 774 | 13 | 746 | 10 | 855 | 55 | 755 | 8 | 87.25 | 0.10 |
| I16-62Z-23 | 1.168 | 0.041 | 0.1256 | 0.002 | 0.19749 | 786 | 19 | 763 | 12 | 852 | 74 | 767 | 11 | 89.56 | 0.82 |
| I16-62Z-25 | 1.076 | 0.035 | 0.126 | 0.0028 | 0.48187 | 742 | 17 | 765 | 16 | 672 | 63 | 755 | 14 | 113.86 | 0.16 |
| I16-62Z-30 | 1.186 | 0.033 | 0.1267 | 0.0018 | 0.036052 | 794 | 15 | 769 | 10 | 865 | 64 | 777 | 9 | 88.88 | 1.19 |
| I16-62Z-13 | 1.184 | 0.028 | 0.1268 | 0.0019 | 0.25793 | 793 | 13 | 770 | 11 | 860 | 51 | 778 | 9 | 89.48 | 0.18 |
| I16-62Z-12 | 1.154 | 0.05 | 0.1275 | 0.0023 | 0.063637 | 779 | 24 | 774 | 13 | 795 | 96 | 775 | 12 | 97.31 | 0.54 |
| I16-62Z-14 | 1.174 | 0.04 | 0.1275 | 0.0019 | 0.11394 | 789 | 19 | 774 | 11 | 831 | 74 | 777 | 10 | 93.09 | 0.95 |
| I16-62Z-19 | 1.23 | 0.052 | 0.1275 | 0.0023 | 0.17879 | 814 | 24 | 774 | 13 | 927 | 88 | 781 | 12 | 83.42 | 0.43 |
| I16-62Z-16 | 1.244 | 0.041 | 0.1276 | 0.0017 | 0.22771 | 821 | 19 | 774 | 10 | 949 | 67 | 781 | 9 | 81.58 | 1.07 |
| I16-62Z-26 | 1.178 | 0.025 | 0.12816 | 0.0014 | 0.35418 | 790 | 12 | 777 | 8 | 827 | 42 | 780 | 8 | 93.96 | 0.32 |
| I16-62Z-3 | 1.194 | 0.032 | 0.1282 | 0.0019 | 0.056524 | 798 | 15 | 778 | 11 | 855 | 62 | 784 | 9 | 90.98 | 0.61 |
| I16-62Z-8 | 1.199 | 0.036 | 0.1286 | 0.0018 | 0.27933 | 800 | 17 | 780 | 10 | 857 | 61 | 784 | 10 | 91.01 | 1.08 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I16-62Z-18 | 1.175 | 0.028 | 0.1297 | 0.0017 | 0.12616 | 789 | 13 | 786 | 10 | 797 | 54 | 787 | 8 | 98.64 | 0.77 |
| I16-62Z-4 | 1.172 | 0.034 | 0.1299 | 0.0017 | 0.19074 | 788 | 16 | 787 | 10 | 788 | 62 | 787 | 9 | 99.86 | 1.35 |
| I16-62Z-11 | 1.212 | 0.033 | 0.1299 | 0.002 | 0.039687 | 806 | 15 | 787 | 11 | 858 | 64 | 794 | 9 | 91.72 | 0.79 |
| I16-62Z-32 | 1.181 | 0.026 | 0.1315 | 0.0018 | 0.05508 | 792 | 12 | 796 | 10 | 779 | 53 | 795 | 8 | 102.27 | 0.34 |
| I16-62Z-17 | 1.247 | 0.044 | 0.1322 | 0.0023 | 0.2575 | 822 | 20 | 800 | 13 | 881 | 73 | 806 | 12 | 90.84 | 1.07 |
| I16-62Z-15 | 1.231 | 0.063 | 0.1328 | 0.0028 | 0.21321 | 815 | 29 | 804 | 16 | 845 | 106 | 806 | 15 | 95.12 | 0.53 |
| I16-62Z-1 | 1.329 | 0.064 | 0.1334 | 0.0022 | 0.33875 | 858 | 28 | 807 | 13 | 993 | 92 | 810 | 13 | 81.28 | 0.68 |
| I16-62Z-5 | 1.233 | 0.042 | 0.1335 | 0.0022 | 0.26227 | 816 | 19 | 808 | 13 | 837 | 70 | 810 | 12 | 96.48 | 0.84 |
| I16-62Z-2 | 1.27 | 0.038 | 0.1339 | 0.002 | 0.14527 | 832 | 17 | 810 | 11 | 892 | 65 | 816 | 10 | 90.78 | 0.89 |
| I16-62Z-29 | 1.275 | 0.049 | 0.1341 | 0.0026 | 0.23867 | 835 | 22 | 811 | 15 | 898 | 80 | 817 | 14 | 90.38 | 0.57 |
| I16-62Z-20 | 1.308 | 0.034 | 0.1377 | 0.0021 | 0.090059 | 849 | 15 | 832 | 12 | 896 | 60 | 838 | 10 | 92.86 | 0.88 |
| I16-62Z-22 | 1.306 | 0.057 | 0.1417 | 0.0036 | 0.19055 | 848 | 25 | 854 | 20 | 833 | 96 | 852 | 17 | 102.56 | 0.73 |
| | | | | | | | | | | | | | | | |
| GJ-1 | 0.82 | 0.022 | 0.09798 | 0.0013 | 0.20441 | 608 | 6 | 603 | 4 | 629 | 30 | 604 | 4 | 95.87 | 0.03 |
| GJ-2 | 0.817 | 0.018 | 0.09686 | 0.0013 | 0.094243 | 606 | 5 | 596 | 4 | 645 | 27 | 600 | 3 | 92.40 | 0.03 |
| GJ-3 | 0.822 | 0.021 | 0.09896 | 0.0012 | 0.26624 | 609 | 6 | 608 | 4 | 612 | 27 | 608 | 3 | 99.35 | 0.03 |
| GJ-4 | 0.799 | 0.022 | 0.09791 | 0.0013 | 0.13873 | 596 | 6 | 602 | 4 | 574 | 31 | 601 | 3 | 104.88 | 0.03 |
| GJ-5 | 0.821 | 0.019 | 0.0992 | 0.0013 | 0.12631 | 609 | 5 | 610 | 4 | 604 | 27 | 609 | 3 | 100.99 | 0.03 |
| GJ-6 | 0.807 | 0.022 | 0.09757 | 0.0011 | 0.034058 | 601 | 6 | 600 | 3 | 603 | 32 | 600 | 3 | 99.50 | 0.03 |
| GJ-7 | 0.812 | 0.019 | 0.0978 | 0.0013 | 0.015401 | 604 | 5 | 602 | 4 | 611 | 29 | 602 | 3 | 98.53 | 0.03 |
| GJ-8 | 0.798 | 0.02 | 0.0972 | 0.0013 | 0.45064 | 596 | 6 | 598 | 4 | 587 | 24 | 598 | 4 | 101.87 | 0.03 |
| GJ-9 | 0.828 | 0.023 | 0.09849 | 0.0012 | 0.03493 | 613 | 6 | 606 | 4 | 638 | 32 | 607 | 3 | 94.98 | 0.03 |
| GJ-10 | 0.815 | 0.023 | 0.097 | 0.0012 | 0.089173 | 605 | 6 | 597 | 4 | 637 | 32 | 599 | 3 | 93.72 | 0.03 |
| GJ-11 | 0.815 | 0.024 | 0.09735 | 0.0011 | 0.00062 | 605 | 7 | 599 | 3 | 629 | 34 | 600 | 3 | 95.23 | 0.03 |
| GJ-12 | 0.81 | 0.023 | 0.09747 | 0.0013 | 0.022769 | 602 | 6 | 600 | 4 | 613 | 34 | 600 | 3 | 97.88 | 0.03 |
| GJ-13 | 0.824 | 0.02 | 0.09743 | 0.0012 | 0.056875 | 610 | 6 | 599 | 4 | 651 | 29 | 602 | 3 | 92.01 | 0.03 |
| GJ-14 | 0.827 | 0.023 | 0.09785 | 0.0012 | 0.012442 | 612 | 6 | 602 | 4 | 650 | 32 | 604 | 3 | 92.62 | 0.03 |
| GJ-15 | 0.81 | 0.021 | 0.09792 | 0.0012 | 0.13811 | 602 | 6 | 602 | 4 | 603 | 29 | 602 | 3 | 99.83 | 0.03 |
| GJ-16 | 0.809 | 0.022 | 0.09824 | 0.0012 | 0.043587 | 602 | 6 | 604 | 4 | 594 | 32 | 604 | 3 | 101.68 | 0.03 |
| GJ-17 | 0.814 | 0.02 | 0.09817 | 0.0013 | 0.035801 | 605 | 6 | 604 | 4 | 609 | 30 | 604 | 3 | 99.18 | 0.03 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GJ-18 | 0.83 | 0.023 | 0.09811 | 0.0011 | 0.22277 | 614 | 6 | 603 | 3 | 652 | 29 | 605 | 3 | 92.48 | 0.03 |
| GJ-19 | 0.806 | 0.022 | 0.09736 | 0.0012 | 0.09875 | 600 | 6 | 599 | 4 | 605 | 31 | 599 | 3 | 99.01 | 0.03 |
| GJ-20 | 0.82 | 0.019 | 0.09863 | 0.0013 | 0.051208 | 608 | 5 | 606 | 4 | 614 | 28 | 607 | 3 | 98.70 | 0.03 |
| GJ-21 | 0.821 | 0.022 | 0.0986 | 0.0013 | 0.1974 | 609 | 6 | 606 | 4 | 618 | 30 | 607 | 4 | 98.06 | 0.03 |
| GJ-22 | 0.826 | 0.021 | 0.09728 | 0.0012 | 0.12877 | 611 | 6 | 598 | 4 | 660 | 29 | 601 | 3 | 90.61 | 0.03 |
| GJ-23 | 0.796 | 0.023 | 0.09843 | 0.0012 | 0.10352 | 595 | 7 | 605 | 4 | 554 | 33 | 603 | 3 | 109.21 | 0.03 |
| GJ-24 | 0.823 | 0.022 | 0.09758 | 0.0012 | 0.018862 | 610 | 6 | 600 | 4 | 645 | 31 | 603 | 3 | 93.02 | 0.03 |
| GJ-25 | 0.828 | 0.023 | 0.097 | 0.0013 | 0.23449 | 613 | 6 | 597 | 4 | 671 | 30 | 600 | 4 | 88.97 | 0.03 |
| GJ-26 | 0.812 | 0.018 | 0.0978 | 0.0013 | 0.224 | 604 | 5 | 602 | 4 | 611 | 25 | 602 | 3 | 98.53 | 0.03 |
| GJ-27 | 0.821 | 0.024 | 0.0983 | 0.0013 | 0.034457 | 609 | 7 | 604 | 4 | 624 | 34 | 605 | 3 | 96.79 | 0.03 |
| GJ-28 | 0.811 | 0.024 | 0.09796 | 0.0012 | 0.14869 | 603 | 7 | 602 | 4 | 605 | 33 | 603 | 3 | 99.50 | 0.03 |
| GJ-29 | 0.808 | 0.021 | 0.09888 | 0.0013 | 0.23398 | 601 | 6 | 608 | 4 | 577 | 29 | 606 | 4 | 105.37 | 0.03 |
| GJ-30 | 0.802 | 0.022 | 0.0973 | 0.0013 | 0.15375 | 598 | 6 | 599 | 4 | 596 | 31 | 598 | 3 | 100.50 | 0.03 |
| GJ-31 | 0.804 | 0.023 | 0.0976 | 0.0013 | 0.083732 | 599 | 6 | 600 | 4 | 594 | 33 | 600 | 3 | 101.01 | 0.03 |
| GJ-32 | 0.816 | 0.019 | 0.0979 | 0.0014 | 0.024131 | 606 | 5 | 602 | 4 | 620 | 29 | 603 | 3 | 97.10 | 0.03 |
| GJ-33 | 0.824 | 0.021 | 0.09846 | 0.0012 | 0.072465 | 610 | 6 | 605 | 4 | 629 | 30 | 607 | 3 | 96.18 | 0.03 |
| GJ-34 | 0.808 | 0.023 | 0.09753 | 0.0012 | 0.2383 | 601 | 6 | 600 | 4 | 607 | 30 | 600 | 3 | 98.85 | 0.03 |
| GJ-35 | 0.835 | 0.018 | 0.0977 | 0.0014 | 0.044279 | 616 | 5 | 601 | 4 | 674 | 27 | 607 | 3 | 89.17 | 0.03 |
| GJ-36 | 0.79 | 0.022 | 0.0973 | 0.0012 | 0.010683 | 591 | 6 | 599 | 4 | 563 | 33 | 597 | 3 | 106.39 | 0.03 |
| | | | | | | | | | | | | | | | |
| Plesovice-1 | 0.589 | 0.023 | 0.05424 | 0.00069 | 0.4667 | 470 | 7 | 341 | 2 | 1166 | 35 | 331 | 2 | 29.25 | 0.15 |
| Plesovice-2 | 0.4282 | 0.0079 | 0.05398 | 0.00055 | 0.3184 | 362 | 3 | 339 | 2 | 512 | 20 | 343 | 2 | 66.21 | 0.13 |
| Plesovice-3 | 0.477 | 0.013 | 0.05576 | 0.00065 | 0.049849 | 396 | 4 | 350 | 2 | 676 | 31 | 356 | 2 | 51.78 | 0.11 |
| Plesovice-4 | 0.3921 | 0.0065 | 0.05361 | 0.00054 | 0.10537 | 336 | 2 | 337 | 2 | 331 | 21 | 336 | 1 | 101.81 | 0.14 |
| Plesovice-5 | 0.4067 | 0.007 | 0.05475 | 0.00056 | 0.2559 | 346 | 3 | 344 | 2 | 366 | 20 | 344 | 2 | 93.99 | 0.14 |
| Plesovice-6 | 0.4227 | 0.0071 | 0.05491 | 0.00055 | 0.27904 | 358 | 3 | 345 | 2 | 446 | 19 | 348 | 2 | 77.35 | 0.13 |
| Plesovice-7 | 0.407 | 0.011 | 0.05381 | 0.00071 | 0.18596 | 347 | 4 | 338 | 2 | 406 | 31 | 339 | 2 | 83.25 | 0.09 |
| Plesovice-8 | 0.4026 | 0.011 | 0.05474 | 0.00067 | 0.11333 | 344 | 4 | 344 | 2 | 343 | 32 | 344 | 2 | 100.29 | 0.09 |
| Plesovice-9 | 0.3989 | 0.009 | 0.054 | 0.00065 | 0.2192 | 341 | 3 | 339 | 2 | 353 | 26 | 339 | 2 | 96.03 | 0.11 |
| Plesovice-10 | 0.4029 | 0.0088 | 0.05437 | 0.00066 | 0.079797 | 344 | 3 | 341 | 2 | 360 | 27 | 342 | 2 | 94.72 | 0.10 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Plesovice-11 | 0.4113 | 0.0091 | 0.05415 | 0.0007 | 0.19551 | 350 | 3 | 340 | 2 | 416 | 26 | 342 | 2 | 81.73 | 0.10 |
| Plesovice-12 | 0.3911 | 0.0094 | 0.05333 | 0.0007 | 0.10108 | 335 | 3 | 335 | 2 | 337 | 30 | 335 | 2 | 99.41 | 0.10 |
| Plesovice-13 | 0.4087 | 0.011 | 0.05474 | 0.00061 | 0.005898 | 348 | 4 | 344 | 2 | 377 | 33 | 344 | 2 | 91.25 | 0.10 |
| Plesovice-14 | 0.415 | 0.0089 | 0.05449 | 0.00059 | 0.29668 | 352 | 3 | 342 | 2 | 422 | 23 | 344 | 2 | 81.04 | 0.11 |
| Plesovice-15 | 0.397 | 0.0086 | 0.05386 | 0.0006 | 0.062902 | 339 | 3 | 338 | 2 | 348 | 27 | 338 | 2 | 97.13 | 0.11 |
| Plesovice-16 | 0.3873 | 0.01 | 0.05336 | 0.00061 | 0.098469 | 332 | 4 | 335 | 2 | 313 | 31 | 335 | 2 | 107.03 | 0.09 |
| Plesovice-17 | 0.4038 | 0.0093 | 0.05383 | 0.00062 | 0.090169 | 344 | 3 | 338 | 2 | 388 | 28 | 339 | 2 | 87.11 | 0.10 |
| Plesovice-18 | 0.4028 | 0.01 | 0.05428 | 0.00058 | 0.053302 | 344 | 4 | 341 | 2 | 364 | 30 | 341 | 2 | 93.68 | 0.10 |
| Plesovice-19 | 0.4183 | 0.01 | 0.05382 | 0.00061 | 0.3208 | 355 | 4 | 338 | 2 | 467 | 25 | 340 | 2 | 72.38 | 0.10 |
| Plesovice-20 | 0.411 | 0.011 | 0.05385 | 0.0007 | 0.26145 | 350 | 4 | 338 | 2 | 427 | 30 | 340 | 2 | 79.16 | 0.10 |
| Plesovice-21 | 0.4008 | 0.0084 | 0.05413 | 0.00062 | 0.080629 | 342 | 3 | 340 | 2 | 359 | 26 | 340 | 2 | 94.71 | 0.11 |
| Plesovice-22 | 0.4039 | 0.0089 | 0.05443 | 0.00059 | 0.30383 | 344 | 3 | 342 | 2 | 363 | 24 | 342 | 2 | 94.21 | 0.11 |
| Plesovice-23 | 0.441 | 0.012 | 0.05358 | 0.00068 | 0.12322 | 371 | 4 | 336 | 2 | 593 | 31 | 342 | 2 | 56.66 | 0.11 |
| Plesovice-24 | 0.3967 | 0.0079 | 0.0545 | 0.00067 | 0.081524 | 339 | 3 | 342 | 2 | 320 | 26 | 341 | 2 | 106.88 | 0.11 |
| Plesovice-25 | 0.405 | 0.012 | 0.05356 | 0.00066 | 0.042998 | 345 | 4 | 336 | 2 | 406 | 35 | 338 | 2 | 82.76 | 0.09 |
| Plesovice-26 | 0.4019 | 0.01 | 0.05418 | 0.00069 | 0.043585 | 343 | 4 | 340 | 2 | 363 | 31 | 341 | 2 | 93.66 | 0.09 |
| Plesovice-27 | 0.4121 | 0.0093 | 0.05454 | 0.00066 | 0.03208 | 350 | 3 | 342 | 2 | 404 | 28 | 344 | 2 | 84.65 | 0.10 |
| Plesovice-28 | 0.4007 | 0.0093 | 0.0549 | 0.00063 | 0.046146 | 342 | 3 | 345 | 2 | 326 | 29 | 344 | 2 | 105.83 | 0.10 |
| Plesovice-29 | 0.3988 | 0.01 | 0.05386 | 0.0007 | 0.26839 | 341 | 4 | 338 | 2 | 359 | 28 | 339 | 2 | 94.15 | 0.09 |
| Plesovice-30 | 0.406 | 0.012 | 0.0552 | 0.00071 | 0.18151 | 346 | 4 | 346 | 2 | 343 | 34 | 346 | 2 | 100.87 | 0.09 |
| Plesovice-31 | 0.4224 | 0.0087 | 0.05552 | 0.00065 | 0.22569 | 358 | 3 | 348 | 2 | 419 | 24 | 351 | 2 | 83.05 | 0.12 |
| Plesovice-32 | 0.4493 | 0.0098 | 0.05508 | 0.0007 | 0.13372 | 377 | 3 | 346 | 2 | 573 | 26 | 353 | 2 | 60.38 | 0.10 |
| Plesovice-33 | 0.4044 | 0.0087 | 0.0542 | 0.00061 | 0.011572 | 345 | 3 | 340 | 2 | 376 | 27 | 341 | 2 | 90.43 | 0.11 |
| Plesovice-34 | 0.501 | 0.012 | 0.0533 | 0.00067 | 0.15796 | 412 | 4 | 335 | 2 | 874 | 26 | 346 | 2 | 38.33 | 0.10 |
| Plesovice-35 | 0.418 | 0.008 | 0.05441 | 0.00061 | 0.19068 | 355 | 3 | 342 | 2 | 441 | 23 | 345 | 2 | 77.55 | 0.11 |
| Plesovice-36 | 0.4582 | 0.011 | 0.05385 | 0.00067 | 0.2439 | 383 | 4 | 338 | 2 | 664 | 26 | 344 | 2 | 50.90 | 0.12 |
| | | | | | | | | | | | | | | | |
| 91500-1 | 1.866 | 0.057 | 0.1799 | 0.0023 | 0.13185 | 1069 | 10 | 1066 | 6 | 1075 | 32 | 1067 | 6 | 99.16 | 0.35 |
| 91500-2 | 1.89 | 0.06 | 0.1803 | 0.0029 | 0.03341 | 1078 | 11 | 1069 | 8 | 1096 | 35 | 1072 | 6 | 97.54 | 0.35 |
| 91500-3 | 1.912 | 0.065 | 0.1788 | 0.0029 | 0.10382 | 1085 | 11 | 1060 | 8 | 1136 | 36 | 1068 | 7 | 93.31 | 0.35 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 91500-4 | 1.832 | 0.055 | 0.1767 | 0.0026 | 0.18253 | 1057 | 10 | 1049 | 7 | 1074 | 31 | 1051 | 6 | 97.67 | 0.34 |
| 91500-5 | 1.882 | 0.066 | 0.1822 | 0.0025 | 0.004259 | 1075 | 12 | 1079 | 7 | 1066 | 38 | 1078 | 6 | 101.22 | 0.35 |
| 91500-6 | 1.892 | 0.063 | 0.1784 | 0.003 | 0.10092 | 1078 | 11 | 1058 | 8 | 1119 | 36 | 1065 | 7 | 94.55 | 0.35 |
| 91500-7 | 1.895 | 0.067 | 0.1812 | 0.0032 | 0.046806 | 1079 | 12 | 1074 | 9 | 1091 | 39 | 1076 | 7 | 98.44 | 0.35 |
| 91500-8 | 1.858 | 0.063 | 0.1783 | 0.0028 | 0.30608 | 1066 | 11 | 1058 | 8 | 1084 | 33 | 1060 | 7 | 97.60 | 0.35 |
| 91500-9 | 1.882 | 0.059 | 0.1789 | 0.0028 | 0.033741 | 1075 | 10 | 1061 | 8 | 1103 | 35 | 1066 | 6 | 96.19 | 0.36 |
| 91500-10 | 1.763 | 0.058 | 0.1773 | 0.0028 | 0.060745 | 1032 | 11 | 1052 | 8 | 989 | 36 | 1045 | 6 | 106.37 | 0.35 |
| 91500-11 | 1.905 | 0.05 | 0.1788 | 0.003 | 0.1184 | 1083 | 9 | 1060 | 8 | 1128 | 29 | 1071 | 6 | 93.97 | 0.35 |
| 91500-12 | 1.888 | 0.071 | 0.1794 | 0.0029 | 0.085817 | 1077 | 12 | 1064 | 8 | 1104 | 40 | 1067 | 7 | 96.38 | 0.34 |
| 91500-13 | 1.871 | 0.061 | 0.1776 | 0.0032 | 0.00311 | 1071 | 11 | 1054 | 9 | 1106 | 37 | 1061 | 7 | 95.30 | 0.35 |
| 91500-14 | 1.905 | 0.064 | 0.177 | 0.0032 | 0.25068 | 1083 | 11 | 1051 | 9 | 1148 | 34 | 1061 | 8 | 91.55 | 0.35 |
| 91500-15 | 1.846 | 0.064 | 0.1776 | 0.003 | 0.058082 | 1062 | 11 | 1054 | 8 | 1079 | 38 | 1057 | 7 | 97.68 | 0.34 |
| 91500-16 | 1.783 | 0.062 | 0.1784 | 0.0028 | 0.06665 | 1039 | 11 | 1058 | 8 | 1000 | 38 | 1052 | 6 | 105.80 | 0.34 |
| 91500-17 | 1.882 | 0.064 | 0.1795 | 0.0026 | 0.071191 | 1075 | 11 | 1064 | 7 | 1096 | 36 | 1067 | 6 | 97.08 | 0.35 |
| 91500-18 | 1.899 | 0.057 | 0.1789 | 0.0029 | 0.26716 | 1081 | 10 | 1061 | 8 | 1121 | 30 | 1068 | 7 | 94.65 | 0.35 |
| 91500-19 | 1.872 | 0.057 | 0.1772 | 0.0032 | 0.015907 | 1071 | 10 | 1052 | 9 | 1111 | 35 | 1060 | 7 | 94.69 | 0.34 |
| 91500-20 | 1.859 | 0.057 | 0.1797 | 0.0028 | 0.15288 | 1067 | 10 | 1065 | 8 | 1069 | 32 | 1066 | 7 | 99.63 | 0.35 |
| 91500-21 | 1.803 | 0.063 | 0.177 | 0.0031 | 0.071172 | 1047 | 11 | 1051 | 8 | 1038 | 38 | 1049 | 7 | 101.25 | 0.34 |
| 91500-22 | 1.846 | 0.063 | 0.175 | 0.0026 | 0.137 | 1062 | 11 | 1040 | 7 | 1108 | 35 | 1045 | 6 | 93.86 | 0.34 |
| 91500-23 | 1.835 | 0.057 | 0.1776 | 0.0028 | 0.055617 | 1058 | 10 | 1054 | 8 | 1067 | 34 | 1055 | 6 | 98.78 | 0.34 |
| 91500-24 | 1.855 | 0.053 | 0.1793 | 0.0026 | 0.079707 | 1065 | 9 | 1063 | 7 | 1069 | 31 | 1064 | 6 | 99.44 | 0.34 |
| 91500-25 | 1.864 | 0.059 | 0.1765 | 0.0029 | 0.12368 | 1068 | 10 | 1048 | 8 | 1111 | 34 | 1055 | 7 | 94.33 | 0.35 |
| 91500-26 | 1.872 | 0.065 | 0.1798 | 0.0029 | 0.11846 | 1071 | 11 | 1066 | 8 | 1082 | 37 | 1067 | 7 | 98.52 | 0.34 |
| 91500-27 | 1.883 | 0.054 | 0.181 | 0.0027 | 0.13503 | 1075 | 10 | 1072 | 7 | 1081 | 31 | 1073 | 6 | 99.17 | 0.34 |
| 91500-28 | 1.865 | 0.064 | 0.1766 | 0.003 | 0.11018 | 1069 | 11 | 1048 | 8 | 1111 | 37 | 1055 | 7 | 94.33 | 0.33 |
| 91500-29 | 1.849 | 0.072 | 0.1771 | 0.0029 | 0.069884 | 1063 | 13 | 1051 | 8 | 1088 | 41 | 1054 | 7 | 96.60 | 0.33 |
| 91500-30 | 1.825 | 0.069 | 0.1775 | 0.0031 | 0.11829 | 1054 | 12 | 1053 | 8 | 1057 | 40 | 1054 | 7 | 99.62 | 0.35 |
| 91500-31 | 1.852 | 0.061 | 0.1769 | 0.0028 | 0.035733 | 1064 | 11 | 1050 | 8 | 1093 | 36 | 1055 | 6 | 96.07 | 0.33 |
| 91500-32 | 1.844 | 0.063 | 0.1778 | 0.0027 | 0.12862 | 1061 | 11 | 1055 | 7 | 1074 | 36 | 1057 | 7 | 98.23 | 0.34 |
| 91500-33 | 1.782 | 0.065 | 0.1744 | 0.0029 | 0.21036 | 1039 | 12 | 1036 | 8 | 1044 | 37 | 1037 | 7 | 99.23 | 0.34 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 91500-34 | 1.902 | 0.064 | 0.1771 | 0.0028 | 0.36749 | 1082 | 11 | 1051 | 8 | 1144 | 31 | 1058 | 7 | 91.87 | 0.35 |
| 91500-35 | 1.896 | 0.069 | 0.1768 | 0.0028 | 0.19863 | 1080 | 12 | 1049 | 8 | 1141 | 36 | 1056 | 7 | 91.94 | 0.35 |
| 91500-36 | 1.825 | 0.06 | 0.1792 | 0.0029 | 0.048623 | 1054 | 11 | 1063 | 8 | 1038 | 36 | 1060 | 7 | 102.41 | 0.35 |

## Appendix 5.2 Chapter 5 Zircon REE concentrations (ppm)

| *Zircon Grain* | *Y* | *Nb* | *La* | *Ce* | *Pr* | *Nd* | *Sm* | *Eu* | *Gd* | *Tb* | *Dy* | *Ho* | *Er* | *Tm* | *Yb* | *Lu* | *Hf* | *Th* | *U* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-26Z-5* | 868 | 4.16 | 0 | 29.83 | 0.226 | 3.65 | 4.99 | 2.33 | 25.2 | 7.58 | 84.1 | 28.35 | 123 | 24.7 | 216.3 | 43.4 | 8510 | 29.28 | 34.9 |
| *CO17-26Z-23* | 1257 | 4.14 | 0.022 | 39.3 | 0.533 | 8.8 | 11.54 | 4.56 | 42.1 | 11.69 | 125.1 | 43.5 | 177.5 | 34.3 | 300.3 | 58.2 | 7930 | 44.7 | 38.4 |
| *CO17-26Z-24* | 1056 | 5.54 | 0.082 | 21.8 | 0.274 | 3.85 | 6.43 | 2.8 | 32.3 | 10.09 | 101.9 | 34.7 | 142.1 | 27.52 | 246.3 | 46.3 | 9950 | 38 | 79.4 |
| *CO17-26Z-15* | 637 | 9.45 | 0 | 13.81 | 0.049 | 0.88 | 2.27 | 1.1 | 12.69 | 4.26 | 55.1 | 20.82 | 94.5 | 20.79 | 193.2 | 38.32 | 12040 | 13.67 | 72.7 |
| *CO17-26Z-6* | 1055 | 5.98 | 0 | 41.5 | 0.176 | 4.24 | 5.99 | 2.63 | 25.6 | 8.17 | 90.6 | 33.09 | 154.6 | 32.2 | 305.5 | 62.7 | 8300 | 38 | 45.9 |
| *CO17-26Z-22* | 1746 | 6.27 | 0.461 | 46.21 | 1.151 | 13.52 | 15.29 | 7.27 | 64.4 | 18.5 | 185.6 | 60.8 | 240.1 | 44.7 | 387 | 71.1 | 7170 | 74.8 | 52.2 |
| *CO17-26Z-19* | 1729 | 5.68 | 0.129 | 42.5 | 0.866 | 11.82 | 14.98 | 7.05 | 65.4 | 18.6 | 187.7 | 61.2 | 234.3 | 43.9 | 371 | 69.3 | 7010 | 70.2 | 47.4 |
| *CO17-26Z-14* | 5270 | 76 | 6.32 | 55.1 | 3.13 | 20.2 | 21.6 | 8.88 | 104.5 | 39.1 | 476 | 172 | 717 | 137 | 1170 | 205 | 13680 | 251 | 548 |
| *CO17-26Z-18* | 1535 | 6.98 | 0.071 | 46.4 | 0.689 | 9.82 | 12.59 | 6.48 | 54.1 | 15.85 | 162.3 | 52.8 | 206.9 | 39.25 | 334.3 | 62.8 | 7620 | 64.4 | 50.6 |
| *CO17-26Z-17* | 752 | 2.86 | 0.225 | 28 | 0.392 | 5.73 | 5.48 | 3.41 | 23.5 | 6.99 | 74 | 25.2 | 105.2 | 21.3 | 192 | 37.3 | 7330 | 20.5 | 22.3 |
| *CO17-26Z-16* | 949 | 18.84 | 0 | 11.7 | 0.151 | 1.98 | 2.57 | 1.3 | 15.4 | 5.95 | 78.6 | 30.93 | 144.6 | 30.41 | 280.7 | 54.2 | 14660 | 24.5 | 136.8 |
| *CO17-26Z-29* | 1559 | 5.67 | 0.042 | 50.5 | 0.662 | 9.63 | 12.5 | 5.92 | 49.9 | 15.4 | 161.3 | 54.5 | 218.9 | 41.6 | 369 | 69.9 | 7820 | 63.5 | 52.3 |
| *CO17-26Z-7* | 1790 | 6.66 | 0.143 | 47.6 | 0.754 | 10.23 | 13.6 | 6.62 | 61.4 | 18 | 185 | 62.3 | 246 | 46.4 | 394 | 73.2 | 7310 | 78.4 | 50.1 |
| *CO17-26Z-4* | 1022 | 16.84 | 2.62 | 18.5 | 1.48 | 10.26 | 8.51 | 3.89 | 27.9 | 8.6 | 94.5 | 33.9 | 150.1 | 31 | 278.3 | 54.3 | 13920 | 30.47 | 140.7 |
| *CO17-26Z-2* | 382.5 | 9.07 | 0 | 3.05 | 0 | 0 | 0 | 0.104 | 3.42 | 1.82 | 27.6 | 12.46 | 61.1 | 13.53 | 126.6 | 24.74 | 14060 | 7.02 | 72.7 |
| *CO17-26Z-25* | 1502 | 19.86 | 0.48 | 27.93 | 0.37 | 3.09 | 4.57 | 2.35 | 27.3 | 10.05 | 127.8 | 48.02 | 220.9 | 46.74 | 435.1 | 85.3 | 11960 | 46.59 | 139.8 |
| *CO17-26Z-10* | 1354 | 8.13 | 4.24 | 25.8 | 3.34 | 18.8 | 18.5 | 5.17 | 49.5 | 13.89 | 135.9 | 46.5 | 186.7 | 35.5 | 306.4 | 56.3 | 9830 | 120.4 | 256 |
| *CO17-26Z-12* | 679 | 3.13 | 0.094 | 27.42 | 0.199 | 2.88 | 4.07 | 1.91 | 19.8 | 6 | 65.4 | 22.28 | 97.3 | 19.9 | 180.1 | 34.4 | 8310 | 20.62 | 23.27 |
| *CO17-26Z-28* | 818 | 2.84 | 0.027 | 26.4 | 0.345 | 6.44 | 7.19 | 3.68 | 30.6 | 8.37 | 88 | 28.7 | 111.6 | 21.49 | 186.3 | 35.3 | 7770 | 26.6 | 24.9 |
| *CO17-26Z-11* | 1112 | 7.33 | 1.83 | 47.1 | 1.27 | 11.28 | 10.63 | 4.96 | 35.9 | 10.24 | 106.4 | 37.74 | 157.8 | 32.1 | 290.3 | 58.54 | 8530 | 36.45 | 56.1 |
| *CO17-26Z-9* | 787 | 3.4 | 0 | 26.8 | 0.152 | 3.43 | 5.53 | 2.66 | 24.2 | 7.38 | 77.5 | 26.5 | 109.2 | 21.65 | 190.8 | 37.6 | 8400 | 24.31 | 26.4 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-26Z-20* | 1184 | 5.54 | 0 | 44.5 | 0.16 | 3.21 | 6.66 | 2.96 | 30.4 | 9.65 | 108.9 | 39 | 165.7 | 33.6 | 303 | 58.2 | 7910 | 38.6 | 42.8 |
| *CO17-26Z-30* | 1058 | 6.13 | 0.89 | 30.7 | 0.582 | 5.37 | 7.62 | 3.13 | 28.8 | 9.25 | 98.5 | 34.7 | 153 | 30.8 | 286 | 56.6 | 9790 | 42.9 | 57.2 |
| *CO17-26Z-27* | 460 | 1.7 | 0 | 18.38 | 0.063 | 1.67 | 2.98 | 1.43 | 12.77 | 4.08 | 44.4 | 15.07 | 65.5 | 13.11 | 117.6 | 23.99 | 7940 | 17.51 | 18.84 |
| *CO17-26Z-21* | 700 | 3.84 | 0.85 | 27.4 | 0.404 | 3.99 | 5.06 | 2.44 | 20.2 | 6.25 | 67.2 | 23.15 | 95.2 | 19.47 | 172.9 | 34.8 | 7890 | 18.7 | 28 |
| *CO17-26Z-1* | 919 | 3.43 | 0.038 | 28.5 | 0.255 | 5.57 | 8.4 | 3.36 | 30.6 | 9.09 | 95.6 | 32.2 | 127 | 24.72 | 218.8 | 41.4 | 7640 | 28.7 | 26.99 |
| *CO17-26Z-8* | 895 | 3.52 | 1.75 | 36.3 | 1.21 | 8.27 | 9.7 | 4.18 | 30.7 | 8.82 | 90.1 | 30.83 | 125.6 | 25.06 | 219.3 | 43 | 7920 | 28.1 | 35 |
| *CO17-26Z-26* | 1280 | 8.07 | 6.28 | 72.1 | 3.37 | 23.1 | 20.1 | 8.36 | 54.7 | 13.68 | 130.7 | 42.98 | 175.1 | 34.14 | 311 | 61.35 | 7760 | 37.73 | 49.2 |
| *CO17-26Z-13* | 960 | 6.7 | 1.01 | 35.6 | 1 | 8.03 | 8.18 | 4.06 | 29.1 | 8.48 | 89.8 | 32.2 | 132.4 | 27.5 | 251 | 48.8 | 9050 | 27.4 | 41.2 |
| *CO17-26Z-3* | 1500 | 9.5 | 3.78 | 53.3 | 2.1 | 15.35 | 15.2 | 6.28 | 54 | 14.3 | 151 | 51.9 | 203 | 38.7 | 348 | 64.8 | 8310 | 66.1 | 74.7 |
| | | | | | | | | | | | | | | | | | | | |
| *CO17-55Z-15* | 360 | 1.1 | 0.02 | 12.07 | 0.047 | 0.82 | 1.06 | 0.243 | 6.52 | 2.2 | 28.2 | 11.43 | 55.8 | 12.87 | 127.2 | 28.31 | 8130 | 47.2 | 75.2 |
| *CO17-55Z-29* | 576 | 1.23 | 0 | 9.23 | 0.059 | 0.85 | 2.3 | 0.612 | 12.3 | 4.1 | 48.8 | 19.1 | 86.3 | 18.51 | 171.5 | 34.84 | 8110 | 58.9 | 74.5 |
| *CO17-55Z-32* | 446.9 | 0.94 | 0 | 7.62 | 0 | 0.26 | 1.25 | 0.23 | 7.54 | 2.7 | 34.5 | 13.83 | 70.4 | 14.47 | 142.9 | 30.19 | 8600 | 52.5 | 83.6 |
| *CO17-55Z-12* | 480 | 1.82 | 0.405 | 14.74 | 0.255 | 1.69 | 1.51 | 0.441 | 7.55 | 2.65 | 35.2 | 14.83 | 75.5 | 16.73 | 173.3 | 37.89 | 10380 | 89.2 | 269 |
| *CO17-55Z-23* | 1611 | 1.87 | 0 | 15.09 | 0.29 | 4.72 | 8.2 | 3.04 | 40 | 12.36 | 143.8 | 54.3 | 239.8 | 51 | 477 | 97.4 | 6390 | 114.9 | 127.8 |
| *CO17-55Z-11* | 997 | 1.41 | 0.2 | 20.73 | 0.346 | 4.44 | 6.13 | 1.93 | 25.5 | 7.35 | 84.9 | 33.4 | 150.5 | 33.2 | 320 | 65.2 | 8410 | 135.7 | 139.8 |
| *CO17-55Z-19* | 440.1 | 8.05 | 0.48 | 6.61 | 0.051 | 0.22 | 0.33 | 0.099 | 5.76 | 2.15 | 32.5 | 14.96 | 74 | 17.16 | 170.2 | 37 | 7890 | 22.41 | 72.6 |
| *CO17-55Z-22* | 1030 | 3.99 | 1.04 | 27.3 | 0.74 | 5.16 | 3.49 | 1.01 | 21.1 | 7.09 | 86 | 33.5 | 149 | 31.8 | 295 | 56.9 | 11440 | 206 | 303 |
| *CO17-55Z-7* | 986 | 1.19 | 0 | 9.42 | 0.136 | 2.82 | 4.56 | 1.64 | 24.5 | 7.45 | 88.6 | 33 | 151 | 32.1 | 301 | 63.1 | 8630 | 80.3 | 140 |
| *CO17-55Z-1* | 921 | 1.7 | 0.099 | 9.28 | 0.112 | 1.56 | 2.62 | 1.07 | 14.8 | 5.78 | 72.7 | 30.15 | 144.6 | 32.04 | 310.4 | 65.9 | 7050 | 69.5 | 134.5 |
| *CO17-55Z-2* | 401 | 1.02 | 0.096 | 12.68 | 0.108 | 0.81 | 0.97 | 0.195 | 7.19 | 2.42 | 31.4 | 12.81 | 61 | 13.07 | 127.6 | 25.77 | 8930 | 32.8 | 49 |
| *CO17-55Z-21* | 441 | 1.83 | 4.3 | 23.5 | 0.86 | 4.4 | 2.22 | 0.35 | 8.1 | 2.57 | 36.2 | 14.93 | 69.9 | 14.84 | 147.3 | 28.6 | 8980 | 66.6 | 149.3 |
| *CO17-55Z-30* | 2450 | 2.93 | 0.097 | 20.5 | 0.51 | 8.7 | 16.3 | 5.82 | 72.4 | 21.1 | 232 | 85.3 | 364 | 74.1 | 677 | 132 | 6900 | 210 | 178 |
| *CO17-55Z-5* | 955 | 0.7 | 0 | 5.8 | 0.114 | 2.23 | 3.88 | 1.33 | 22.4 | 7.48 | 87.7 | 32.7 | 145.1 | 30.3 | 278 | 55.5 | 7180 | 56.4 | 76.6 |
| *CO17-55Z-28* | 2635 | 2.4 | 0.077 | 21.07 | 0.58 | 10.4 | 14.8 | 5.6 | 69.3 | 21.45 | 233 | 86.8 | 387 | 80.6 | 765 | 151 | 6530 | 313 | 307.8 |
| *CO17-55Z-10* | 295.9 | 0.83 | 0.164 | 11.51 | 0.075 | 0.52 | 0.79 | 0.161 | 4.93 | 1.7 | 22.4 | 9.22 | 46.3 | 10.53 | 103 | 22.53 | 9320 | 61.7 | 161.1 |
| *CO17-55Z-3* | 767 | 5.64 | 0.705 | 17.82 | 0.571 | 3.14 | 1.95 | 0.68 | 9.29 | 4 | 55 | 24.1 | 118.8 | 26.7 | 264 | 55.7 | 10750 | 160.1 | 469 |
| *CO17-55Z-31* | 251.1 | 1.04 | 17.4 | 50 | 4.3 | 18.6 | 3.52 | 0.68 | 5.11 | 1.69 | 19.52 | 7.64 | 39.5 | 9.27 | 94.2 | 21.02 | 8580 | 30.73 | 109.2 |
| *CO17-55Z-25* | 780 | 1.53 | 0.09 | 13.4 | 0.172 | 1.84 | 2.72 | 1 | 16.2 | 5.8 | 69 | 25.1 | 120 | 25 | 227 | 50.3 | 10160 | 107 | 146 |
| *CO17-55Z-24* | 1540 | 3.35 | 5 | 30.6 | 3.24 | 22 | 8.2 | 3.12 | 28.1 | 8.8 | 119 | 49.3 | 236 | 51 | 501 | 104 | 9150 | 200 | 352 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-55Z-18* | 1438 | 2.29 | 0.356 | 13.59 | 0.339 | 3.84 | 7.43 | 2.05 | 37.1 | 11.61 | 134.1 | 50.4 | 219 | 43 | 402 | 78.5 | 6700 | 129.8 | 162.8 |
| *CO17-55Z-8* | 336.6 | 1.35 | 0.258 | 13.86 | 0.256 | 1.75 | 1.44 | 0.42 | 5.98 | 2.05 | 24.76 | 10.6 | 52.9 | 12.07 | 118 | 25.99 | 9720 | 73.1 | 135.2 |
| *CO17-55Z-27* | 1063 | 8.15 | 0.289 | 9.76 | 0.206 | 0.93 | 1.19 | 0.193 | 10.13 | 5.04 | 73.4 | 34.21 | 172.1 | 39.61 | 409.1 | 84.6 | 10540 | 128.2 | 998 |
| *CO17-55Z-26* | 253.8 | 0.89 | 0.146 | 5.69 | 0.145 | 0.99 | 0.9 | 0.225 | 3.26 | 1.27 | 16.94 | 7.21 | 39.5 | 9.51 | 105.4 | 23.81 | 9890 | 77.9 | 470.2 |
| *CO17-55Z-6* | 296.1 | 0.88 | 0.065 | 13.66 | 0.091 | 0.69 | 1.06 | 0.393 | 4.82 | 1.78 | 22.9 | 8.96 | 44.6 | 10.37 | 108 | 24.07 | 9240 | 65.52 | 124.7 |
| *CO17-55Z-13* | 577 | 1.21 | 0.145 | 14.18 | 0.109 | 1.57 | 2.53 | 0.54 | 12 | 4 | 48.9 | 19 | 83.4 | 18.5 | 173 | 35.2 | 8710 | 69.4 | 124 |
| *CO17-55Z-4* | 407 | 3.27 | 2.96 | 15.4 | 1.97 | 9.7 | 3.34 | 1.41 | 5.71 | 1.93 | 28.3 | 12.22 | 66.4 | 16.36 | 181.4 | 41.5 | 10760 | 44 | 670 |
| *CO17-55Z-16* | 1325 | 2.48 | 0.129 | 32.5 | 0.196 | 2.8 | 4.92 | 2.09 | 27.1 | 9.07 | 105.9 | 41.5 | 193 | 42.2 | 415 | 86.4 | 8890 | 187.1 | 281 |
| *CO17-55Z-14* | 1520 | 6.78 | 1.16 | 19.6 | 0.777 | 4.81 | 4.29 | 1.27 | 27.4 | 10.3 | 128 | 50.9 | 234 | 46.9 | 425 | 82 | 9700 | 223 | 520 |
| *CO17-55Z-9* | 763 | 2.78 | 1.31 | 20.1 | 0.9 | 5 | 2.29 | 1.03 | 11.6 | 4.25 | 56.8 | 24.2 | 115 | 26.8 | 264 | 57.3 | 9730 | 128 | 257 |
| *CO17-55Z-20* | 479 | 2.28 | 1.81 | 13.67 | 1.3 | 7.3 | 3.2 | 1.3 | 8 | 2.68 | 36.2 | 15.2 | 78.2 | 18.3 | 191 | 40.3 | 11810 | 56.1 | 295 |
| *CO17-55Z-17* | 458.5 | 1.45 | 0.195 | 9.37 | 0.156 | 1.41 | 0.94 | 0.332 | 7.91 | 2.77 | 35.4 | 14.73 | 71.1 | 16.23 | 163.1 | 34.03 | 10360 | 39.6 | 150.5 |
| | | | | | | | | | | | | | | | | | | | |
| *CO17-58Z-1* | 1121 | 5.9 | 17.7 | 63.5 | 8.74 | 54.2 | 24.4 | 7.43 | 35.3 | 7.09 | 82.6 | 34.5 | 192.5 | 47.3 | 475 | 101.2 | 12190 | 39.8 | 574 |
| *CO17-58Z-2* | 1014 | 6.7 | 57 | 196 | 27.5 | 153 | 54.6 | 7.61 | 62.6 | 8.75 | 83.9 | 32.7 | 161.1 | 36.9 | 359 | 74.5 | 12650 | 54.5 | 663 |
| *CO17-58Z-4* | 1328 | 5.09 | 4.80E+03 | 8.20E+03 | 770 | 2750 | 460 | 12.5 | 325 | 36.3 | 181 | 46.7 | 189.8 | 42.14 | 403.5 | 85.8 | 12200 | 2000 | 454 |
| *CO17-58Z-33* | 1177 | 5.35 | 24.6 | 91 | 15.16 | 103.2 | 43.3 | 5 | 55 | 8.43 | 92 | 37.1 | 198.4 | 46.2 | 455 | 95.5 | 11960 | 33.1 | 369 |
| *CO17-58Z-10* | 2258 | 8.28 | 27.8 | 107 | 13.8 | 88 | 24.7 | 7 | 52.2 | 14.91 | 189.9 | 75.6 | 359 | 76.5 | 679 | 130.7 | 12070 | 255 | 1322 |
| *CO17-58Z-25* | 973 | 8.41 | 12.9 | 47.2 | 7.16 | 45.5 | 14 | 2.92 | 22.9 | 5.22 | 69.1 | 31.4 | 162.6 | 38 | 376 | 76.7 | 12740 | 99.4 | 1079 |
| *CO17-58Z-6* | 3720 | 10.72 | 478 | 1736 | 321 | 2195 | 872 | 94.3 | 871 | 87.9 | 506 | 128.5 | 488 | 101.3 | 916 | 172.5 | 13590 | 98.5 | 1233 |
| *CO17-58Z-17* | 2048 | 9.96 | 46.4 | 136.5 | 17.89 | 118 | 33.4 | 4.55 | 46.9 | 12.36 | 155 | 66.8 | 330.7 | 74.6 | 707 | 135 | 13570 | 124.7 | 1330 |
| *CO17-58Z-28* | 1334 | 3.32 | 11.5 | 29.9 | 3.17 | 22.2 | 10.3 | 1.68 | 26.2 | 8.12 | 108 | 43.6 | 215.8 | 47.9 | 452 | 95.4 | 11500 | 143.3 | 678 |
| *CO17-58Z-8* | 627 | 4.7 | 0.342 | 10.33 | 0.216 | 1.7 | 1.8 | 0.125 | 11.23 | 4.2 | 53.7 | 21.29 | 97.3 | 21.12 | 187.9 | 37.24 | 11230 | 60.2 | 152.7 |
| *CO17-58Z-16* | 1640 | 7.07 | 71 | 180 | 22.7 | 132 | 39.5 | 5.28 | 51.4 | 11.3 | 137 | 55.6 | 268 | 59 | 559 | 108 | 13960 | 133 | 1080 |
| *CO17-58Z-22* | 1304 | 5.02 | 32.9 | 114 | 16.3 | 88 | 29.9 | 4.9 | 38.3 | 8.17 | 96.4 | 40.9 | 218 | 55.2 | 602 | 132 | 16310 | 94.2 | 1650 |
| *CO17-58Z-5* | 3620 | 10.11 | 147 | 373 | 45.7 | 268 | 99.9 | 21.3 | 141.9 | 26.7 | 297 | 118.2 | 583 | 125 | 1116 | 220 | 10500 | 227 | 999 |
| *CO17-58Z-13* | 593 | 3.93 | 15.1 | 54.8 | 7.9 | 49.7 | 17 | 2.41 | 24.6 | 4.72 | 50.7 | 19.81 | 94.9 | 21.7 | 209 | 43.3 | 12410 | 51.7 | 369 |
| *CO17-58Z-24* | 1191 | 5.46 | 23.2 | 72.8 | 9.88 | 70.4 | 25.2 | 3.68 | 34.9 | 6.82 | 83.7 | 36.4 | 202.3 | 51.2 | 522 | 110.2 | 13620 | 49.2 | 568 |
| *CO17-58Z-11* | 3900 | 7.15 | 72 | 249 | 39.4 | 265 | 102 | 10.7 | 157 | 34.4 | 366 | 133.8 | 593 | 119.2 | 1059 | 206.8 | 9550 | 385 | 734 |
| *CO17-58Z-23* | 1089 | 6.44 | 48.6 | 172 | 23.9 | 139 | 40.4 | 12 | 45.1 | 8.1 | 86.7 | 34.8 | 175.7 | 40.5 | 407 | 82.6 | 11760 | 102 | 688 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-58Z-32* | 2160 | 6.66 | 205 | 810 | 148 | 1050 | 406 | 53.8 | 423 | 43.4 | 265 | 71.6 | 286 | 59.4 | 568 | 116.9 | 9800 | 120.5 | 514 |
| *CO17-58Z-9* | 1185 | 4.69 | 24.1 | 97.1 | 12.47 | 89.5 | 39 | 7.46 | 56.8 | 11.19 | 108 | 40 | 172.9 | 35 | 317.7 | 63.3 | 11790 | 147.9 | 344 |
| *CO17-58Z-14* | 2667 | 9.19 | 79.1 | 253 | 32.8 | 202 | 67.2 | 18.4 | 100.9 | 21.9 | 235.6 | 88.8 | 405 | 82.8 | 744 | 138.6 | 10220 | 313.8 | 955 |
| *CO17-58Z-15* | 1513 | 11.9 | 127 | 304 | 39 | 228 | 71.7 | 9.21 | 87.2 | 12.85 | 123.3 | 46.8 | 233 | 53.3 | 532 | 114.4 | 12130 | 184 | 1027 |
| *CO17-58Z-26* | 809 | 6.02 | 54.1 | 193 | 35.8 | 236 | 106 | 11.1 | 125 | 13.7 | 91 | 27.2 | 113.2 | 23.8 | 231 | 45.2 | 11500 | 83.6 | 336 |
| *CO17-58Z-19* | 1347 | 4.58 | 29.1 | 111 | 18.5 | 107 | 39.8 | 4.95 | 52.6 | 10.7 | 114.7 | 44.9 | 214 | 47 | 444 | 87.1 | 11240 | 101 | 618 |
| *CO17-58Z-30* | 1410 | 13.9 | 111.8 | 334 | 47.1 | 262 | 100 | 12.5 | 120 | 14 | 108.5 | 38.8 | 195.9 | 48.9 | 563 | 125.9 | 15290 | 149.5 | 1464 |
| *CO17-58Z-27* | 1276 | 23.4 | 78.8 | 203 | 25.5 | 142.1 | 35.9 | 12.3 | 42.3 | 7.79 | 93.7 | 39.27 | 202.5 | 47.6 | 495 | 103.8 | 27390 | 70.6 | 1582 |
| *CO17-58Z-3* | 1364 | 23 | 178.7 | 486 | 70 | 400 | 152.9 | 27.3 | 160.2 | 20.02 | 141.7 | 40.8 | 158.1 | 33.27 | 338.1 | 64.6 | 3.31E+04 | 78.8 | 884 |
| *CO17-58Z-21* | 1903 | 9.23 | 168 | 444 | 63.6 | 406 | 160 | 18.2 | 171 | 21.3 | 178.5 | 60.4 | 280.6 | 65 | 672 | 129 | 15000 | 154 | 1931 |
| *CO17-58Z-7* | 1930 | 5.32 | 148 | 365 | 58 | 362 | 172 | 16.9 | 198 | 24.8 | 194 | 64 | 273 | 57.9 | 530 | 104 | 11780 | 142 | 608 |
| *CO17-58Z-20* | 492 | 1.44 | 10.51 | 33.2 | 4.31 | 28.8 | 15 | 3.02 | 25.6 | 4.65 | 45.4 | 15.38 | 71.4 | 15.57 | 154.6 | 34 | 11580 | 50.1 | 171 |
| *CO17-58Z-31* | 1430 | 6.26 | 72 | 282 | 38.3 | 207 | 57.2 | 12.8 | 61 | 10.9 | 115.3 | 46.1 | 223 | 52.6 | 506 | 103.5 | 14890 | 94.3 | 970 |
| *CO17-58Z-12* | 3424 | 8.92 | 243.2 | 797 | 116.3 | 622 | 167.7 | 33.9 | 200 | 34.2 | 325 | 114.7 | 505 | 106.9 | 964 | 176.6 | 9880 | 607 | 1609 |
| *CO17-58Z-18* | 2540 | 11.7 | 396 | 750 | 93.8 | 513 | 157 | 17.9 | 193 | 27.7 | 234 | 82.8 | 379 | 83 | 762 | 149.3 | 12410 | 267 | 1478 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-07Z-2* | 762 | 1.33 | 0.023 | 13.39 | 0.038 | 1.24 | 3.22 | 1.01 | 16.5 | 5.38 | 66 | 24.9 | 112.1 | 24.12 | 217.4 | 45.2 | 7320 | 71.5 | 93.5 |
| *I16-07Z-16* | 1837 | 4.38 | 1.08 | 39.4 | 0.75 | 5.3 | 7.03 | 1.51 | 39.8 | 14.01 | 161.8 | 62.4 | 280.1 | 55 | 501 | 97.1 | 8670 | 213.1 | 218.8 |
| *I16-07Z-8* | 809 | 3.71 | 0.69 | 18.6 | 0.45 | 5.9 | 4.88 | 1.32 | 17.7 | 5.86 | 70.4 | 26.6 | 119.6 | 24.5 | 234 | 45.4 | 9870 | 93.7 | 233 |
| *I16-07Z-5* | 1442 | 4.09 | 1.3 | 46.8 | 1.62 | 15.9 | 11.9 | 2.53 | 42.5 | 11.65 | 126.9 | 50.3 | 214 | 41.4 | 376 | 71.8 | 7620 | 255 | 340 |
| *I16-07Z-4* | 1128 | 1.77 | 6.38 | 59.4 | 5.26 | 36 | 23.9 | 9.65 | 57.6 | 13.2 | 118.5 | 35.87 | 146.5 | 30.49 | 268.1 | 50.5 | 10910 | 140.9 | 426 |
| *I16-07Z-9* | 1150 | 6.9 | 0.39 | 16.3 | 0.51 | 2.29 | 1.44 | 0.36 | 14.4 | 6.3 | 89 | 38.6 | 186 | 42.5 | 409 | 79 | 13710 | 151 | 666 |
| *I16-07Z-12* | 2633 | 14.05 | 5.94 | 99.3 | 3.1 | 19.8 | 15.2 | 4.76 | 68.3 | 21.92 | 249 | 90.4 | 382 | 75 | 650 | 121.3 | 8640 | 845 | 595 |
| *I16-07Z-17* | 2359 | 9.67 | 2.51 | 60.8 | 1.28 | 9.7 | 9.5 | 2.41 | 49.5 | 16.94 | 205.2 | 79.4 | 349 | 70.9 | 621 | 116.7 | 10030 | 473 | 628 |
| *I16-07Z-6* | 3102 | 20.8 | 3.83 | 40.1 | 0.48 | 4.1 | 5.4 | 1.08 | 43.2 | 18.3 | 250.7 | 99.9 | 469 | 101.7 | 899 | 171.4 | 10060 | 739 | 1658 |
| *I16-07Z-11* | 2511 | 14.8 | 23.5 | 73.3 | 5.35 | 28.2 | 10.4 | 2.52 | 43.2 | 15.92 | 205.4 | 79.8 | 374 | 76.9 | 679 | 125.2 | 10940 | 362 | 893 |
| *I16-07Z-15* | 2977 | 13.16 | 4.15 | 76.5 | 4.11 | 33.1 | 21.8 | 3.5 | 70 | 21.79 | 256.1 | 97.7 | 438 | 88 | 777 | 144.1 | 10170 | 646 | 993 |
| *I16-07Z-1* | 1710 | 14.2 | 3.54 | 42.5 | 4.03 | 25 | 9 | 2.73 | 25.7 | 8 | 119 | 53.1 | 275 | 63.7 | 624 | 130.6 | 14260 | 183 | 1201 |
| *I16-07Z-14* | 2382 | 27 | 8.7 | 49.6 | 3.73 | 23.6 | 7.18 | 1.64 | 31.9 | 13.16 | 184 | 78.3 | 376.3 | 84.8 | 782 | 151.4 | 12740 | 297.4 | 1308 |
| *I16-07Z-7* | 3400 | 15.6 | 10.6 | 101.8 | 8.61 | 59.2 | 34.1 | 4.97 | 84.3 | 24.43 | 287 | 110.6 | 491 | 100.1 | 847 | 158.9 | 11720 | 498 | 1180 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-07Z-13* | 2448 | 21.28 | 18.8 | 94 | 7.77 | 47.1 | 17.2 | 4.78 | 45.3 | 15.03 | 192.5 | 79.2 | 372 | 80.2 | 726 | 140.2 | 14260 | 387 | 1488 |
| *I16-07Z-3* | 4470 | 30.7 | 85 | 259 | 19.6 | 74.2 | 28.2 | 9.16 | 83.7 | 28.8 | 359 | 146.5 | 692 | 146 | 1360 | 261.1 | 10290 | 1690 | 2451 |
| *I16-07Z-10* | 4870 | 19.6 | 35.2 | 234.9 | 23.7 | 144.4 | 68.8 | 23.2 | 166.1 | 43.3 | 457 | 160 | 650 | 128.8 | 1101 | 198 | 10210 | 2595 | 2005 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-17Z-10* | 1171 | 2.05 | 3.18 | 53.9 | 2.61 | 17.8 | 13.4 | 4.47 | 41.6 | 11.43 | 113.1 | 38.8 | 161.3 | 32.71 | 283.9 | 55.7 | 9350 | 211.9 | 351.4 |
| *I16-17Z-8* | 501 | 1.06 | 1.83 | 18.6 | 1.32 | 8.3 | 5.7 | 2.92 | 15.4 | 5.11 | 48.5 | 17.3 | 71.9 | 15.4 | 138 | 26.9 | 11920 | 46.4 | 162 |
| *I16-17Z-7* | 816 | 1.39 | 45.4 | 155 | 17.9 | 90 | 22.7 | 5 | 36.9 | 8.65 | 83.6 | 27 | 118.7 | 23.6 | 216 | 40.8 | 9110 | 163.2 | 306.9 |
| *I16-17Z-11* | 966 | 1 | 2.25 | 30.2 | 2.51 | 18.1 | 15.6 | 7.81 | 38.9 | 11.25 | 103 | 32.3 | 132.1 | 27.2 | 235.9 | 47 | 7960 | 64.9 | 154.3 |
| *I16-17Z-14* | 742 | 0.6 | 1.48 | 19.7 | 1.16 | 9.3 | 9.3 | 3.98 | 25.5 | 8.05 | 76.6 | 24.7 | 103.3 | 21.8 | 192.8 | 39.5 | 8290 | 62.6 | 143.6 |
| *I16-17Z-2* | 900 | 0.68 | 12.3 | 85 | 11.2 | 59 | 45 | 14.1 | 79 | 16 | 114 | 28.8 | 101 | 19.3 | 169 | 32.3 | 9310 | 60.1 | 143.4 |
| *I16-17Z-5* | 951 | 1.19 | 3.55 | 36.5 | 4.18 | 25.4 | 18.7 | 8 | 43.4 | 11.3 | 108 | 30.4 | 126.1 | 24.5 | 223 | 41.7 | 8900 | 86.3 | 227 |
| *I16-17Z-9* | 1152 | 2.94 | 5.63 | 50.3 | 4.69 | 30.1 | 16.8 | 7.36 | 44.4 | 12.33 | 120.4 | 38.9 | 155.9 | 29.9 | 258.3 | 45.9 | 10490 | 140.7 | 419.1 |
| *I16-17Z-1* | 1658 | 1.8 | 7.08 | 75.3 | 8.38 | 52 | 49.7 | 22.3 | 103.6 | 27 | 222.9 | 58.6 | 211.3 | 38.3 | 331 | 56 | 8260 | 239.3 | 380.7 |
| *I16-17Z-12* | 1118 | 1.35 | 4.35 | 53.2 | 4.81 | 32.4 | 33.2 | 14.5 | 73 | 14.9 | 128 | 36.6 | 147.5 | 28.9 | 253 | 48 | 9710 | 126.6 | 289 |
| *I16-17Z-13* | 3170 | 5.7 | 56 | 298 | 39 | 232 | 179 | 67.4 | 290 | 70.4 | 525 | 115.9 | 376 | 65.6 | 508 | 79.2 | 10150 | 271 | 857 |
| *I16-17Z-6* | 3360 | 6.92 | 45.4 | 414 | 54.4 | 344 | 191 | 68 | 271 | 62.8 | 489 | 120.4 | 391 | 72.3 | 606 | 93 | 10720 | 317.2 | 1180 |
| *I16-17Z-15* | 16750 | 19.7 | 203.8 | 1336 | 183 | 1157 | 892 | 307 | 1521 | 371 | 2750 | 584 | 1805 | 298 | 2160 | 307 | 17480 | 492 | 3140 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-18Z-27* | 3840 | 15.5 | 0 | 66.5 | 0.12 | 3.08 | 8.86 | 1.69 | 63.5 | 23.97 | 321 | 131.2 | 603 | 129.1 | 1182 | 235.3 | 8620 | 568 | 681 |
| *I16-18Z-23* | 2816 | 10.07 | 0.7 | 44.3 | 0.286 | 2.55 | 6.4 | 1.44 | 42.4 | 16.47 | 225.9 | 91.5 | 439.2 | 95.4 | 920 | 185.7 | 7810 | 212 | 283.3 |
| *I16-18Z-2* | 974 | 0.71 | 0 | 11.69 | 0.086 | 1.62 | 3.99 | 1.68 | 22.7 | 7.31 | 86.5 | 33 | 149.7 | 31.26 | 295.2 | 60.5 | 7430 | 38 | 56.3 |
| *I16-18Z-28* | 2877 | 11.49 | 15.36 | 61.8 | 3.85 | 17.4 | 10.3 | 1.58 | 46.9 | 18.39 | 238.6 | 97.2 | 456 | 99.2 | 957 | 191.7 | 8970 | 236.7 | 483.3 |
| *I16-18Z-26* | 5470 | 29.4 | 9.3 | 67.6 | 2.76 | 13.6 | 12 | 2.16 | 75.6 | 33.3 | 446 | 182 | 856 | 179.1 | 1688 | 321.6 | 9000 | 678 | 1276 |
| *I16-18Z-13* | 6550 | 24.7 | 1.4 | 51.5 | 0.58 | 5.6 | 10.5 | 1.9 | 89.5 | 37.6 | 521 | 211.1 | 1003 | 209.5 | 1937 | 368.7 | 9300 | 827 | 1216 |
| *I16-18Z-29* | 9010 | 56.8 | 0.91 | 121.7 | 0.54 | 8.6 | 20.1 | 3.13 | 138.3 | 57.1 | 744 | 300 | 1349 | 288 | 2590 | 497 | 8820 | 1743 | 2230 |
| *I16-18Z-6* | 5830 | 38.9 | 1.28 | 43.3 | 0.96 | 5.7 | 7.72 | 1.39 | 68.1 | 33.2 | 457.5 | 191.9 | 916 | 196.4 | 1827 | 350.9 | 9880 | 802 | 1626 |
| *I16-18Z-14* | 3000 | 30.66 | 12.4 | 40 | 3.06 | 14.4 | 8.8 | 1.25 | 39.8 | 17.8 | 245 | 100.1 | 485 | 114.1 | 1185 | 243.1 | 2.04E+04 | 322 | 1294 |
| *I16-18Z-21* | 5430 | 62 | 19.3 | 106.3 | 9.11 | 55.1 | 44 | 7.57 | 153 | 48.4 | 531 | 179.9 | 768 | 170.5 | 1574 | 303.4 | 11390 | 637 | 2634 |
| *I16-18Z-31* | 5470 | 61.3 | 6.61 | 69.2 | 1.67 | 9.6 | 10.4 | 1.67 | 72.7 | 32.2 | 450 | 185.3 | 863 | 187.9 | 1732 | 332 | 9460 | 888 | 1835 |
| *I16-18Z-25* | 2971 | 44.2 | 62.1 | 130.4 | 10.84 | 56.3 | 26.9 | 6.2 | 75.8 | 24 | 275.5 | 97.6 | 443 | 108.4 | 1215 | 251 | 25850 | 141 | 1811 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-18Z-15* | 6880 | 29.9 | 26.6 | 69.9 | 3.77 | 17.2 | 10.72 | 2.16 | 81.4 | 37.3 | 532 | 224.3 | 1073 | 232.8 | 2128 | 406.1 | 9700 | 820 | 1749 |
| *I16-18Z-16* | 3320 | 18.55 | 7.69 | 55 | 3.58 | 21.1 | 12.4 | 3.04 | 58.4 | 21.06 | 278 | 108.7 | 515 | 117.1 | 1146 | 234.5 | 11930 | 317 | 1229 |
| *I16-18Z-8* | 4180 | 17.2 | 2 | 48 | 0.99 | 8.9 | 11.9 | 2.32 | 64.5 | 26.4 | 352 | 138.8 | 648 | 137.4 | 1259 | 243.3 | 8650 | 372 | 747 |
| *I16-18Z-10* | 2311 | 14.53 | 33.5 | 122.2 | 13.77 | 72.1 | 23.1 | 4.53 | 53.3 | 17.8 | 202.1 | 73.5 | 341.6 | 71.1 | 681 | 133.5 | 9970 | 194.1 | 740 |
| *I16-18Z-7* | 3798 | 37.6 | 28.2 | 108.1 | 8.53 | 46 | 17.8 | 3.37 | 72.7 | 26.37 | 335 | 127.3 | 587 | 124.1 | 1139 | 218 | 10560 | 643 | 1291 |
| *I16-18Z-5* | 4860 | 64 | 27.3 | 113 | 11.6 | 63 | 32 | 2.53 | 93.9 | 32.74 | 411.3 | 160.2 | 755 | 163.4 | 1499 | 286.8 | 13380 | 885 | 2111 |
| *I16-18Z-22* | 5210 | 45 | 147 | 265 | 20.9 | 87.1 | 25 | 4.02 | 81.9 | 31.62 | 420.6 | 171 | 796 | 177.9 | 1645 | 320.5 | 13510 | 766 | 1832 |
| *I16-18Z-12* | 7100 | 29.9 | 5.51 | 61.3 | 1.94 | 11.4 | 12.5 | 2.48 | 92 | 38.82 | 548 | 229.6 | 1074 | 228.4 | 2045 | 393.2 | 10870 | 724 | 1288 |
| *I16-18Z-19* | 3070 | 42.3 | 20.8 | 166.4 | 8.41 | 47.5 | 24.4 | 4.22 | 89.3 | 27.8 | 302 | 103.4 | 439 | 87.7 | 778 | 148.4 | 8790 | 623 | 915 |
| *I16-18Z-18* | 4913 | 43.2 | 50.5 | 181.6 | 14.45 | 70.3 | 27.2 | 5.54 | 95.3 | 33.2 | 432.6 | 169.7 | 761 | 159.5 | 1489 | 286.5 | 10160 | 655 | 1402 |
| *I16-18Z-4* | 5625 | 47.9 | 27.7 | 109.2 | 7.34 | 35.2 | 16.6 | 3.39 | 82.7 | 34.02 | 459.6 | 188.6 | 868 | 187.7 | 1754 | 341.5 | 10680 | 885 | 1688 |
| *I16-18Z-17* | 7020 | 69.2 | 90.1 | 295 | 31.8 | 158 | 71 | 9.59 | 186 | 56.7 | 634 | 233.2 | 1040 | 210.5 | 1915 | 366.2 | 9080 | 1175 | 1900 |
| *I16-18Z-1* | 2530 | 34.17 | 3.47 | 23.2 | 1.4 | 7.5 | 4.54 | 1.33 | 28.5 | 12.51 | 185.7 | 81.9 | 410 | 97.9 | 1009 | 206.9 | 10840 | 102 | 1229 |
| *I16-18Z-3* | 3766 | 77.3 | 35.6 | 219.3 | 21.4 | 123.3 | 56.1 | 7.59 | 145.8 | 41.2 | 417 | 128 | 461.4 | 77.7 | 627 | 104.5 | 11920 | 315 | 1356 |
| *I16-18Z-9* | 1462 | 39.5 | 21.7 | 125 | 10.79 | 68.6 | 27.9 | 7.25 | 78.9 | 21.4 | 177 | 52.1 | 170 | 29.4 | 223 | 35.9 | 2040 | 184.6 | 328 |
| *I16-18Z-30* | 4470 | 77.9 | 68.6 | 179 | 18 | 80.1 | 36.4 | 17.9 | 125.3 | 36.4 | 393 | 133.8 | 590 | 133.7 | 1459 | 291.4 | 21800 | 229.7 | 2002 |
| *I16-18Z-11* | 5220 | 34.7 | 30.7 | 79 | 7.41 | 34.4 | 21.9 | 2.87 | 88.7 | 34.1 | 437 | 168.5 | 773 | 162.7 | 1514 | 292.6 | 9980 | 484 | 2430 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-32Z-2* | 2531 | 4.95 | 0 | 22.23 | 0.086 | 1.35 | 4.9 | 1.16 | 42.1 | 15.75 | 210.5 | 86.3 | 379 | 81.1 | 745 | 148 | 9240 | 146.9 | 249.5 |
| *I16-32Z-21* | 1420 | 2.15 | 0.127 | 10.95 | 0.158 | 1.86 | 3.16 | 0.553 | 22.9 | 8.53 | 113.9 | 46.9 | 224 | 48.7 | 463 | 95.2 | 8810 | 99.3 | 190.2 |
| *I16-32Z-3* | 1628 | 2.58 | 0.67 | 9.6 | 0.34 | 3.62 | 5.17 | 0.6 | 29.9 | 10.5 | 138.4 | 56.2 | 254.8 | 52 | 487 | 95.9 | 8034 | 73.1 | 117.2 |
| *I16-32Z-5* | 4500 | 23.6 | 54.2 | 127.9 | 9.8 | 44 | 24.9 | 6.51 | 100.9 | 32.5 | 395 | 145.7 | 640 | 134.5 | 1233 | 232.8 | 9080 | 576 | 640 |
| *I16-32Z-22* | 3886 | 39.5 | 11.4 | 96.5 | 3.76 | 22.9 | 13.3 | 2.95 | 68.1 | 24.21 | 330.1 | 128.9 | 599.8 | 131.9 | 1225 | 234.2 | 8980 | 748 | 1365 |
| *I16-32Z-13* | 4304 | 39.4 | 53.9 | 145.6 | 11.2 | 50.1 | 26.9 | 7.62 | 90.2 | 31 | 377 | 144.5 | 660 | 144.6 | 1323 | 259.3 | 9040 | 677.4 | 1076 |
| *I16-32Z-10* | 5280 | 49.6 | 140.1 | 315.7 | 30.4 | 148 | 68.3 | 16.37 | 154.8 | 43.1 | 459 | 168.6 | 740 | 157.1 | 1444 | 276.7 | 8940 | 802 | 1188 |
| *I16-32Z-12* | 6870 | 87.7 | 79.3 | 237 | 30.2 | 136 | 63.8 | 17.8 | 158 | 49 | 553 | 200 | 932 | 199.4 | 1869 | 344 | 9810 | 1027 | 1900 |
| *I16-32Z-27* | 7660 | 188.4 | 188.5 | 945 | 121.8 | 709 | 356 | 69.8 | 389 | 81.2 | 726 | 229.3 | 960 | 202.6 | 1925 | 363 | 9380 | 939 | 1152 |
| *I16-32Z-14* | 10550 | 93.7 | 233.2 | 499 | 48.1 | 239.9 | 108.8 | 29.5 | 285 | 78.3 | 848 | 301 | 1295 | 268.9 | 2457 | 452 | 9960 | 1640 | 2605 |
| *I16-32Z-1* | 5250 | 44 | 157 | 349 | 37.3 | 135.9 | 40.3 | 21.4 | 109.5 | 34.6 | 420 | 160.6 | 744 | 163.7 | 1539 | 298.7 | 10280 | 779 | 1217 |
| *I16-32Z-18* | 5040 | 62.5 | 194 | 570 | 62.1 | 261 | 65 | 14.7 | 127.4 | 37.6 | 419 | 156.4 | 737 | 161.5 | 1477 | 288.6 | 8630 | 833 | 1201 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-32Z-9* | 8270 | 81.5 | 379 | 1034 | 135 | 568 | 166 | 51.1 | 249.2 | 68 | 722 | 243.5 | 1045 | 212.6 | 1916 | 349.3 | 9210 | 870 | 1390 |
| *I16-32Z-26* | 7730 | 86.8 | 121.3 | 425 | 45.8 | 193 | 71 | 24.1 | 166.5 | 49.9 | 571 | 209.4 | 945 | 204.8 | 1885 | 350.8 | 9680 | 810 | 1328 |
| *I16-32Z-7* | 6780 | 49.4 | 104.2 | 443 | 50.1 | 243.6 | 83.7 | 26.51 | 150.1 | 43.9 | 479.5 | 165.2 | 724 | 161 | 1573 | 297.4 | 9020 | 741 | 1157 |
| *I16-32Z-20* | 7310 | 212 | 93.4 | 445 | 45.7 | 255 | 88.8 | 34.9 | 174.3 | 49.3 | 520 | 184.1 | 809 | 174.6 | 1615 | 301.3 | 9480 | 863 | 1386 |
| *I16-32Z-6* | 12580 | 149.5 | 183 | 552 | 72.7 | 327 | 157.7 | 36.8 | 352 | 99.1 | 1017 | 326 | 1429 | 316.2 | 2980 | 540 | 8470 | 1333 | 1575 |
| *I16-32Z-19* | 5900 | 88.4 | 210 | 873 | 99.2 | 410 | 99.4 | 16.7 | 140.8 | 40.7 | 472.3 | 178.3 | 838 | 181.3 | 1702 | 327.8 | 8960 | 676 | 1204 |
| *I16-32Z-24* | 6770 | 74.7 | 174.3 | 482 | 56.8 | 291.1 | 150.4 | 37.3 | 247.4 | 58.6 | 547 | 174.3 | 772 | 181.5 | 1873 | 389.1 | 10070 | 539.5 | 1417 |
| *I16-32Z-15* | 6500 | 84 | 373 | 600 | 51.6 | 195 | 62 | 48 | 140 | 41.5 | 493 | 184 | 852 | 184 | 1710 | 340 | 10440 | 783 | 1258 |
| *I16-32Z-8* | 5770 | 69 | 262.1 | 633 | 68.5 | 282.3 | 82.4 | 19.51 | 131.9 | 39.8 | 442 | 159.4 | 766 | 180.6 | 1873 | 375.1 | 10320 | 1087 | 1858 |
| *I16-32Z-25* | 5190 | 40.7 | 149.9 | 359 | 41.5 | 167.7 | 55.5 | 24.1 | 131.5 | 37.5 | 407 | 149.2 | 691 | 150.5 | 1434 | 287.1 | 9180 | 640 | 1266 |
| *I16-32Z-4* | 7910 | 62.8 | 178.4 | 824 | 74.3 | 344 | 118.8 | 38.1 | 231.8 | 63.5 | 639 | 210.6 | 926 | 198.6 | 1785 | 344.1 | 9230 | 846 | 1433 |
| *I16-32Z-23* | 6850 | 96.2 | 143.3 | 531 | 50.2 | 210.4 | 90.6 | 28.4 | 199.9 | 49.9 | 527 | 187.6 | 863 | 186.8 | 1796 | 351.8 | 9210 | 2020 | 1590 |
| *I16-32Z-17* | 5450 | 127 | 188.7 | 602 | 68.2 | 312 | 93.3 | 17.27 | 146.9 | 38.4 | 429.8 | 168.2 | 807 | 184.2 | 1792 | 357 | 9190 | 1147 | 1487 |
| *I16-32Z-11* | 5860 | 89 | 168 | 197 | 42 | 175 | 63.6 | 18.1 | 148 | 46.4 | 506 | 175 | 803 | 181.6 | 1756 | 337 | 11500 | 615.7 | 1248 |
| *I16-32Z-16* | 7630 | 107.4 | 126.5 | 312.8 | 38.4 | 164.7 | 66.4 | 23.5 | 162.6 | 50.2 | 564 | 203.7 | 934 | 220.4 | 2224 | 455.5 | 14020 | 799 | 1994 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-34Z-19* | 1047 | 3.99 | 0.99 | 12.82 | 0.702 | 5.5 | 3.33 | 0.72 | 17.3 | 6.22 | 84.7 | 34.5 | 162.8 | 34.4 | 320.7 | 68 | 7990 | 70.2 | 137.7 |
| *I16-34Z-26* | 520 | 0.93 | 0 | 2.8 | 0.035 | 0.3 | 0.95 | 0.083 | 7.2 | 2.81 | 40 | 17.2 | 88 | 19.1 | 204 | 47 | 10690 | 23.7 | 60 |
| *I16-34Z-25* | 1219 | 2.33 | 16.6 | 68.6 | 9.27 | 50.3 | 16.9 | 2.55 | 33.1 | 9.33 | 102.1 | 39.7 | 187.2 | 41.1 | 387.6 | 77.1 | 8750 | 75.2 | 156.4 |
| *I16-34Z-6* | 1506 | 1.83 | 0 | 9.24 | 0.052 | 1.17 | 3.3 | 0.52 | 25.2 | 9.77 | 126.9 | 50.1 | 240.8 | 49.6 | 472.1 | 95.1 | 7865 | 90.3 | 161 |
| *I16-34Z-29* | 1397 | 1.18 | 0 | 8.42 | 0.044 | 0.83 | 2.89 | 0.439 | 22.8 | 8.12 | 111.4 | 45.7 | 219.8 | 47.3 | 462.8 | 97.2 | 9060 | 89 | 190.4 |
| *I16-34Z-10* | 1471 | 1.72 | 0.71 | 13.49 | 0.316 | 4.21 | 4.71 | 0.74 | 28.6 | 10.06 | 124.5 | 49.6 | 230.4 | 48.2 | 446 | 89.9 | 9020 | 80.7 | 150.9 |
| *I16-34Z-16* | 1141 | 2.17 | 0 | 6.99 | 0.053 | 0.86 | 1.96 | 0.296 | 17.8 | 6.79 | 89.7 | 37.79 | 179.3 | 40.27 | 367.7 | 77.7 | 7780 | 68 | 121.6 |
| *I16-34Z-1* | 1100 | 1.69 | 0 | 6.26 | 0.022 | 0.42 | 2.22 | 0.35 | 17 | 6.61 | 86.2 | 35.85 | 176.5 | 38.96 | 365.2 | 78.6 | 7990 | 51 | 128.6 |
| *I16-34Z-27* | 1127 | 1.8 | 0.013 | 8.87 | 0.068 | 1.63 | 2.56 | 0.333 | 16.9 | 6.2 | 87.3 | 37.2 | 179.9 | 40.9 | 406 | 86 | 8870 | 64.8 | 163.3 |
| *I16-34Z-5* | 977 | 1.28 | 0.028 | 5.28 | 0.052 | 0.35 | 1.41 | 0.31 | 12 | 5.13 | 74.6 | 31.51 | 156.8 | 35.07 | 347.8 | 71.5 | 8400 | 37.09 | 103.9 |
| *I16-34Z-12* | 1190 | 1.76 | 0 | 6.57 | 0.023 | 0.58 | 2.23 | 0.407 | 16 | 6.38 | 89.5 | 38.9 | 195.5 | 43.33 | 422.4 | 88.7 | 8120 | 50 | 137.1 |
| *I16-34Z-15* | 2133 | 1.42 | 0 | 9.96 | 0.117 | 3.24 | 6.33 | 1.01 | 38.7 | 14.18 | 181.5 | 72.8 | 332.7 | 68 | 621 | 125.7 | 7820 | 129.4 | 195 |
| *I16-34Z-13* | 1624 | 1.31 | 0.073 | 9.23 | 0.09 | 2.2 | 3.9 | 0.64 | 30.4 | 10.58 | 135.4 | 54.5 | 252.4 | 53.3 | 506.6 | 102.6 | 8590 | 112.2 | 198 |
| *I16-34Z-2* | 1597 | 1.32 | 0.521 | 14.54 | 0.325 | 3.58 | 4.69 | 0.68 | 27.9 | 9.85 | 127.6 | 52.8 | 249 | 55 | 512 | 106.7 | 9630 | 117.6 | 218 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-34Z-14* | 854 | 1.43 | 0.503 | 6.65 | 0.352 | 2.49 | 3.02 | 0.47 | 15.8 | 5.24 | 69.6 | 27.95 | 133.7 | 29.32 | 289 | 62.1 | 9850 | 47.6 | 121.3 |
| *I16-34Z-7* | 1062 | 1.61 | 0.106 | 5.85 | 0.092 | 1.35 | 2.45 | 0.53 | 13.9 | 5.82 | 84.1 | 33.98 | 165.7 | 37.38 | 375 | 77.7 | 7990 | 41.3 | 114.6 |
| *I16-34Z-8* | 1178 | 2.27 | 0 | 7.64 | 0.055 | 0.61 | 2.44 | 0.315 | 17.3 | 6.86 | 90.4 | 38.95 | 194.1 | 42.08 | 415 | 87.2 | 7800 | 58.62 | 140.7 |
| *I16-34Z-24* | 1057 | 2.63 | 8.2 | 29.5 | 2.98 | 17.5 | 4.5 | 1.98 | 18.5 | 6.39 | 81.8 | 35.12 | 174.6 | 38.83 | 390.5 | 84.9 | 8310 | 46.13 | 154.9 |
| *I16-34Z-30* | 1868 | 1.45 | 0.126 | 10.35 | 0.21 | 3.11 | 6.09 | 0.87 | 34.1 | 12.94 | 162 | 62.4 | 289.9 | 59.7 | 553 | 112.1 | 8450 | 118.2 | 199.5 |
| *I16-34Z-4* | 1183 | 0.97 | 0.124 | 7.25 | 0.092 | 1.32 | 2.36 | 0.467 | 19.9 | 7.46 | 94.2 | 40.5 | 188.9 | 41.6 | 400 | 84 | 9320 | 66.9 | 211.9 |
| *I16-34Z-17* | 1098 | 1.85 | 0.101 | 9.84 | 0.063 | 1.24 | 2.51 | 0.4 | 16.2 | 6.76 | 89.6 | 37 | 176.3 | 38.54 | 367.5 | 76.4 | 7990 | 99.9 | 190.5 |
| *I16-34Z-11* | 973 | 1.43 | 0.79 | 9.73 | 0.375 | 3.55 | 2.23 | 0.57 | 14.3 | 5.52 | 73.7 | 31 | 150.5 | 35 | 354 | 75.3 | 10110 | 67.7 | 159 |
| *I16-34Z-28* | 1369 | 2.73 | 0.01 | 9.2 | 0.041 | 0.93 | 2.62 | 0.46 | 21.7 | 7.91 | 109.9 | 44.77 | 222.6 | 48.6 | 470.4 | 101.7 | 7760 | 77.3 | 165.5 |
| *I16-34Z-9* | 1182 | 2.82 | 1.43 | 12.9 | 0.82 | 7 | 6.26 | 1.32 | 26.2 | 8.03 | 99.9 | 40.2 | 182 | 38.5 | 364 | 76 | 7980 | 84.2 | 172.5 |
| *I16-34Z-21* | 1677 | 7.76 | 1.11 | 16.04 | 0.587 | 6.02 | 5.29 | 1.34 | 27.9 | 10.88 | 140.6 | 56.7 | 262.5 | 54.61 | 510 | 105.3 | 8440 | 121.2 | 205.7 |
| *I16-34Z-23* | 1429 | 2.37 | 0.523 | 11.95 | 0.298 | 2.87 | 3.84 | 0.58 | 22.1 | 8.22 | 110.9 | 46.9 | 226.6 | 51 | 501 | 106.8 | 9790 | 142.3 | 265.5 |
| *I16-34Z-20* | 929 | 1.49 | 0.067 | 6.56 | 0.11 | 1.03 | 1.6 | 0.33 | 12.9 | 5.14 | 70.7 | 30.4 | 149.2 | 34 | 331 | 72.1 | 8310 | 42.6 | 155 |
| *I16-34Z-18* | 687 | 2.05 | 4.89 | 22.7 | 1.74 | 9.5 | 4 | 0.6 | 13.5 | 3.57 | 47.1 | 20.11 | 101.4 | 27.6 | 306.1 | 73.2 | 11470 | 140.3 | 301.4 |
| *I16-34Z-22* | 631 | 3.32 | 6.44 | 32.9 | 3.2 | 21 | 9.8 | 2.66 | 23.6 | 4.75 | 47.1 | 17.55 | 91.9 | 21.9 | 260 | 69.9 | 19640 | 59.1 | 208.1 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-46Z-22* | 1376 | 43.6 | 1.41 | 6.14 | 0.435 | 3.64 | 2.95 | 0.85 | 14.3 | 5.43 | 85.1 | 41.7 | 250 | 72.9 | 892 | 189.1 | 9820 | 82.6 | 595 |
| *I16-46Z-20* | 2904 | 39.2 | 0.057 | 8.03 | 0.042 | 0.9 | 4.97 | 0.264 | 50.3 | 23.36 | 303.8 | 101.5 | 380.9 | 65.1 | 480.8 | 79.5 | 12530 | 67.2 | 825.1 |
| *I16-46Z-24* | 4600 | 651 | 58 | 252 | 18.6 | 82.6 | 33.3 | 6.8 | 106 | 35.7 | 413 | 141.3 | 586 | 112 | 878 | 117.4 | 11240 | 686 | 665 |
| *I16-46Z-16* | 1234 | 38.4 | 3.7 | 12.3 | 0.99 | 4.3 | 2.75 | 0.49 | 12.6 | 5.66 | 85.7 | 40 | 222.5 | 55.8 | 550 | 101.1 | 9790 | 132 | 641 |
| *I16-46Z-10* | 759 | 10.02 | 0.792 | 5.04 | 0.258 | 2.03 | 2.13 | 0.214 | 9.6 | 3.8 | 59.6 | 26.2 | 128.6 | 29 | 276.7 | 54.5 | 9100 | 23.1 | 316.6 |
| *I16-46Z-7* | 2091 | 29.1 | 1540 | 2900 | 281 | 1090 | 203 | 8.9 | 222 | 35 | 256 | 70.9 | 292 | 57.8 | 540 | 101.9 | 10070 | 273 | 593 |
| *I16-46Z-12* | 844 | 23.6 | 0.54 | 2.89 | 0.106 | 0.94 | 1.17 | 0.276 | 8.85 | 4.41 | 65.2 | 28.2 | 151.3 | 40.1 | 445.2 | 91.1 | 12070 | 28.8 | 547 |
| *I16-46Z-13* | 1259 | 6.36 | 203 | 257 | 21.6 | 76.4 | 10 | 1.26 | 20 | 7.34 | 99.8 | 42.3 | 199.9 | 39.3 | 342 | 61.7 | 11340 | 35.06 | 332.4 |
| *I16-46Z-19* | 1866 | 78.3 | 68 | 150 | 19 | 88 | 19 | 1.62 | 32 | 7.9 | 111.6 | 56.1 | 357 | 95.1 | 933 | 169.9 | 8900 | 147 | 669 |
| *I16-46Z-15* | 1127 | 21.3 | 0.42 | 4.77 | 0.171 | 2.32 | 1.19 | 0.46 | 9.4 | 4.81 | 76.1 | 35.1 | 193.3 | 53.3 | 591 | 113.7 | 10550 | 96.8 | 654.8 |
| *I16-46Z-17* | 1093 | 9.96 | 0 | 5.64 | 0 | 0.26 | 1.58 | 0.032 | 20.2 | 8.77 | 107.8 | 37.8 | 149.8 | 26.45 | 207.5 | 36.4 | 10490 | 43.2 | 302.5 |
| *I16-46Z-6* | 1252 | 29.9 | 1020 | 2030 | 230 | 920 | 191 | 4.6 | 160 | 21.7 | 135 | 41.2 | 200.9 | 50.9 | 518 | 97.4 | 8870 | 315 | 624.9 |
| *I16-46Z-30* | 1290 | 19 | 5.86 | 15.6 | 2.14 | 15 | 9.1 | 2.78 | 38 | 10.76 | 116.9 | 42.7 | 182.4 | 36.9 | 350 | 60.3 | 13410 | 86.2 | 541 |
| *I16-46Z-14* | 2301 | 11.02 | 0.103 | 6.43 | 0 | 0.39 | 1.54 | 0.109 | 24.8 | 14.44 | 210.2 | 79.3 | 333.2 | 61.1 | 488.5 | 81.8 | 11430 | 47.47 | 559.4 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-46Z-4* | 1807 | 34.3 | 18.2 | 56.4 | 7.49 | 54.9 | 27.4 | 8.88 | 82.1 | 16.26 | 150.1 | 51.6 | 264.1 | 64.6 | 605 | 104 | 7940 | 299.2 | 801 |
| *I16-46Z-1* | 2039 | 75.5 | 6.9 | 21.8 | 2.11 | 13.7 | 10.4 | 2.29 | 38.7 | 13.1 | 159.8 | 70.4 | 366 | 85 | 738 | 117.8 | 6590 | 118.6 | 867 |
| *I16-46Z-25* | 1395 | 21.9 | 7.62 | 18.2 | 2.12 | 13.5 | 9.3 | 1.97 | 30 | 8.02 | 107 | 43.6 | 221 | 50.2 | 506 | 95.6 | 9940 | 154 | 462 |
| *I16-46Z-23* | 2620 | 25.6 | 65.4 | 136 | 19.8 | 132 | 97 | 26.6 | 274 | 51.1 | 354 | 85.9 | 303 | 60.4 | 595 | 118 | 9120 | 198.1 | 682 |
| *I16-46Z-11* | 1572 | 68.7 | 13.8 | 30.5 | 3.28 | 24.8 | 14.2 | 3.84 | 39.5 | 9.92 | 113.3 | 49.4 | 265.5 | 64.7 | 616 | 112.5 | 8770 | 227.1 | 751.5 |
| *I16-46Z-27* | 1612 | 46.7 | 0.202 | 5.61 | 0.106 | 1.35 | 1.79 | 0.191 | 13.3 | 5.52 | 87.5 | 43.5 | 267.1 | 69 | 622 | 98.6 | 8970 | 98.2 | 670 |
| *I16-46Z-9* | 1492 | 47.5 | 9.7 | 33.9 | 3.07 | 16.9 | 5.4 | 0.77 | 19.1 | 8.24 | 115.9 | 48.4 | 236.2 | 51.9 | 486 | 87.1 | 10570 | 228.8 | 516.5 |
| *I16-46Z-18* | 1390 | 131 | 111 | 223 | 24.2 | 100.2 | 36.9 | 6.87 | 70.2 | 14.07 | 118.2 | 43.9 | 212 | 51.8 | 512 | 84.9 | 8000 | 221.8 | 603 |
| *I16-46Z-8* | 2009 | 59.8 | 2.83 | 10.5 | 0.83 | 4.89 | 5.38 | 1.68 | 24.9 | 9.01 | 134.8 | 62.5 | 369 | 101.2 | 1059 | 198.4 | 9830 | 120.2 | 778 |
| *I16-46Z-2* | 1343 | 46 | 2.5 | 9.9 | 0.73 | 7 | 5.7 | 1.44 | 25.9 | 9 | 108.6 | 44.5 | 235.4 | 58 | 579 | 113.1 | 10520 | 96 | 472 |
| *I16-46Z-28* | 1635 | 38 | 19.9 | 58.1 | 8.2 | 58.4 | 23.1 | 4.84 | 52.8 | 11.07 | 128 | 52.6 | 276 | 67.8 | 687 | 135.4 | 11770 | 97.8 | 732 |
| *I16-46Z-26* | 890 | 12.4 | 12.4 | 30.3 | 3.7 | 30.8 | 13.2 | 3.7 | 43 | 9.2 | 79 | 27.5 | 122 | 26.5 | 257 | 48.1 | 10640 | 86 | 317 |
| *I16-46Z-5* | 7630 | 517 | 63.8 | 217 | 19.3 | 125 | 101 | 32 | 311 | 78.9 | 727 | 208 | 736 | 118.5 | 775 | 90.9 | 8810 | 1279 | 728 |
| *I16-46Z-3* | 1770 | 17.9 | 28.7 | 67 | 9.5 | 59 | 37.3 | 9.3 | 112 | 23.2 | 201 | 59.3 | 235 | 50.1 | 472 | 88.1 | 11290 | 190 | 560 |
| *I16-46Z-29* | 802 | 6.88 | 59 | 65 | 5.7 | 18.2 | 4.9 | 1.78 | 15.3 | 4.42 | 58.6 | 25.5 | 132.1 | 33 | 348 | 69.3 | 10890 | 52.7 | 357 |
| *I16-46Z-21* | 2150 | 46.9 | 12.1 | 34.5 | 4.12 | 29.2 | 18.4 | 4.78 | 55.5 | 14.2 | 163 | 64.6 | 342 | 88.6 | 988 | 197.2 | 13070 | 217 | 734 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-52Z-33* | 1570 | 18.5 | 3.5 | 42.3 | 3.3 | 28.2 | 16.6 | 3.57 | 47.6 | 13.7 | 149 | 51.1 | 228 | 46.6 | 428 | 79.6 | 8820 | 325 | 468 |
| *I16-52Z-26* | 1684 | 8.93 | 18.3 | 131 | 15.7 | 115 | 58.3 | 14.5 | 110 | 23.3 | 193 | 57.8 | 225.4 | 42.7 | 375.1 | 69.1 | 9730 | 344 | 398 |
| *I16-52Z-23* | 1318 | 3.08 | 0.039 | 15.49 | 0.113 | 2.21 | 3.38 | 1.93 | 24.2 | 8.6 | 110 | 44.4 | 197.2 | 43 | 397 | 84.1 | 7030 | 70 | 144.9 |
| *I16-52Z-10* | 1023 | 1.43 | 0.289 | 13.02 | 0.596 | 6 | 7.1 | 2.81 | 28.8 | 8.28 | 92.1 | 34.14 | 150.8 | 33.07 | 308.8 | 65.2 | 6770 | 52.5 | 102.9 |
| *I16-52Z-5* | 1848 | 11.47 | 2.09 | 26.7 | 3.15 | 32.7 | 27 | 4.7 | 69.3 | 18.1 | 188.8 | 65.9 | 292 | 60.5 | 546 | 108.7 | 7720 | 85.3 | 211.4 |
| *I16-52Z-24* | 1289 | 2.98 | 0.53 | 19.02 | 0.78 | 9 | 8 | 3.24 | 31.5 | 9.47 | 109.1 | 42.9 | 195.1 | 40.8 | 387 | 79.2 | 6900 | 65.3 | 143.8 |
| *I16-52Z-9* | 560 | 0.74 | 0 | 11.4 | 0.06 | 1.79 | 3.76 | 1.87 | 22.3 | 6.2 | 56.9 | 17.9 | 68 | 13.46 | 126.2 | 25.7 | 8490 | 78.9 | 247 |
| *I16-52Z-27* | 945 | 1.68 | 0 | 10.7 | 0.103 | 1.38 | 2.65 | 1.56 | 18.4 | 6.14 | 77.8 | 31.33 | 146 | 31.33 | 306.6 | 64.5 | 6680 | 45 | 101 |
| *I16-52Z-7* | 1367 | 7.58 | 0.213 | 20.38 | 0.39 | 3.63 | 6.07 | 1.67 | 29.6 | 9.85 | 120.9 | 42.9 | 201.6 | 43.1 | 396.9 | 75.9 | 7580 | 277.5 | 445.6 |
| *I16-52Z-14* | 944 | 1.88 | 0 | 10.89 | 0.036 | 1.25 | 2.94 | 1.5 | 17.1 | 5.94 | 80.9 | 31.11 | 147.8 | 31.85 | 311.2 | 66.87 | 6870 | 43.81 | 109.3 |
| *I16-52Z-19* | 923 | 1.43 | 0.565 | 12.51 | 0.587 | 5.33 | 6.19 | 2.1 | 24.8 | 7.44 | 82.9 | 30.8 | 137.6 | 29.8 | 288 | 60.3 | 6800 | 42.8 | 92.6 |
| *I16-52Z-16* | 608 | 1.05 | 0 | 7.27 | 0.05 | 0.91 | 1.97 | 1.16 | 12.83 | 3.9 | 49.6 | 20.46 | 96 | 21.15 | 209.4 | 45.5 | 6740 | 24.29 | 63.4 |
| *I16-52Z-15* | 629 | 1.78 | 0.295 | 7.68 | 0.094 | 1.29 | 2.9 | 0.96 | 12 | 4.07 | 51.8 | 20.2 | 98.7 | 21.7 | 214.5 | 47.9 | 6760 | 31.9 | 74.5 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-52Z-11* | 1224 | 2.71 | 0.058 | 14.68 | 0.138 | 2.38 | 3.56 | 2.12 | 25.5 | 8.37 | 105.1 | 40.28 | 186.3 | 39.73 | 377.1 | 77.5 | 6660 | 68.6 | 135.5 |
| *I16-52Z-17* | 1085 | 2.34 | 0 | 8.53 | 0.086 | 1.14 | 2.63 | 1.76 | 19.2 | 7.25 | 92.4 | 37.2 | 173.6 | 37.4 | 384 | 80.5 | 8140 | 37.5 | 131.4 |
| *I16-52Z-3* | 949 | 2.02 | 2.6 | 18.5 | 0.94 | 5.4 | 3.25 | 1.65 | 16.95 | 5.84 | 77.1 | 30.5 | 148.9 | 31.27 | 314 | 65.5 | 6700 | 43 | 103.3 |
| *I16-52Z-4* | 1273 | 14.2 | 10.9 | 90.4 | 12 | 91.8 | 60.8 | 11.3 | 94.9 | 18.8 | 145.7 | 42.1 | 165.7 | 33.9 | 314.1 | 63.1 | 6920 | 295 | 296 |
| *I16-52Z-20* | 1205 | 2.81 | 0.16 | 17.6 | 0.275 | 3.33 | 4.97 | 2.43 | 26.7 | 9.15 | 105.6 | 39.7 | 182.9 | 37.6 | 362.7 | 74.1 | 6970 | 84.1 | 144.8 |
| *I16-52Z-34* | 967 | 1.77 | 0 | 11.7 | 0.09 | 1.43 | 3 | 1.54 | 18.07 | 6.37 | 79 | 31.19 | 149 | 32.12 | 315.2 | 65 | 6960 | 45.93 | 102.4 |
| *I16-52Z-18* | 470 | 0.63 | 0 | 4.71 | 0.028 | 0.61 | 1.85 | 0.98 | 9.7 | 3.29 | 39.1 | 15.76 | 72.8 | 15.76 | 163.8 | 36.69 | 6910 | 15.74 | 41.5 |
| *I16-52Z-1* | 777 | 1 | 0 | 8.43 | 0.104 | 1.48 | 2.93 | 1.4 | 15.23 | 5.11 | 63.9 | 25.57 | 120.5 | 26 | 257.3 | 55.8 | 6960 | 32.64 | 77.7 |
| *I16-52Z-12* | 1467 | 2.92 | 2.16 | 24.6 | 0.77 | 5.7 | 5.27 | 2.68 | 32.4 | 10.96 | 132.7 | 49.7 | 222 | 45.9 | 427 | 86.2 | 6770 | 107.3 | 168 |
| *I16-52Z-22* | 1385 | 2.98 | 0.071 | 16.73 | 0.185 | 2.55 | 4.75 | 2.36 | 26.8 | 9.12 | 117.1 | 46.28 | 211.9 | 44.72 | 422.5 | 87.9 | 6830 | 77.86 | 157.5 |
| *I16-52Z-8* | 1064 | 2.55 | 0.15 | 13.15 | 0.294 | 3.57 | 5.06 | 2.26 | 25.3 | 7.76 | 93 | 36.15 | 159.8 | 34.31 | 321.5 | 66.6 | 7080 | 62.3 | 123.8 |
| *I16-52Z-13* | 263 | 1.64 | 0.187 | 4.01 | 0.25 | 3.17 | 4.62 | 0.73 | 13.1 | 3.28 | 29.8 | 8.4 | 32.6 | 6.54 | 62 | 10.9 | 7580 | 30.6 | 68.2 |
| *I16-52Z-21* | 1140 | 2.36 | 0.067 | 8.38 | 0.126 | 0.79 | 1.78 | 0.69 | 12.75 | 6.23 | 87.6 | 38.3 | 194.7 | 48 | 511 | 110.6 | 12110 | 44.8 | 219.7 |
| *I16-52Z-6* | 997 | 2.07 | 0.087 | 12.01 | 0.167 | 2.68 | 3.52 | 1.8 | 20.8 | 6.52 | 81.3 | 32.16 | 152.4 | 33.02 | 320.5 | 68.7 | 6810 | 47.39 | 110.5 |
| *I16-52Z-2* | 809 | 4.19 | 0.041 | 41.1 | 0.454 | 6.42 | 7.89 | 3.6 | 26.5 | 7.85 | 85.7 | 27.42 | 104.7 | 19.68 | 166.4 | 30.5 | 5290 | 86.7 | 62.3 |
| *I16-52Z-25* | 966 | 2.09 | 0 | 11.17 | 0.047 | 1.47 | 3.31 | 1.5 | 17.5 | 6.07 | 77.3 | 30.67 | 148.3 | 32.2 | 312.3 | 66.9 | 6930 | 41.8 | 107.7 |
| *I16-52Z-32* | 25.4 | 0.43 | 0.232 | 1.99 | 0.4 | 2.74 | 4.03 | 0.61 | 9.6 | 1.31 | 5.27 | 0.74 | 1.75 | 0.277 | 1.68 | 0.39 | 11600 | 19.7 | 442.8 |
| *I16-52Z-31* | 1215 | 3.42 | 10.2 | 50 | 4.3 | 27.2 | 18.2 | 5.41 | 52 | 13.35 | 127.4 | 42.4 | 169 | 33.2 | 301 | 59.4 | 6890 | 203 | 176 |
| *I16-52Z-29* | 784 | 1.86 | 0.723 | 13.99 | 1.38 | 15.2 | 13.3 | 3.56 | 27.7 | 6.57 | 67.5 | 25.5 | 117.1 | 25.1 | 247.6 | 53.6 | 6870 | 33.5 | 78.9 |
| *I16-52Z-28* | 1141 | 1.72 | 1.01 | 20.12 | 2.24 | 19.7 | 18.4 | 4.95 | 41.7 | 9.56 | 104.3 | 38.7 | 168.3 | 36.4 | 340 | 71.3 | 6980 | 57.9 | 112.9 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-54Z-6* | 2158 | 4.07 | 0.195 | 68.9 | 0.71 | 8.35 | 17.8 | 11.37 | 88.3 | 25.2 | 235 | 69.2 | 258 | 46.1 | 389 | 74.6 | 6623 | 389 | 576 |
| *I16-54Z-17* | 998 | 22 | 0.44 | 23.69 | 0.151 | 2.14 | 1.53 | 0.74 | 11.7 | 4.93 | 62 | 25.24 | 139 | 35.6 | 409 | 90.4 | 10160 | 91.2 | 1957 |
| *I16-54Z-14* | 1573 | 2.34 | 0 | 28.74 | 0.041 | 1.55 | 6 | 4.09 | 40.1 | 13.22 | 137.5 | 47.5 | 200.7 | 38.88 | 346.1 | 68.1 | 7270 | 227.8 | 494.4 |
| *I16-54Z-2* | 682 | 0.77 | 0 | 12.21 | 0.029 | 1.01 | 3.54 | 2.08 | 19.6 | 6.19 | 62.6 | 21 | 86.9 | 17 | 153 | 29.3 | 7320 | 78.1 | 200.6 |
| *I16-54Z-16* | 1127 | 31.6 | 0.079 | 6.09 | 0.028 | 0 | 0.12 | 0.296 | 6.4 | 3.17 | 61 | 29.6 | 183.5 | 53.4 | 642 | 146 | 9210 | 28.9 | 2880 |
| *I16-54Z-20* | 1330 | 9.9 | 11.56 | 47.6 | 3.03 | 13.8 | 4.22 | 2.1 | 10.8 | 4.43 | 66.9 | 35.64 | 227.9 | 65.4 | 756 | 166.8 | 11100 | 57 | 2177 |
| *I16-54Z-22* | 2044 | 23.1 | 0.014 | 23.3 | 0.017 | 0.32 | 2.08 | 0.58 | 17.1 | 8.83 | 137.3 | 59.8 | 316 | 76.2 | 784 | 151.5 | 9440 | 194 | 2566 |
| *I16-54Z-11* | 947 | 1.9 | 0.367 | 23.4 | 0.336 | 5.22 | 6.09 | 3.43 | 34 | 9.35 | 92.9 | 28.8 | 113 | 21 | 182.8 | 35.4 | 7100 | 124.3 | 221 |
| *I16-54Z-23* | 1375 | 20.1 | 0.052 | 30.3 | 0 | 0.43 | 2.49 | 0.96 | 16.3 | 6.79 | 84.5 | 34.4 | 181.3 | 47.4 | 540.5 | 119.8 | 9480 | 40.96 | 2391 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-54Z-9* | 1419 | 44.1 | 0.049 | 10.15 | 0.033 | 0.35 | 0.36 | 0.81 | 8.83 | 4.49 | 75.9 | 39.6 | 234 | 67 | 755 | 161.8 | 9620 | 57.8 | 3640 |
| *I16-54Z-4* | 694 | 0.85 | 0 | 10.6 | 0.063 | 0.66 | 3.35 | 1.84 | 18.2 | 5.8 | 64.8 | 22.1 | 90.3 | 17.3 | 154.4 | 30.4 | 8280 | 67.8 | 222 |
| *I16-54Z-18* | 819 | 19.6 | 0.31 | 13.01 | 0.54 | 2.32 | 2.11 | 0.49 | 7.83 | 3.6 | 51.6 | 21.9 | 127.8 | 33.72 | 368.7 | 74.3 | 9200 | 63.4 | 1041 |
| *I16-54Z-7* | 842 | 6.74 | 0.054 | 3.57 | 0.045 | 0.4 | 0.94 | 0.186 | 8.96 | 4.16 | 62 | 28.41 | 146.8 | 37.3 | 408.4 | 89.5 | 10260 | 31.1 | 328.1 |
| *I16-54Z-12* | 1432 | 9.43 | 3.6 | 39.9 | 1.19 | 7.2 | 5.2 | 2.72 | 22.9 | 8.49 | 109.1 | 42.15 | 202 | 43.3 | 422.8 | 81 | 8720 | 206.8 | 1199 |
| *I16-54Z-8* | 800 | 9.49 | 4.9 | 39.9 | 2.16 | 12.2 | 5.7 | 7.1 | 15.8 | 5.01 | 58.2 | 23.2 | 112.7 | 25.8 | 254.1 | 52.1 | 12570 | 76 | 830 |
| *I16-54Z-15* | 1147 | 1.81 | 0.108 | 43.4 | 0.147 | 1.93 | 6.5 | 4.19 | 33.6 | 10.16 | 105.9 | 33.4 | 136.2 | 26 | 218 | 40.1 | 5870 | 123 | 229 |
| *I16-54Z-24* | 393 | 4.91 | 5.5 | 26.7 | 2.61 | 12.3 | 4.24 | 2.39 | 9.99 | 2.13 | 25.9 | 10.47 | 53.9 | 13.71 | 195 | 57.1 | 8740 | 8.83 | 463 |
| *I16-54Z-19* | 1931 | 35.9 | 20.7 | 102 | 9.7 | 62 | 18.7 | 23.8 | 39.8 | 9.74 | 119.6 | 51.9 | 293.2 | 74.2 | 801 | 161.2 | 9820 | 123.1 | 3080 |
| *I16-54Z-21* | 966 | 27.6 | 18 | 82.4 | 7.71 | 45.7 | 12 | 10.4 | 20.7 | 4.1 | 49.1 | 23.51 | 145.7 | 44.12 | 559 | 145.3 | 9400 | 16.8 | 2375 |
| *I16-54Z-10* | 1332 | 51.7 | 1.36 | 5.69 | 0.234 | 1.95 | 0.55 | 0.39 | 4.4 | 2.83 | 52.9 | 31.5 | 232.8 | 77.1 | 1009 | 267 | 1.58E+04 | 22.18 | 4379 |
| *I16-54Z-1* | 1267 | 10.69 | 17.5 | 117.4 | 15.6 | 124.1 | 56.4 | 20.2 | 90 | 15.4 | 116.1 | 31 | 120.4 | 25.6 | 267 | 63.9 | 8460 | 29.2 | 961 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-62Z-1* | 783 | 1.08 | 159 | 350 | 31 | 125 | 20.1 | 3.2 | 26.2 | 6.77 | 70.2 | 26.7 | 119.3 | 25 | 241 | 49.7 | 8290 | 43.6 | 63.9 |
| *I16-62Z-25* | 780 | 0.72 | 2.7 | 11.7 | 0.83 | 5.7 | 4.82 | 1.64 | 19.8 | 6.28 | 72 | 26.9 | 117.7 | 23.7 | 226 | 45.4 | 9450 | 36 | 233 |
| *I16-62Z-10* | 1666 | 2.14 | 0.28 | 10.41 | 0.345 | 4.25 | 6.51 | 3.92 | 37.9 | 12.8 | 151.7 | 57.1 | 259 | 53.7 | 509 | 104.4 | 8060 | 130 | 237.9 |
| *I16-62Z-22* | 786 | 1.1 | 0.7 | 12.1 | 0.42 | 3.6 | 3.66 | 1.41 | 19.5 | 6 | 70.9 | 26.9 | 118.3 | 25.1 | 225 | 45.4 | 8420 | 35.9 | 52.4 |
| *I16-62Z-32* | 2010 | 1.59 | 0.034 | 11.9 | 0.309 | 5.59 | 10.4 | 3.89 | 61 | 18.3 | 204 | 72.2 | 298 | 59.3 | 520 | 100.9 | 7730 | 106 | 181 |
| *I16-62Z-28* | 2088 | 1.33 | 0.323 | 11.8 | 0.481 | 5.7 | 11.1 | 3.67 | 57.1 | 18.84 | 208.6 | 74.5 | 309 | 60.8 | 533.3 | 101.9 | 9090 | 114.4 | 177 |
| *I16-62Z-4* | 3420 | 2.38 | 0.044 | 23.11 | 0.539 | 10.14 | 22.1 | 7.11 | 105.4 | 32.6 | 357.8 | 120.7 | 507 | 94.2 | 813 | 151.5 | 7200 | 213 | 165.5 |
| *I16-62Z-18* | 2179 | 1.56 | 0.043 | 11.58 | 0.288 | 5.43 | 10.33 | 3.59 | 60.3 | 19.17 | 219.8 | 78.3 | 330 | 62.8 | 557 | 104.8 | 8350 | 117.1 | 163.8 |
| *I16-62Z-12* | 854 | 1.29 | 0.065 | 7.89 | 0.084 | 1.37 | 2.68 | 0.99 | 16.85 | 5.73 | 72.4 | 28.43 | 132.8 | 28.6 | 268.8 | 54.5 | 7980 | 29.88 | 57.9 |
| *I16-62Z-5* | 1640 | 0.99 | 0 | 10.4 | 0.215 | 4.56 | 8.9 | 2.99 | 45.8 | 14.5 | 162 | 58.1 | 246 | 48.6 | 426 | 81.3 | 8490 | 82.7 | 96.5 |
| *I16-62Z-15* | 800 | 0.69 | 0 | 7.16 | 0.062 | 1.48 | 3.15 | 1.14 | 20.2 | 6.24 | 72.3 | 27.9 | 121.1 | 24.5 | 223 | 43.6 | 8570 | 33.7 | 60 |
| *I16-62Z-31* | 3206 | 2.47 | 6.1 | 46 | 4.5 | 33.4 | 27.9 | 8.47 | 113.8 | 31.7 | 343 | 115.5 | 478 | 89.8 | 756 | 145.6 | 6710 | 177.6 | 133.7 |
| *I16-62Z-26* | 2370 | 2.29 | 1.62 | 20.4 | 1.16 | 10.5 | 14.2 | 5.13 | 74 | 21.6 | 239 | 85.1 | 350 | 67.6 | 600 | 117.1 | 8510 | 171 | 456 |
| *I16-62Z-7* | 599 | 0.76 | 0.277 | 4.76 | 0.172 | 1.6 | 2.25 | 1.02 | 13.3 | 4.56 | 52.1 | 20.4 | 91 | 19.2 | 189 | 40.1 | 10400 | 24 | 321 |
| *I16-62Z-14* | 1750 | 1.24 | 0.145 | 10.61 | 0.31 | 4.6 | 8.97 | 2.82 | 46.3 | 15 | 170 | 61.7 | 257 | 50.9 | 458 | 88.6 | 8550 | 88.5 | 98.6 |
| *I16-62Z-20* | 1440 | 1.37 | 0.57 | 11.05 | 0.53 | 4.39 | 7.9 | 2.77 | 40.8 | 12.9 | 149 | 52.1 | 208 | 40.9 | 361 | 68.9 | 9950 | 108.8 | 134.1 |
| *I16-62Z-11* | 1306 | 1.2 | 0 | 8.45 | 0.179 | 3 | 7.08 | 2.52 | 36.4 | 11.44 | 128.3 | 46.4 | 197.8 | 40.4 | 349.3 | 70.8 | 7810 | 75.1 | 102.6 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-62Z-8* | 2508 | 1.33 | 0.058 | 12.13 | 0.445 | 6.34 | 12.44 | 4.82 | 69 | 22.48 | 251.7 | 89.5 | 374.2 | 70.1 | 613 | 114.1 | 7580 | 125.7 | 123.6 |
| *I16-62Z-3* | 1430 | 1.09 | 1.62 | 16.7 | 1.34 | 11.3 | 10.5 | 3.48 | 41.6 | 12.8 | 138 | 50 | 211 | 42.4 | 375 | 73.1 | 8430 | 74.3 | 111.7 |
| *I16-62Z-9* | 1644 | 1.22 | 0.81 | 12.5 | 0.64 | 6.9 | 7.63 | 2.71 | 42.7 | 13.39 | 159 | 57.2 | 246 | 48.6 | 437 | 84.8 | 9170 | 82 | 333 |
| *I16-62Z-17* | 1819 | 0.98 | 0 | 10.49 | 0.362 | 5.74 | 11.32 | 3.95 | 55 | 16.99 | 186.3 | 64.6 | 267.8 | 52.1 | 454.3 | 84.7 | 7470 | 72 | 70.1 |
| *I16-62Z-2* | 1990 | 1.28 | 0.077 | 10.87 | 0.357 | 6.97 | 11.9 | 4.06 | 60.6 | 18.4 | 196 | 70.5 | 299 | 56.5 | 498 | 95.3 | 7410 | 93.1 | 103.6 |
| *I16-62Z-29* | 700 | 0.74 | 0 | 6.32 | 0.102 | 1.71 | 3.5 | 1.41 | 16.1 | 5.5 | 64 | 23 | 101 | 21.2 | 202 | 41.5 | 10060 | 42.6 | 69.8 |
| *I16-62Z-23* | 1413 | 0.89 | 0 | 9.87 | 0.158 | 3.57 | 7.23 | 2.46 | 36.9 | 11.86 | 136.7 | 49.6 | 207.6 | 41.87 | 369.9 | 70.8 | 8650 | 67.2 | 86.3 |
| *I16-62Z-13* | 920 | 1.02 | 0.031 | 6.21 | 0.106 | 1.53 | 3.4 | 1.38 | 20.9 | 7.1 | 83 | 31.6 | 138 | 28.7 | 273 | 55.3 | 9070 | 45.7 | 200.3 |
| *I16-62Z-24* | 2059 | 1.33 | 0.053 | 10.23 | 0.319 | 5.55 | 10.63 | 4.1 | 56.4 | 18.67 | 207.7 | 73.2 | 309.4 | 60.2 | 524.6 | 100.9 | 8080 | 97.6 | 134.3 |
| *I16-62Z-30* | 2872 | 1.77 | 0.419 | 18.91 | 0.529 | 8.43 | 17.08 | 5.53 | 84.9 | 27.03 | 296.4 | 102.7 | 425.3 | 81.8 | 706 | 130.1 | 7210 | 158.4 | 137.7 |
| *I16-62Z-27* | 930 | 0.69 | 0 | 5.7 | 0.12 | 2.04 | 4.6 | 1.44 | 24.3 | 7.3 | 88 | 29.9 | 133 | 26.8 | 243 | 46.9 | 8740 | 35.9 | 186 |
| *I16-62Z-19* | 234.8 | 0.485 | 0 | 4.35 | 0.021 | 0.23 | 0.46 | 0.255 | 3.21 | 1.28 | 16.98 | 7.1 | 37.4 | 8.98 | 96.5 | 21.41 | 10740 | 18.45 | 44 |
| *I16-62Z-6* | 897 | 0.96 | 0.016 | 9.31 | 0.093 | 2.14 | 3.74 | 1.29 | 21.2 | 7.38 | 84.1 | 31.1 | 135 | 27.6 | 249 | 48.3 | 8243 | 40.8 | 56.4 |
| *I16-62Z-16* | 2060 | 1.61 | 0.135 | 15.67 | 0.363 | 5.78 | 11.59 | 3.62 | 59.2 | 18.19 | 199.5 | 71.9 | 302 | 59.8 | 517 | 98.7 | 8450 | 130.8 | 128.5 |
| *I16-62Z-21* | 3026 | 2.13 | 0.138 | 14.71 | 0.454 | 6.74 | 16.15 | 5.55 | 87.3 | 27.34 | 308.6 | 109.1 | 444.6 | 86.3 | 748 | 144.1 | 7630 | 157.9 | 144.8 |

Appendix 5.3 Apatite U–Pb age data. Reported ages are isochron corrected in IsoplotR.

| Apatite Grain | $^{207}Pb/^{235}U$ | 2σ | $^{206}Pb/^{238}U$ | 2σ | Error Correlation (ρ) | $^{207}Pb/^{235}U$ Age (Ma) | Age 2σ | $^{206}Pb/^{238}U$ Age (Ma) | Age 2σ | $^{207}Pb/^{206}Pb$ Age (Ma) | Age 2σ | Age conc. | Age 2σ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-17A-1* | 56.2 | 3.3 | 0.898 | 0.035 | 0.76067 | 2799 | 45 | 2799 | 27 | 2799 | 73 | 2799 | 26 |
| *I16-17A-2* | 54.1 | 3.2 | 0.9 | 0.037 | 0.67775 | 2925 | 44 | 2925 | 31 | 2925 | 72 | 2925 | 28 |
| *I16-17A-3* | 28.3 | 2 | 0.716 | 0.038 | 0.80892 | 3481 | 34 | 3481 | 71 | 3481 | 31 | 3481 | 29 |
| *I16-17A-4* | 26.3 | 1.6 | 0.665 | 0.022 | 0.72173 | 3008 | 33 | 3008 | 36 | 3008 | 45 | 3008 | 31 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-17A-5* | 50.4 | 3.6 | 0.868 | 0.035 | 0.75733 | 2927 | 51 | 2927 | 31 | 2927 | 78 | 2927 | 31 |
| *I16-17A-6* | 23.56 | 1.1 | 0.639 | 0.016 | 0.75985 | 2988 | 25 | 2988 | 28 | 2988 | 31 | 2988 | 24 |
| *I16-17A-7* | 45.1 | 3.7 | 0.855 | 0.039 | 0.70872 | 3390 | 46 | 3390 | 49 | 3390 | 62 | 3390 | 42 |
| *I16-17A-8* | 44.2 | 2.6 | 0.891 | 0.035 | 0.5672 | 4107 | 26 | 4107 | 60 | 4107 | 29 | 4107 | 24 |
| *I16-17A-9* | 32.9 | 1.8 | 0.736 | 0.019 | 0.63896 | 3169 | 31 | 3169 | 28 | 3169 | 45 | 3169 | 26 |
| *I16-17A-10* | 33.2 | 2.8 | 0.748 | 0.047 | 0.58893 | 3600 | 41 | 3600 | 87 | 3600 | 53 | 3600 | 41 |
| *I16-17A-11* | 30.78 | 1.4 | 0.73 | 0.019 | 0.52777 | 3533 | 22 | 3533 | 35 | 3533 | 29 | 3533 | 22 |
| *I16-17A-12* | 28.5 | 1.4 | 0.703 | 0.019 | 0.77092 | 3333 | 25 | 3333 | 34 | 3333 | 28 | 3333 | 25 |
| *I16-17A-13* | 53.9 | 4.5 | 0.95 | 0.047 | 0.84072 | 4305 | 37 | 4305 | 78 | 4305 | 29 | 4305 | 29 |
| *I16-17A-14* | 36.6 | 1.8 | 0.772 | 0.026 | 0.78603 | 3215 | 26 | 3215 | 36 | 3215 | 33 | 3215 | 26 |
| *I16-17A-15* | 40 | 2.2 | 0.783 | 0.02 | 0.63277 | 2978 | 38 | 2978 | 23 | 2978 | 59 | 2978 | 22 |
| *I16-17A-16* | 28.89 | 1.4 | 0.69 | 0.02 | 0.54727 | 3032 | 28 | 3032 | 31 | 3032 | 44 | 3032 | 24 |
| *I16-17A-17* | 34.3 | 1.9 | 0.765 | 0.022 | 0.66002 | 3663 | 27 | 3663 | 40 | 3663 | 31 | 3663 | 27 |
| *I16-17A-18* | 30.09 | 1.3 | 0.707 | 0.019 | 0.71916 | 3112 | 23 | 3112 | 29 | 3112 | 31 | 3112 | 23 |
| *I16-17A-19* | 41.6 | 2.6 | 0.814 | 0.027 | 0.60092 | 3164 | 40 | 3164 | 32 | 3164 | 60 | 3164 | 29 |
| *I16-17A-20* | 38.1 | 2.4 | 0.794 | 0.026 | 0.6802 | 3768 | 30 | 3768 | 47 | 3768 | 34 | 3768 | 30 |
| *I16-17A-21* | 33.39 | 1.6 | 0.726 | 0.021 | 0.54355 | 2991 | 31 | 2991 | 28 | 2991 | 49 | 2991 | 24 |
| *I16-17A-23* | 42.2 | 2.5 | 0.802 | 0.025 | 0.7302 | 2975 | 40 | 2975 | 27 | 2975 | 59 | 2975 | 27 |
| *I16-17A-24* | 28.3 | 1.4 | 0.661 | 0.019 | 0.52868 | 2810 | 33 | 2810 | 27 | 2810 | 54 | 2810 | 24 |
| *I16-17A-25* | 30.75 | 1.5 | 0.73 | 0.019 | 0.67274 | 3533 | 24 | 3533 | 35 | 3533 | 28 | 3533 | 24 |
| *I16-17A-26* | 33.3 | 1.8 | 0.742 | 0.02 | 0.73796 | 3211 | 30 | 3211 | 30 | 3211 | 39 | 3211 | 27 |
| *I16-17A-27* | 31.38 | 1.4 | 0.724 | 0.02 | 0.56881 | 3198 | 25 | 3198 | 31 | 3198 | 36 | 3198 | 23 |
| *I16-17A-28* | 27.44 | 1.2 | 0.672 | 0.017 | 0.54716 | 2975 | 26 | 2975 | 26 | 2975 | 40 | 2975 | 22 |
| *I16-17A-29* | 37.4 | 2.1 | 0.777 | 0.021 | 0.66397 | 3176 | 34 | 3176 | 28 | 3176 | 48 | 3176 | 26 |
| *I16-17A-30* | 35.1 | 2.5 | 0.782 | 0.029 | 0.65421 | 3724 | 33 | 3724 | 52 | 3724 | 38 | 3724 | 33 |
| *I16-07A-10* | 26.4 | 1.2 | 0.66 | 0.018 | 0.60514 | 3030 | 25 | 3030 | 30 | 3030 | 37 | 3030 | 23 |
| *I16-07A-11* | 30 | 1.6 | 0.688 | 0.02 | 0.74334 | 3028 | 31 | 3028 | 31 | 3028 | 42 | 3028 | 28 |
| *I16-07A-13* | 36.2 | 1.9 | 0.718 | 0.021 | 0.60524 | 2886 | 38 | 2886 | 27 | 2886 | 60 | 2886 | 25 |
| *I16-07A-15* | 34.4 | 4.3 | 0.72 | 0.077 | 0.72373 | 3007 | 71 | 3007 | 106 | 3007 | 109 | 3007 | 69 |
| *I16-07A-16* | 24.93 | 1.1 | 0.647 | 0.016 | 0.47402 | 3016 | 25 | 3016 | 27 | 3016 | 39 | 3016 | 21 |
| *I16-07A-17* | 26 | 1.6 | 0.646 | 0.034 | 0.69053 | 2934 | 33 | 2934 | 55 | 2934 | 50 | 2934 | 33 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-07A-18* | 28.71 | 1.4 | 0.681 | 0.021 | 0.62471 | 3058 | 28 | 3058 | 33 | 3058 | 40 | 3058 | 26 |
| *I16-07A-19* | 28.02 | 1.3 | 0.665 | 0.021 | 0.65344 | 2962 | 27 | 2962 | 33 | 2962 | 40 | 2962 | 25 |
| *I16-07A-2* | 26.16 | 1.3 | 0.664 | 0.019 | 0.44431 | 3090 | 28 | 3090 | 33 | 3090 | 44 | 3090 | 24 |
| *I16-07A-20* | 30.49 | 1.6 | 0.69 | 0.021 | 0.40117 | 3012 | 34 | 3012 | 32 | 3012 | 56 | 3012 | 25 |
| *I16-07A-21* | 25.67 | 1.1 | 0.66 | 0.016 | 0.54605 | 3089 | 23 | 3089 | 28 | 3089 | 34 | 3089 | 21 |
| *I16-07A-22* | 30.8 | 1.7 | 0.704 | 0.019 | 0.69417 | 3124 | 32 | 3124 | 30 | 3124 | 43 | 3124 | 27 |
| *I16-07A-23* | 30.55 | 1.5 | 0.687 | 0.019 | 0.6779 | 2982 | 30 | 2982 | 28 | 2982 | 43 | 2982 | 25 |
| *I16-07A-24* | 30.8 | 1.6 | 0.686 | 0.02 | 0.59247 | 2957 | 33 | 2957 | 29 | 2957 | 51 | 2957 | 26 |
| *I16-07A-25* | 27.4 | 1.5 | 0.676 | 0.018 | 0.68279 | 3113 | 30 | 3113 | 30 | 3113 | 41 | 3113 | 27 |
| *I16-07A-26* | 31.4 | 1.6 | 0.702 | 0.021 | 0.53542 | 3056 | 31 | 3056 | 31 | 3056 | 49 | 3056 | 26 |
| *I16-07A-28* | 21.83 | 1.2 | 0.604 | 0.02 | 0.48674 | 2853 | 31 | 2853 | 35 | 2853 | 51 | 2853 | 27 |
| *I16-07A-29* | 24.56 | 1.6 | 0.65 | 0.027 | 0.70112 | 3076 | 34 | 3076 | 48 | 3076 | 44 | 3076 | 34 |
| *I16-07A-3* | 28.11 | 1.4 | 0.687 | 0.019 | 0.59295 | 3176 | 27 | 3176 | 32 | 3176 | 38 | 3176 | 25 |
| *I16-07A-30* | 26.3 | 1.4 | 0.672 | 0.025 | 0.53502 | 3169 | 28 | 3169 | 44 | 3169 | 42 | 3169 | 27 |
| *I16-07A-31* | 47.2 | 2.5 | 0.82 | 0.033 | 0.80146 | 3006 | 33 | 3006 | 35 | 3006 | 48 | 3006 | 29 |
| *I16-07A-32* | 29.17 | 1.3 | 0.68 | 0.02 | 0.6532 | 3015 | 26 | 3015 | 31 | 3015 | 38 | 3015 | 24 |
| *I16-07A-33* | 34.6 | 1.9 | 0.714 | 0.024 | 0.59657 | 2946 | 37 | 2946 | 32 | 2946 | 58 | 2946 | 28 |
| *I16-07A-34* | 26.11 | 1.3 | 0.655 | 0.016 | 0.62379 | 3005 | 28 | 3005 | 27 | 3005 | 41 | 3005 | 24 |
| *I16-07A-4* | 25.5 | 1.2 | 0.651 | 0.016 | 0.53014 | 3012 | 27 | 3012 | 27 | 3012 | 41 | 3012 | 23 |
| *I16-07A-5* | 24.36 | 1.1 | 0.638 | 0.015 | 0.55002 | 2975 | 25 | 2975 | 26 | 2975 | 38 | 2975 | 22 |
| *I16-07A-6* | 25.12 | 1.2 | 0.652 | 0.018 | 0.73842 | 3051 | 25 | 3051 | 31 | 3051 | 32 | 3051 | 25 |
| *I16-07A-7* | 23.2 | 2.1 | 0.619 | 0.044 | 0.59641 | 2889 | 50 | 2889 | 76 | 2889 | 79 | 2889 | 48 |
| *I16-07A-8* | 26.47 | 1.2 | 0.657 | 0.017 | 0.68572 | 2998 | 25 | 2998 | 28 | 2998 | 35 | 2998 | 23 |
| *I16-07A-9* | 23.15 | 1.1 | 0.621 | 0.016 | 0.62412 | 2909 | 27 | 2909 | 28 | 2909 | 39 | 2909 | 24 |
| *I16-18A-1* | 16.85 | 0.91 | 0.5625 | 0.014 | 0.58474 | 2776 | 28 | 2776 | 27 | 2776 | 41 | 2776 | 24 |
| *I16-18A-10* | 17.62 | 1 | 0.5695 | 0.013 | 0.66046 | 2770 | 30 | 2770 | 24 | 2770 | 43 | 2770 | 23 |
| *I16-18A-11* | 27.37 | 1.3 | 0.654 | 0.017 | 0.49781 | 2674 | 33 | 2674 | 22 | 2674 | 57 | 2674 | 20 |
| *I16-18A-12* | 28.86 | 1.4 | 0.7 | 0.023 | 0.75011 | 2985 | 26 | 2985 | 33 | 2985 | 35 | 2985 | 25 |
| *I16-18A-13* | 16.18 | 0.68 | 0.5544 | 0.0097 | 0.36581 | 2760 | 22 | 2760 | 19 | 2760 | 35 | 2760 | 16 |
| *I16-18A-15* | 19.18 | 1.2 | 0.594 | 0.016 | 0.58806 | 2873 | 33 | 2873 | 30 | 2873 | 48 | 2873 | 27 |
| *I16-18A-16* | 20.5 | 1.3 | 0.6057 | 0.014 | 0.64933 | 2854 | 35 | 2854 | 25 | 2854 | 51 | 2854 | 24 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-18A-17* | 28.8 | 1.9 | 0.724 | 0.026 | 0.52737 | 3511 | 31 | 3511 | 49 | 3511 | 41 | 3511 | 31 |
| *I16-18A-18* | 22.02 | 1.1 | 0.611 | 0.013 | 0.57351 | 2752 | 30 | 2752 | 21 | 2752 | 47 | 2752 | 20 |
| *I16-18A-19* | 20.14 | 1.2 | 0.589 | 0.014 | 0.81184 | 2719 | 33 | 2719 | 23 | 2719 | 46 | 2719 | 23 |
| *I16-18A-2* | 24.1 | 1.2 | 0.646 | 0.017 | 0.58076 | 2906 | 28 | 2906 | 27 | 2906 | 42 | 2906 | 23 |
| *I16-18A-20* | 25.99 | 1.1 | 0.66 | 0.016 | 0.59771 | 2849 | 25 | 2849 | 23 | 2849 | 39 | 2849 | 20 |
| *I16-18A-21* | 25.6 | 1.1 | 0.666 | 0.015 | 0.66822 | 2971 | 24 | 2971 | 24 | 2971 | 33 | 2971 | 21 |
| *I16-18A-22* | 26.68 | 1.3 | 0.656 | 0.019 | 0.65255 | 2745 | 30 | 2745 | 26 | 2745 | 47 | 2745 | 24 |
| *I16-18A-23* | 20.58 | 1.1 | 0.622 | 0.018 | 0.88819 | 3111 | 26 | 3111 | 36 | 3111 | 25 | 3111 | 24 |
| *I16-18A-24* | 25.36 | 1.1 | 0.646 | 0.014 | 0.51658 | 2772 | 27 | 2772 | 20 | 2772 | 45 | 2772 | 19 |
| *I16-18A-25* | 32.8 | 2.6 | 0.71 | 0.032 | 0.73831 | 2698 | 53 | 2698 | 36 | 2698 | 82 | 2698 | 36 |
| *I16-18A-26* | 27.16 | 1.2 | 0.656 | 0.016 | 0.54636 | 2705 | 30 | 2705 | 21 | 2705 | 49 | 2705 | 20 |
| *I16-18A-27* | 22.87 | 1.3 | 0.615 | 0.019 | 0.72707 | 2713 | 33 | 2713 | 29 | 2713 | 48 | 2713 | 27 |
| *I16-18A-28* | 27.62 | 1.3 | 0.671 | 0.018 | 0.63705 | 2796 | 29 | 2796 | 25 | 2796 | 45 | 2796 | 22 |
| *I16-18A-29* | 27.56 | 1.2 | 0.668 | 0.017 | 0.45914 | 2774 | 29 | 2774 | 23 | 2774 | 49 | 2774 | 20 |
| *I16-18A-3* | 17.36 | 2.1 | 0.5653 | 0.022 | 0.32748 | 2753 | 66 | 2753 | 41 | 2753 | 109 | 2753 | 39 |
| *I16-18A-30* | 26.4 | 1.8 | 0.714 | 0.025 | 0.75296 | 3474 | 31 | 3474 | 47 | 3474 | 33 | 3474 | 31 |
| *I16-18A-31* | 19.04 | 0.77 | 0.5945 | 0.011 | 0.42386 | 2897 | 21 | 2897 | 21 | 2897 | 33 | 2897 | 17 |
| *I16-18A-32* | 18.32 | 0.94 | 0.597 | 0.013 | 0.89976 | 3063 | 24 | 3063 | 27 | 3063 | 25 | 3063 | 24 |
| *I16-18A-33* | 31.9 | 2.3 | 0.779 | 0.031 | 0.65632 | 3713 | 32 | 3713 | 56 | 3713 | 35 | 3713 | 32 |
| *I16-18A-34* | 29.3 | 1.6 | 0.67 | 0.017 | 0.53257 | 2654 | 40 | 2654 | 21 | 2654 | 68 | 2654 | 20 |
| *I16-18A-35* | 19.48 | 1.4 | 0.594 | 0.016 | 0.36994 | 2837 | 39 | 2837 | 29 | 2837 | 64 | 2837 | 26 |
| *I16-18A-36* | 16.11 | 0.63 | 0.5637 | 0.0093 | 0.14873 | 2879 | 19 | 2879 | 19 | 2879 | 33 | 2879 | 14 |
| *I16-18A-37* | 26.7 | 1.5 | 0.661 | 0.019 | 0.63548 | 2788 | 35 | 2788 | 27 | 2788 | 54 | 2788 | 25 |
| *I16-18A-38* | 30.1 | 1.7 | 0.693 | 0.024 | 0.56139 | 2774 | 38 | 2774 | 30 | 2774 | 62 | 2774 | 27 |
| *I16-18A-4* | 25.68 | 1.1 | 0.646 | 0.015 | 0.55349 | 2743 | 27 | 2743 | 21 | 2743 | 44 | 2743 | 19 |
| *I16-18A-5* | 17.57 | 1.1 | 0.56 | 0.016 | 0.56686 | 2682 | 34 | 2682 | 29 | 2682 | 53 | 2682 | 27 |
| *I16-18A-6* | 21.87 | 1.2 | 0.611 | 0.015 | 0.40597 | 2766 | 33 | 2766 | 24 | 2766 | 55 | 2766 | 22 |
| *I16-18A-7* | 20.7 | 0.96 | 0.6097 | 0.011 | 0.51508 | 2879 | 25 | 2879 | 19 | 2879 | 39 | 2879 | 18 |
| *I16-18A-8* | 25.82 | 1.1 | 0.652 | 0.016 | 0.60928 | 2785 | 26 | 2785 | 23 | 2785 | 41 | 2785 | 20 |
| *I16-18A-9* | 30.3 | 1.5 | 0.714 | 0.021 | 0.7676 | 2977 | 28 | 2977 | 29 | 2977 | 37 | 2977 | 25 |
| *I16-32A-1* | 809 | 110 | 6.82 | 0.92 | 0.96946 | 5689 | 17 | 5689 | 53 | 5689 | 14 | 5689 | 14 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-32A-2* | 1059 | 120 | 9.8 | 1.1 | 0.91341 | 5659 | 15 | 5659 | 30 | 5659 | 19 | 5659 | 15 |
| *I16-32A-3* | 685.8 | 27 | 11.81 | 0.23 | 0.97049 | 5331 | 5 | 5331 | 4 | 5331 | 6 | 5331 | 3 |
| *I16-32A-5* | 926 | 77 | 7.43 | 0.52 | 0.96833 | 5735 | 12 | 5735 | 26 | 5735 | 10 | 5735 | 10 |
| *I16-32A-6* | 94.7 | 49 | 1.136 | 0.41 | 0.92837 | 4656 | 240 | 4656 | 558 | 4656 | 149 | 4656 | 142 |
| *I16-32A-7* | 196 | 28 | 2.44 | 0.36 | 0.85956 | 5177 | 37 | 5177 | 133 | 5177 | 33 | 5177 | 28 |
| *CO17-58A-1* | 11.5 | 0.55 | 0.457 | 0.013 | 0.6159 | 2182 | 26 | 2182 | 23 | 2182 | 44 | 2182 | 21 |
| *CO17-58A-10* | 11.65 | 0.55 | 0.459 | 0.011 | 0.084041 | 2181 | 29 | 2181 | 19 | 2181 | 60 | 2181 | 15 |
| *CO17-58A-11* | 11.74 | 0.72 | 0.4519 | 0.013 | 0.29003 | 2112 | 38 | 2112 | 22 | 2112 | 75 | 2112 | 20 |
| *CO17-58A-12* | 16.8 | 0.75 | 0.5967 | 0.014 | 0.67348 | 3017 | 20 | 3017 | 28 | 3017 | 25 | 3017 | 20 |
| *CO17-58A-13* | 14.1 | 0.68 | 0.491 | 0.015 | 0.48685 | 2166 | 30 | 2166 | 23 | 2166 | 57 | 2166 | 20 |
| *CO17-58A-14* | 13.11 | 0.6 | 0.493 | 0.013 | 0.38109 | 2307 | 26 | 2307 | 22 | 2307 | 49 | 2307 | 18 |
| *CO17-58A-15* | 13.71 | 0.95 | 0.462 | 0.018 | 0.6362 | 1996 | 44 | 1996 | 26 | 1996 | 84 | 1996 | 26 |
| *CO17-58A-16* | 12.81 | 1 | 0.466 | 0.013 | 0.54054 | 2109 | 49 | 2109 | 21 | 2109 | 90 | 2109 | 21 |
| *CO17-58A-17* | 10.95 | 0.51 | 0.4676 | 0.011 | 0.46389 | 2368 | 23 | 2368 | 22 | 2368 | 39 | 2368 | 19 |
| *CO17-58A-18* | 14.4 | 0.68 | 0.4839 | 0.012 | 0.5376 | 2083 | 31 | 2083 | 17 | 2083 | 59 | 2083 | 17 |
| *CO17-58A-19* | 11.84 | 0.6 | 0.463 | 0.013 | 0.49473 | 2193 | 28 | 2193 | 23 | 2193 | 52 | 2193 | 20 |
| *CO17-58A-2* | 15.51 | 0.93 | 0.511 | 0.017 | 0.68012 | 2171 | 36 | 2171 | 24 | 2171 | 63 | 2171 | 23 |
| *CO17-58A-20* | 17.02 | 1.1 | 0.524 | 0.021 | 0.60897 | 2116 | 43 | 2116 | 27 | 2116 | 81 | 2116 | 25 |
| *CO17-58A-21* | 14.78 | 0.73 | 0.484 | 0.014 | 0.54789 | 2048 | 33 | 2048 | 20 | 2048 | 64 | 2048 | 19 |
| *CO17-58A-22* | 10.36 | 0.53 | 0.462 | 0.014 | 0.47269 | 2405 | 24 | 2405 | 30 | 2405 | 40 | 2405 | 22 |
| *CO17-58A-23* | 11.45 | 0.52 | 0.468 | 0.011 | 0.60515 | 2293 | 23 | 2293 | 21 | 2293 | 38 | 2293 | 19 |
| *CO17-58A-24* | 12.71 | 0.64 | 0.491 | 0.014 | 0.63328 | 2347 | 26 | 2347 | 25 | 2347 | 42 | 2347 | 22 |
| *CO17-58A-25* | 14.71 | 0.72 | 0.502 | 0.014 | 0.35998 | 2187 | 32 | 2187 | 21 | 2187 | 63 | 2187 | 18 |
| *CO17-58A-26* | 13.75 | 0.63 | 0.491 | 0.011 | 0.55191 | 2206 | 27 | 2206 | 17 | 2206 | 49 | 2206 | 17 |
| *CO17-58A-27* | 11.35 | 0.5 | 0.482 | 0.012 | 0.73569 | 2486 | 21 | 2486 | 25 | 2486 | 27 | 2486 | 21 |
| *CO17-58A-28* | 14.07 | 0.71 | 0.4821 | 0.012 | 0.42571 | 2102 | 34 | 2102 | 18 | 2102 | 65 | 2102 | 17 |
| *CO17-58A-29* | 11.49 | 0.61 | 0.458 | 0.012 | 0.55553 | 2192 | 29 | 2192 | 22 | 2192 | 51 | 2192 | 20 |
| *CO17-58A-3* | 13.66 | 0.67 | 0.478 | 0.012 | 0.43495 | 2113 | 32 | 2113 | 18 | 2113 | 61 | 2113 | 17 |
| *CO17-58A-30* | 10.99 | 0.54 | 0.46 | 0.013 | 0.39237 | 2277 | 26 | 2277 | 25 | 2277 | 48 | 2277 | 20 |
| *CO17-58A-4* | 10.19 | 0.53 | 0.4404 | 0.011 | 0.43706 | 2195 | 27 | 2195 | 21 | 2195 | 50 | 2195 | 19 |
| *CO17-58A-5* | 14.1 | 0.69 | 0.4786 | 0.012 | 0.50114 | 2074 | 32 | 2074 | 18 | 2074 | 62 | 2074 | 17 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-58A-6* | 11.66 | 0.57 | 0.4697 | 0.011 | 0.40243 | 2280 | 26 | 2280 | 20 | 2280 | 48 | 2280 | 18 |
| *CO17-58A-7* | 14.88 | 0.77 | 0.483 | 0.014 | 0.53534 | 2033 | 35 | 2033 | 19 | 2033 | 69 | 2033 | 19 |
| *CO17-58A-8* | 10.31 | 0.62 | 0.446 | 0.016 | 0.33027 | 2233 | 31 | 2233 | 31 | 2233 | 61 | 2233 | 24 |
| *CO17-58A-9* | 11.53 | 0.5 | 0.4614 | 0.01 | 0.43829 | 2217 | 24 | 2217 | 18 | 2217 | 44 | 2217 | 16 |
| *CO17-26A-1* | 90.9 | 7.5 | 0.847 | 0.062 | 0.79862 | 681 | 156 | 681 | 3 | 681 | 671 | 681 | 3 |
| *CO17-26A-10* | 16.8 | 1.3 | 0.2484 | 0.011 | 0.71113 | 703 | 111 | 703 | 7 | 703 | 461 | 703 | 7 |
| *CO17-26A-11* | 14.79 | 1 | 0.2238 | 0.011 | 0.31043 | 679 | 132 | 679 | 8 | 679 | 578 | 679 | 7 |
| *CO17-26A-12* | 13.55 | 0.78 | 0.2201 | 0.0065 | 0.66986 | 700 | 80 | 700 | 5 | 700 | 331 | 700 | 5 |
| *CO17-26A-13* | 8.53 | 0.54 | 0.1773 | 0.0055 | 0.43554 | 697 | 80 | 697 | 7 | 697 | 339 | 697 | 7 |
| *CO17-26A-14* | 9.46 | 0.42 | 0.1937 | 0.0047 | 0.36221 | 732 | 61 | 732 | 5 | 732 | 248 | 732 | 5 |
| *CO17-26A-15* | 12.98 | 0.69 | 0.2252 | 0.0059 | 0.53221 | 734 | 77 | 734 | 5 | 734 | 313 | 734 | 5 |
| *CO17-26A-16* | 9.03 | 0.43 | 0.1859 | 0.005 | 0.40361 | 715 | 63 | 715 | 6 | 715 | 262 | 715 | 6 |
| *CO17-26A-17* | 6.92 | 0.9 | 0.165 | 0.0087 | 0.33424 | 703 | 150 | 703 | 12 | 703 | 633 | 703 | 12 |
| *CO17-26A-18* | 7.96 | 0.35 | 0.1728 | 0.004 | 0.094324 | 698 | 63 | 698 | 5 | 698 | 271 | 698 | 5 |
| *CO17-26A-19* | 16.54 | 0.8 | 0.25 | 0.0085 | 0.60908 | 715 | 75 | 715 | 5 | 715 | 312 | 715 | 5 |
| *CO17-26A-2* | 11.03 | 0.51 | 0.1983 | 0.0049 | 0.45642 | 698 | 67 | 698 | 5 | 698 | 283 | 698 | 5 |
| *CO17-26A-20* | 22.16 | 1.1 | 0.2986 | 0.0093 | 0.44659 | 716 | 98 | 716 | 4 | 716 | 410 | 716 | 4 |
| *CO17-26A-21* | 17.46 | 0.88 | 0.2584 | 0.0081 | 0.40789 | 716 | 93 | 716 | 5 | 716 | 389 | 716 | 5 |
| *CO17-26A-22* | 14.35 | 0.7 | 0.2355 | 0.0077 | 0.31661 | 728 | 88 | 728 | 6 | 728 | 364 | 728 | 5 |
| *CO17-26A-23* | 13.09 | 0.69 | 0.222 | 0.007 | 0.48046 | 720 | 81 | 720 | 6 | 720 | 334 | 720 | 6 |
| *CO17-26A-24* | 14.55 | 0.76 | 0.2322 | 0.0076 | 0.48583 | 712 | 85 | 712 | 6 | 712 | 354 | 712 | 5 |
| *CO17-26A-25* | 15.21 | 0.9 | 0.242 | 0.0081 | 0.54107 | 725 | 93 | 725 | 6 | 725 | 379 | 725 | 6 |
| *CO17-26A-26* | 14.69 | 0.7 | 0.2406 | 0.0081 | 0.41405 | 735 | 81 | 735 | 6 | 735 | 335 | 735 | 6 |
| *CO17-26A-27* | 10.71 | 0.77 | 0.1915 | 0.0075 | 0.77945 | 682 | 80 | 682 | 7 | 682 | 335 | 682 | 7 |
| *CO17-26A-28* | 17.65 | 0.85 | 0.2667 | 0.0085 | 0.50739 | 735 | 82 | 735 | 5 | 735 | 336 | 735 | 5 |
| *CO17-26A-29* | 11.49 | 2.9 | 0.1964 | 0.023 | 0.68491 | 677 | 330 | 677 | 21 | 677 | 1404 | 677 | 20 |
| *CO17-26A-3* | 23.8 | 1.9 | 0.308 | 0.017 | 0.69248 | 705 | 130 | 705 | 7 | 705 | 546 | 705 | 7 |
| *CO17-26A-30* | 15.75 | 0.71 | 0.2489 | 0.0071 | 0.33923 | 732 | 82 | 732 | 5 | 732 | 339 | 732 | 5 |
| *CO17-26A-4* | 16.39 | 0.78 | 0.2467 | 0.0083 | 0.52692 | 708 | 80 | 708 | 5 | 708 | 336 | 708 | 5 |
| *CO17-26A-5* | 18.1 | 1.3 | 0.256 | 0.011 | 0.75173 | 694 | 101 | 694 | 6 | 694 | 425 | 694 | 6 |
| *CO17-26A-6* | 12.42 | 1 | 0.2089 | 0.008 | 0.47999 | 694 | 122 | 694 | 7 | 694 | 519 | 694 | 7 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-26A-7* | 20.6 | 1.6 | 0.276 | 0.013 | 0.7737 | 692 | 112 | 692 | 6 | 692 | 470 | 692 | 6 |
| *CO17-26A-8* | 11.32 | 0.57 | 0.2009 | 0.0059 | 0.54797 | 698 | 69 | 698 | 6 | 698 | 293 | 698 | 6 |
| *CO17-26A-9* | 10.45 | 0.62 | 0.2043 | 0.0067 | 0.66979 | 739 | 69 | 739 | 7 | 739 | 274 | 739 | 7 |
| *I16-62A-1* | 25.2 | 1.5 | 0.317 | 0.015 | 0.36372 | 642 | 136 | 642 | 5 | 642 | 620 | 642 | 4 |
| *I16-62A-10* | 13.25 | 0.87 | 0.1999 | 0.009 | 0.36416 | 601 | 116 | 601 | 6 | 601 | 562 | 601 | 6 |
| *I16-62A-11* | 17.1 | 1.7 | 0.222 | 0.018 | 0.41068 | 576 | 203 | 576 | 9 | 576 | 1017 | 576 | 9 |
| *I16-62A-13* | 29.3 | 2.1 | 0.335 | 0.022 | 0.69485 | 608 | 129 | 608 | 6 | 608 | 615 | 608 | 5 |
| *I16-62A-14* | 12.07 | 0.73 | 0.2018 | 0.0095 | 0.38803 | 640 | 100 | 640 | 7 | 640 | 463 | 640 | 7 |
| *I16-62A-15* | 36.4 | 2.7 | 0.382 | 0.023 | 0.709 | 589 | 136 | 589 | 4 | 589 | 665 | 589 | 4 |
| *I16-62A-16* | 14.17 | 0.86 | 0.2139 | 0.0099 | 0.3638 | 621 | 112 | 621 | 6 | 621 | 527 | 621 | 6 |
| *I16-62A-17* | 14.56 | 0.86 | 0.2171 | 0.01 | 0.38188 | 621 | 109 | 621 | 6 | 621 | 516 | 621 | 6 |
| *I16-62A-18* | 14.98 | 1.1 | 0.22 | 0.012 | 0.53354 | 619 | 120 | 619 | 7 | 619 | 564 | 619 | 7 |
| *I16-62A-19* | 17.07 | 1.1 | 0.2386 | 0.0096 | 0.70494 | 621 | 92 | 621 | 5 | 621 | 426 | 621 | 5 |
| *I16-62A-2* | 15.51 | 1.1 | 0.238 | 0.012 | 0.6652 | 658 | 98 | 658 | 7 | 658 | 437 | 658 | 7 |
| *I16-62A-20* | 24.4 | 2.1 | 0.286 | 0.023 | 0.67002 | 590 | 156 | 590 | 8 | 590 | 763 | 590 | 7 |
| *I16-62A-21* | 11.9 | 0.71 | 0.1977 | 0.0099 | 0.41053 | 631 | 99 | 631 | 8 | 631 | 465 | 631 | 7 |
| *I16-62A-22* | 11.09 | 0.82 | 0.1835 | 0.0078 | 0.31599 | 606 | 120 | 606 | 7 | 606 | 574 | 606 | 6 |
| *I16-62A-23* | 43.3 | 3.8 | 0.474 | 0.034 | 0.87169 | 640 | 112 | 640 | 5 | 640 | 505 | 640 | 5 |
| *I16-62A-24* | 14.49 | 1.3 | 0.212 | 0.014 | 0.52908 | 607 | 146 | 607 | 9 | 607 | 699 | 607 | 9 |
| *I16-62A-25* | 19.1 | 4.8 | 0.271 | 0.048 | 0.75818 | 660 | 333 | 660 | 22 | 660 | 1462 | 660 | 22 |
| *I16-62A-26* | 25 | 1.8 | 0.313 | 0.018 | 0.81022 | 637 | 95 | 637 | 6 | 637 | 432 | 637 | 6 |
| *I16-62A-27* | 18.9 | 1.3 | 0.26 | 0.011 | 0.25028 | 637 | 144 | 637 | 5 | 637 | 663 | 637 | 5 |
| *I16-62A-28* | 13.71 | 0.9 | 0.2092 | 0.0084 | 0.4394 | 618 | 109 | 618 | 6 | 618 | 510 | 618 | 6 |
| *I16-62A-3* | 12.35 | 0.7 | 0.2069 | 0.0068 | 0.12095 | 649 | 103 | 649 | 5 | 649 | 470 | 649 | 5 |
| *I16-62A-4* | 19.1 | 4.6 | 0.256 | 0.035 | 0.43588 | 622 | 454 | 622 | 16 | 622 | 2113 | 622 | 16 |
| *I16-62A-5* | 18.1 | 3.4 | 0.247 | 0.03 | 0.57948 | 621 | 313 | 621 | 15 | 621 | 1456 | 621 | 15 |
| *I16-62A-6* | 21.09 | 1.3 | 0.268 | 0.014 | 0.66673 | 610 | 102 | 610 | 6 | 610 | 484 | 610 | 5 |
| *I16-62A-7* | 17.13 | 1.1 | 0.2304 | 0.01 | 0.4553 | 598 | 119 | 598 | 5 | 598 | 575 | 598 | 5 |
| *I16-62A-8* | 10.44 | 0.81 | 0.179 | 0.011 | 0.44746 | 609 | 117 | 609 | 10 | 609 | 565 | 609 | 9 |
| *I16-62A-9* | 21.7 | 1.7 | 0.274 | 0.016 | 0.3967 | 612 | 167 | 612 | 6 | 612 | 792 | 612 | 6 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-55A-1* | 23.3 | 1.7 | 0.551 | 0.026 | 0.37621 | 2375 | 62 | 2375 | 38 | 2375 | 121 | 2375 | 32 |
| *CO17-55A-10* | 20.7 | 1.3 | 0.543 | 0.025 | 0.52773 | 2444 | 44 | 2444 | 40 | 2444 | 81 | 2444 | 32 |
| *CO17-55A-11* | 26.6 | 1.7 | 0.591 | 0.026 | 0.44506 | 2457 | 54 | 2457 | 35 | 2457 | 102 | 2457 | 30 |
| *CO17-55A-12* | 27.8 | 2 | 0.602 | 0.023 | 0.66449 | 2466 | 57 | 2466 | 30 | 2466 | 96 | 2466 | 30 |
| *CO17-55A-13* | 27.7 | 2.1 | 0.613 | 0.035 | 0.63944 | 2533 | 55 | 2533 | 47 | 2533 | 97 | 2533 | 40 |
| *CO17-55A-14* | 20.7 | 1.4 | 0.535 | 0.023 | 0.57207 | 2397 | 48 | 2397 | 36 | 2397 | 86 | 2397 | 32 |
| *CO17-55A-15* | 17.21 | 1 | 0.514 | 0.022 | 0.41986 | 2431 | 38 | 2431 | 39 | 2431 | 73 | 2431 | 29 |
| *CO17-55A-16* | 16.28 | 1 | 0.51 | 0.019 | 0.52443 | 2451 | 37 | 2451 | 34 | 2451 | 64 | 2451 | 29 |
| *CO17-55A-17* | 21.8 | 1.6 | 0.559 | 0.026 | 0.62228 | 2488 | 49 | 2488 | 40 | 2488 | 84 | 2488 | 36 |
| *CO17-55A-18* | 19.4 | 1.3 | 0.527 | 0.023 | 0.67761 | 2408 | 43 | 2408 | 38 | 2408 | 72 | 2408 | 34 |
| *CO17-55A-19* | 27.9 | 1.9 | 0.604 | 0.03 | 0.57143 | 2473 | 54 | 2473 | 39 | 2473 | 100 | 2473 | 34 |
| *CO17-55A-2* | 17.66 | 1.1 | 0.529 | 0.019 | 0.49394 | 2505 | 39 | 2505 | 33 | 2505 | 67 | 2505 | 29 |
| *CO17-55A-20* | 16.17 | 1 | 0.501 | 0.023 | 0.54932 | 2400 | 37 | 2400 | 41 | 2400 | 68 | 2400 | 31 |
| *CO17-55A-21* | 28.6 | 2 | 0.59 | 0.026 | 0.6297 | 2370 | 60 | 2370 | 33 | 2370 | 107 | 2370 | 31 |
| *CO17-55A-22* | 20.8 | 3.3 | 0.595 | 0.14 | 0.46317 | 2799 | 86 | 2799 | 244 | 2799 | 226 | 2799 | 82 |
| *CO17-55A-23* | 17 | 0.97 | 0.499 | 0.019 | 0.42713 | 2350 | 39 | 2350 | 33 | 2350 | 75 | 2350 | 27 |
| *CO17-55A-24* | 19.33 | 1.1 | 0.511 | 0.02 | 0.25162 | 2319 | 47 | 2319 | 32 | 2319 | 96 | 2319 | 25 |
| *CO17-55A-25* | 20 | 1.4 | 0.533 | 0.027 | 0.54017 | 2416 | 48 | 2416 | 44 | 2416 | 89 | 2416 | 35 |
| *CO17-55A-26* | 18 | 4.7 | 0.502 | 0.11 | 0.64642 | 2324 | 166 | 2324 | 185 | 2324 | 309 | 2324 | 139 |
| *CO17-55A-27* | 15.85 | 0.99 | 0.5 | 0.023 | 0.47585 | 2409 | 38 | 2409 | 42 | 2409 | 72 | 2409 | 31 |
| *CO17-55A-28* | 18.13 | 1 | 0.503 | 0.019 | 0.71693 | 2324 | 35 | 2324 | 32 | 2324 | 58 | 2324 | 28 |
| *CO17-55A-29* | 17.25 | 1 | 0.513 | 0.016 | 0.51954 | 2423 | 37 | 2423 | 28 | 2423 | 65 | 2423 | 26 |
| *CO17-55A-3* | 26.7 | 1.7 | 0.587 | 0.027 | 0.43781 | 2430 | 55 | 2430 | 36 | 2430 | 107 | 2430 | 30 |
| *CO17-55A-30* | 17.54 | 1.1 | 0.498 | 0.016 | 0.50098 | 2320 | 44 | 2320 | 27 | 2320 | 80 | 2320 | 26 |
| *CO17-55A-4* | 30.1 | 2.1 | 0.626 | 0.035 | 0.71618 | 2499 | 50 | 2499 | 44 | 2499 | 88 | 2499 | 37 |
| *CO17-55A-5* | 17.93 | 1.1 | 0.531 | 0.02 | 0.48036 | 2504 | 39 | 2504 | 35 | 2504 | 68 | 2504 | 29 |
| *CO17-55A-6* | 28.1 | 1.8 | 0.573 | 0.023 | 0.66563 | 2303 | 55 | 2303 | 29 | 2303 | 100 | 2303 | 28 |
| *CO17-55A-7* | 14.56 | 0.92 | 0.492 | 0.018 | 0.46026 | 2421 | 37 | 2421 | 34 | 2421 | 66 | 2421 | 29 |
| *CO17-55A-8* | 16.47 | 1.1 | 0.506 | 0.022 | 0.54123 | 2417 | 41 | 2417 | 39 | 2417 | 73 | 2417 | 33 |
| *CO17-55A-9* | 15.12 | 0.91 | 0.506 | 0.017 | 0.6161 | 2484 | 34 | 2484 | 32 | 2484 | 53 | 2484 | 28 |
| *I16-34A-1* | 22.44 | 1.2 | 0.648 | 0.02 | 0.66609 | 3341 | 25 | 3341 | 42 | 3341 | 29 | 3341 | 25 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-34A-10* | 21.18 | 1.8 | 0.639 | 0.02 | 0.63669 | 3185 | 40 | 3185 | 39 | 3185 | 53 | 3185 | 36 |
| *I16-34A-11* | 44.6 | 3.7 | 0.891 | 0.045 | 0.75502 | 4107 | 37 | 4107 | 77 | 4107 | 33 | 4107 | 32 |
| *I16-34A-12* | 40.9 | 3.3 | 0.943 | 0.049 | 0.63878 | 4282 | 32 | 4282 | 81 | 4282 | 28 | 4282 | 26 |
| *I16-34A-13* | 40.7 | 2.9 | 0.848 | 0.039 | 0.45298 | 3959 | 32 | 3959 | 68 | 3959 | 41 | 3959 | 32 |
| *I16-34A-14* | 64.5 | 7.4 | 1.053 | 0.081 | 0.85855 | 4637 | 50 | 4637 | 127 | 4637 | 31 | 4637 | 30 |
| *I16-34A-15* | 36 | 2.4 | 0.812 | 0.038 | 0.74373 | 3832 | 31 | 3832 | 68 | 3832 | 29 | 3832 | 27 |
| *I16-34A-16* | 23.04 | 1.2 | 0.642 | 0.016 | 0.65281 | 3083 | 27 | 3083 | 29 | 3083 | 36 | 3083 | 25 |
| *I16-34A-17* | 18.9 | 0.79 | 0.6144 | 0.013 | 0.52656 | 3283 | 19 | 3283 | 29 | 3283 | 23 | 3283 | 19 |
| *I16-34A-18* | 80.4 | 6.5 | 1.156 | 0.094 | 0.81884 | 3085 | 48 | 3085 | 53 | 3085 | 84 | 3085 | 38 |
| *I16-34A-19* | 50.9 | 4.3 | 0.889 | 0.059 | 0.67197 | 3057 | 56 | 3057 | 55 | 3057 | 91 | 3057 | 44 |
| *I16-34A-2* | 24.54 | 1.3 | 0.677 | 0.018 | 0.56335 | 3333 | 25 | 3333 | 35 | 3333 | 33 | 3333 | 25 |
| *I16-34A-20* | 22.63 | 1.1 | 0.649 | 0.018 | 0.67411 | 3307 | 23 | 3307 | 37 | 3307 | 27 | 3307 | 23 |
| *I16-34A-21* | 23.25 | 1.1 | 0.663 | 0.016 | 0.54405 | 3279 | 22 | 3279 | 31 | 3279 | 30 | 3279 | 22 |
| *I16-34A-22* | 65.3 | 4.7 | 0.963 | 0.055 | 0.5948 | 2727 | 72 | 2727 | 35 | 2727 | 128 | 2727 | 31 |
| *I16-34A-23* | 108 | 14 | 1.26 | 0.091 | 0.70663 | 2528 | 166 | 2528 | 29 | 2528 | 293 | 2528 | 29 |
| *I16-34A-24* | 48.9 | 3.1 | 0.881 | 0.045 | 0.66971 | 3171 | 39 | 3171 | 46 | 3171 | 62 | 3171 | 34 |
| *I16-34A-25* | 22.03 | 1 | 0.641 | 0.016 | 0.60589 | 3230 | 22 | 3230 | 32 | 3230 | 28 | 3230 | 22 |
| *I16-34A-26* | 103.7 | 9.9 | 1.268 | 0.084 | 0.58869 | 2660 | 119 | 2660 | 29 | 2660 | 212 | 2660 | 28 |
| *I16-34A-27* | 19.74 | 0.83 | 0.6116 | 0.013 | 0.49454 | 3070 | 20 | 3070 | 26 | 3070 | 29 | 3070 | 19 |
| *I16-34A-28* | 71.9 | 5.2 | 1.052 | 0.064 | 0.74234 | 2894 | 56 | 2894 | 38 | 2894 | 94 | 2894 | 33 |
| *I16-34A-29* | 57.9 | 3.6 | 0.931 | 0.052 | 0.57045 | 2902 | 53 | 2902 | 40 | 2902 | 96 | 2902 | 30 |
| *I16-34A-3* | 18 | 0.69 | 0.6065 | 0.011 | 0.75578 | 3294 | 17 | 3294 | 26 | 3294 | 17 | 3294 | 17 |
| *I16-34A-30* | 19.57 | 3.8 | 0.616 | 0.068 | 0.86377 | 3170 | 92 | 3170 | 142 | 3170 | 84 | 3170 | 83 |
| *I16-34A-31* | 40.6 | 4.2 | 0.844 | 0.057 | 0.8614 | 3945 | 48 | 3945 | 100 | 3945 | 36 | 3945 | 36 |
| *I16-34A-32* | 39.5 | 2.5 | 0.85 | 0.033 | 0.86421 | 3966 | 29 | 3966 | 57 | 3966 | 22 | 3966 | 22 |
| *I16-34A-4* | 45.7 | 4.5 | 0.833 | 0.051 | 0.71751 | 2970 | 67 | 2970 | 51 | 2970 | 102 | 2970 | 48 |
| *I16-34A-5* | 57.8 | 4.2 | 0.966 | 0.057 | 0.71041 | 3239 | 44 | 3239 | 51 | 3239 | 68 | 3239 | 38 |
| *I16-34A-6* | 28.5 | 2 | 0.716 | 0.027 | 0.71646 | 3481 | 34 | 3481 | 51 | 3481 | 37 | 3481 | 33 |
| *I16-34A-7* | 19.66 | 0.94 | 0.609 | 0.013 | 0.66589 | 3044 | 23 | 3044 | 26 | 3044 | 30 | 3044 | 22 |
| *I16-34A-8* | 21.42 | 1.2 | 0.644 | 0.018 | 0.76387 | 3205 | 26 | 3205 | 35 | 3205 | 29 | 3205 | 26 |
| *I16-34A-9* | 62.2 | 5.6 | 0.994 | 0.059 | 0.70595 | 3095 | 63 | 3095 | 45 | 3095 | 98 | 3095 | 42 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-52A-1* | 5.94 | 0.26 | 0.174 | 0.0034 | 0.52394 | 828 | 40 | 828 | 6 | 828 | 145 | 828 | 6 |
| *I16-52A-10* | 40.1 | 2.3 | 0.447 | 0.019 | 0.90406 | 834 | 74 | 834 | 5 | 834 | 266 | 834 | 5 |
| *I16-52A-11* | 46.6 | 2.9 | 0.489 | 0.023 | 0.80882 | 817 | 108 | 817 | 5 | 817 | 400 | 817 | 5 |
| *I16-52A-12* | 85.6 | 4.4 | 0.806 | 0.028 | 0.79884 | 831 | 104 | 831 | 2 | 831 | 379 | 831 | 2 |
| *I16-52A-13* | 77.1 | 3.7 | 0.746 | 0.026 | 0.73685 | 840 | 104 | 840 | 3 | 840 | 378 | 840 | 3 |
| *I16-52A-14* | 66.9 | 3.9 | 0.668 | 0.028 | 0.81602 | 845 | 106 | 845 | 3 | 845 | 384 | 845 | 3 |
| *I16-52A-15* | 72.1 | 3.9 | 0.7 | 0.03 | 0.79003 | 832 | 105 | 832 | 3 | 832 | 386 | 832 | 3 |
| *I16-52A-17* | 77.8 | 3.6 | 0.756 | 0.025 | 0.65596 | 845 | 111 | 845 | 2 | 845 | 405 | 845 | 2 |
| *I16-52A-18* | 53.5 | 2.4 | 0.543 | 0.016 | 0.62997 | 818 | 105 | 818 | 3 | 818 | 392 | 818 | 3 |
| *I16-52A-19* | 55.3 | 2.7 | 0.562 | 0.023 | 0.70619 | 825 | 106 | 825 | 4 | 825 | 393 | 825 | 4 |
| *I16-52A-2* | 45.2 | 20 | 0.496 | 0.14 | 0.39868 | 849 | 1178 | 849 | 32 | 849 | 4276 | 849 | 31 |
| *I16-52A-20* | 67 | 3.1 | 0.657 | 0.022 | 0.56958 | 829 | 121 | 829 | 3 | 829 | 447 | 829 | 3 |
| *I16-52A-21* | 78.7 | 4.1 | 0.756 | 0.025 | 0.7118 | 837 | 118 | 837 | 2 | 837 | 432 | 837 | 2 |
| *I16-52A-22* | 73.6 | 4.1 | 0.723 | 0.03 | 0.78079 | 846 | 110 | 846 | 3 | 846 | 398 | 846 | 3 |
| *I16-52A-23* | 53.5 | 2.5 | 0.558 | 0.017 | 0.67281 | 841 | 103 | 841 | 3 | 841 | 373 | 841 | 3 |
| *I16-52A-24* | 70.9 | 4.5 | 0.682 | 0.033 | 0.69126 | 822 | 147 | 822 | 4 | 822 | 546 | 822 | 4 |
| *I16-52A-25* | 23.89 | 2.1 | 0.322 | 0.017 | 0.62817 | 845 | 157 | 845 | 9 | 845 | 570 | 845 | 9 |
| *I16-52A-26* | 62.3 | 3.2 | 0.633 | 0.027 | 0.68317 | 847 | 116 | 847 | 4 | 847 | 422 | 847 | 4 |
| *I16-52A-27* | 99.3 | 22 | 0.893 | 0.17 | 0.91468 | 811 | 309 | 811 | 11 | 811 | 1153 | 811 | 11 |
| *I16-52A-28* | 53.4 | 2.7 | 0.561 | 0.021 | 0.61064 | 847 | 119 | 847 | 4 | 847 | 433 | 847 | 4 |
| *I16-52A-29* | 7.78 | 0.36 | 0.1913 | 0.0042 | 0.44375 | 841 | 52 | 841 | 6 | 841 | 190 | 841 | 6 |
| *I16-52A-3* | 8.31 | 0.42 | 0.1947 | 0.0042 | 0.74564 | 837 | 51 | 837 | 6 | 837 | 180 | 837 | 6 |
| *I16-52A-30* | 76.1 | 4.4 | 0.722 | 0.033 | 0.80491 | 821 | 111 | 821 | 3 | 821 | 412 | 821 | 3 |
| *I16-52A-31* | 67.1 | 4.4 | 0.682 | 0.033 | 0.79886 | 861 | 122 | 861 | 4 | 861 | 433 | 861 | 4 |
| *I16-52A-32* | 65 | 3.1 | 0.651 | 0.023 | 0.7132 | 842 | 103 | 842 | 3 | 842 | 375 | 842 | 3 |
| *I16-52A-33* | 77.3 | 3.9 | 0.754 | 0.03 | 0.7406 | 847 | 108 | 847 | 3 | 847 | 390 | 847 | 3 |
| *I16-52A-4* | 54.5 | 2.7 | 0.575 | 0.021 | 0.70861 | 855 | 103 | 855 | 4 | 855 | 370 | 855 | 4 |
| *I16-52A-5* | 64.8 | 3.1 | 0.642 | 0.022 | 0.67775 | 832 | 110 | 832 | 3 | 832 | 402 | 832 | 3 |
| *I16-52A-6* | 14.39 | 1 | 0.245 | 0.011 | 0.97613 | 843 | 56 | 843 | 10 | 843 | 181 | 843 | 6 |
| *I16-52A-7* | 70.8 | 3.5 | 0.687 | 0.023 | 0.74529 | 829 | 105 | 829 | 3 | 829 | 387 | 829 | 3 |
| *I16-52A-8* | 64.7 | 3.5 | 0.643 | 0.024 | 0.79967 | 835 | 103 | 835 | 3 | 835 | 375 | 835 | 3 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-52A-9* | 15.07 | 0.74 | 0.2512 | 0.0067 | 0.67222 | 846 | 69 | 846 | 6 | 846 | 248 | 846 | 6 |
| *I16-54A-10* | 4.08 | 0.26 | 0.1961 | 0.0058 | 0.37269 | 652 | 35 | 652 | 5 | 652 | 157 | 652 | 5 |
| *I16-54A-12* | 5.18 | 0.6 | 0.218 | 0.012 | 0.57078 | 617 | 64 | 617 | 7 | 617 | 295 | 617 | 7 |
| *I16-54A-13* | 32.6 | 2.4 | 0.793 | 0.053 | 0.59734 | 483 | 63 | 483 | 2 | 483 | 367 | 483 | 1 |
| *I16-54A-14* | 12.7 | 1.1 | 0.365 | 0.019 | 0.64024 | 512 | 59 | 512 | 3 | 512 | 321 | 512 | 3 |
| *I16-54A-15* | 3.83 | 0.18 | 0.2026 | 0.0041 | 0.3032 | 719 | 25 | 719 | 4 | 719 | 104 | 719 | 4 |
| *I16-54A-16* | 5.52 | 0.71 | 0.1968 | 0.012 | 0.25483 | 513 | 90 | 513 | 6 | 513 | 495 | 513 | 6 |
| *I16-54A-17* | 9.3 | 0.56 | 0.3089 | 0.011 | 0.40169 | 567 | 45 | 567 | 3 | 567 | 227 | 567 | 3 |
| *I16-54A-18* | 3.75 | 0.19 | 0.203 | 0.0057 | 0.372 | 734 | 26 | 734 | 6 | 734 | 107 | 734 | 6 |
| *I16-54A-19* | 5.88 | 0.41 | 0.1792 | 0.0069 | 0.23129 | 435 | 53 | 435 | 3 | 435 | 341 | 435 | 3 |
| *I16-54A-2* | 3.59 | 0.21 | 0.1697 | 0.0047 | 0.10544 | 592 | 35 | 592 | 4 | 592 | 173 | 592 | 4 |
| *I16-54A-20* | 5.66 | 0.9 | 0.1689 | 0.0081 | 0.75173 | 418 | 98 | 418 | 4 | 418 | 625 | 418 | 3 |
| *I16-54A-23* | 5.1 | 0.38 | 0.241 | 0.014 | 0.36381 | 719 | 45 | 719 | 10 | 719 | 196 | 719 | 9 |
| *I16-54A-24* | 1.55 | 0.11 | 0.1262 | 0.0033 | 0.33472 | 662 | 24 | 662 | 7 | 662 | 104 | 662 | 7 |
| *I16-54A-25* | 9.04 | 0.61 | 0.302 | 0.012 | 0.73007 | 566 | 38 | 566 | 3 | 566 | 189 | 566 | 3 |
| *I16-54A-26* | 9.01 | 0.56 | 0.373 | 0.014 | 0.77334 | 760 | 31 | 760 | 5 | 760 | 117 | 760 | 4 |
| *I16-54A-28* | 2.91 | 0.2 | 0.1769 | 0.0073 | 0.66715 | 731 | 27 | 731 | 10 | 731 | 102 | 731 | 10 |
| *I16-54A-3* | 6.71 | 0.48 | 0.204 | 0.0075 | 0.74677 | 455 | 40 | 455 | 3 | 455 | 238 | 455 | 3 |
| *I16-54A-30* | 2.47 | 0.23 | 0.1405 | 0.0057 | 0.53901 | 593 | 39 | 593 | 8 | 593 | 183 | 593 | 8 |
| *I16-54A-31* | 12.06 | 0.56 | 0.438 | 0.012 | 0.53425 | 688 | 31 | 688 | 2 | 688 | 134 | 688 | 2 |
| *I16-54A-32* | 16.54 | 0.89 | 0.51 | 0.019 | 0.44744 | 593 | 44 | 593 | 2 | 593 | 213 | 593 | 2 |
| *I16-54A-33* | 18.5 | 2 | 0.549 | 0.038 | 0.72699 | 575 | 68 | 575 | 3 | 575 | 336 | 575 | 3 |
| *I16-54A-4* | 8.13 | 0.35 | 0.3562 | 0.0076 | 0.65415 | 797 | 24 | 797 | 3 | 797 | 88 | 797 | 3 |
| *I16-54A-5* | 2.499 | 0.12 | 0.1622 | 0.0037 | 0.19302 | 718 | 21 | 718 | 6 | 718 | 92 | 718 | 5 |
| *I16-54A-6* | 10 | 0.9 | 0.282 | 0.013 | 0.48018 | 471 | 68 | 471 | 3 | 471 | 398 | 471 | 3 |
| *I16-54A-7* | 2.08 | 0.17 | 0.1393 | 0.005 | 0.76238 | 649 | 29 | 649 | 8 | 649 | 112 | 649 | 8 |
| *I16-54A-8* | 29 | 2.1 | 0.507 | 0.028 | 0.47485 | 325 | 73 | 325 | 1 | 325 | 597 | 325 | 1 |
| *I16-54A-9* | 3.53 | 0.25 | 0.2061 | 0.005 | 0.77367 | 790 | 31 | 790 | 6 | 790 | 108 | 790 | 5 |
| *I16-46A-1* | 153 | 15 | 1.41 | 0.15 | 0.86723 | 805 | 176 | 805 | 4 | 805 | 666 | 805 | 3 |
| *I16-46A-10* | 9.17 | 0.29 | 0.1904 | 0.0047 | 0.10514 | 765 | 53 | 765 | 6 | 765 | 216 | 765 | 5 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-46A-11* | 14.21 | 0.72 | 0.226 | 0.0084 | 0.40381 | 748 | 91 | 748 | 7 | 748 | 370 | 748 | 7 |
| *I16-46A-13* | 11.11 | 0.35 | 0.2014 | 0.0065 | 0.29825 | 747 | 59 | 747 | 7 | 747 | 249 | 747 | 5 |
| *I16-46A-14* | 9.26 | 0.45 | 0.1886 | 0.005 | 0.54061 | 754 | 60 | 754 | 6 | 754 | 239 | 754 | 6 |
| *I16-46A-15* | 96.1 | 7.7 | 0.859 | 0.065 | 0.87775 | 740 | 129 | 740 | 4 | 740 | 520 | 740 | 4 |
| *I16-46A-16* | 17.96 | 0.77 | 0.2616 | 0.0095 | 0.32869 | 767 | 93 | 767 | 6 | 767 | 374 | 767 | 6 |
| *I16-46A-17* | 54.6 | 2.7 | 0.581 | 0.028 | 0.58987 | 803 | 126 | 803 | 4 | 803 | 479 | 803 | 4 |
| *I16-46A-18* | 24.8 | 1.2 | 0.312 | 0.014 | 0.53843 | 756 | 105 | 756 | 6 | 756 | 424 | 756 | 6 |
| *I16-46A-19* | 129 | 12 | 1.16 | 0.11 | 0.83347 | 771 | 181 | 771 | 4 | 771 | 709 | 771 | 4 |
| *I16-46A-2* | 35 | 1.8 | 0.379 | 0.016 | 0.56086 | 728 | 121 | 728 | 5 | 728 | 498 | 728 | 4 |
| *I16-46A-20* | 36.7 | 3.3 | 0.374 | 0.019 | 0.53373 | 693 | 217 | 693 | 5 | 693 | 923 | 693 | 5 |
| *I16-46A-21* | 25.7 | 1.3 | 0.316 | 0.012 | 0.76945 | 748 | 79 | 748 | 5 | 748 | 314 | 748 | 5 |
| *I16-46A-22* | 76.9 | 4.8 | 0.756 | 0.051 | 0.81234 | 790 | 123 | 790 | 4 | 790 | 474 | 790 | 4 |
| *I16-46A-23* | 81.1 | 4.7 | 0.758 | 0.043 | 0.74264 | 756 | 131 | 756 | 3 | 756 | 523 | 756 | 3 |
| *I16-46A-24* | 120 | 10 | 1.024 | 0.083 | 0.88089 | 725 | 139 | 725 | 3 | 725 | 570 | 725 | 3 |
| *I16-46A-25* | 24.5 | 1.2 | 0.315 | 0.013 | 0.45773 | 769 | 110 | 769 | 6 | 769 | 435 | 769 | 5 |
| *I16-46A-26* | 21.4 | 1 | 0.279 | 0.011 | 0.38908 | 739 | 108 | 739 | 6 | 739 | 442 | 739 | 5 |
| *I16-46A-27* | 7.85 | 0.34 | 0.1781 | 0.0051 | 0.48907 | 757 | 50 | 757 | 7 | 757 | 201 | 757 | 7 |
| *I16-46A-28* | 14.94 | 0.76 | 0.234 | 0.012 | 0.42207 | 756 | 101 | 756 | 10 | 756 | 416 | 756 | 8 |
| *I16-46A-29* | 9.44 | 0.34 | 0.1941 | 0.0059 | 0.43622 | 771 | 50 | 771 | 7 | 771 | 204 | 771 | 6 |
| *I16-46A-3* | 6.65 | 0.43 | 0.1623 | 0.0069 | 0.36215 | 728 | 75 | 728 | 11 | 728 | 313 | 728 | 10 |
| *I16-46A-30* | 11.47 | 0.55 | 0.208 | 0.007 | 0.50632 | 762 | 69 | 762 | 7 | 762 | 277 | 762 | 7 |
| *I16-46A-4* | 82.8 | 5.2 | 0.782 | 0.054 | 0.68103 | 766 | 168 | 766 | 4 | 766 | 662 | 766 | 3 |
| *I16-46A-5* | 13.16 | 0.66 | 0.227 | 0.0079 | 0.52025 | 781 | 76 | 781 | 7 | 781 | 296 | 781 | 7 |
| *I16-46A-6* | 20 | 1.1 | 0.281 | 0.014 | 0.71362 | 776 | 85 | 776 | 8 | 776 | 333 | 776 | 8 |
| *I16-46A-7* | 35.3 | 1.9 | 0.383 | 0.019 | 0.64921 | 731 | 118 | 731 | 5 | 731 | 483 | 731 | 5 |
| *I16-46A-8* | 23.2 | 1 | 0.287 | 0.012 | 0.41181 | 723 | 108 | 723 | 6 | 723 | 451 | 723 | 5 |
| *I16-46A-9* | 10.25 | 0.39 | 0.1922 | 0.0059 | 0.31721 | 737 | 62 | 737 | 7 | 737 | 260 | 737 | 6 |
| *McClure-1* | 2.25 | 0.15 | 0.0977 | 0.003 | 0.21178 | 500 | 57 | 500 | 6 | 500 | 308 | 500 | 6 |
| *McClure-2* | 3.96 | 0.21 | 0.1173 | 0.0034 | 0.37951 | 513 | 68 | 513 | 5 | 513 | 363 | 513 | 5 |
| *McClure-3* | 2.143 | 0.12 | 0.0968 | 0.0028 | 0.037345 | 501 | 51 | 501 | 6 | 501 | 269 | 501 | 6 |
| *McClure-4* | 3.29 | 0.23 | 0.1097 | 0.0037 | 0.085413 | 507 | 79 | 507 | 6 | 507 | 421 | 507 | 6 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *McClure-5* | 3.77 | 0.26 | 0.116 | 0.0043 | 0.051796 | 512 | 87 | 512 | 6 | 512 | 458 | 512 | 6 |
| *McClure-6* | 2.52 | 0.16 | 0.1025 | 0.0033 | 0.14526 | 510 | 58 | 510 | 6 | 510 | 306 | 510 | 6 |
| *McClure-7* | 2.36 | 0.15 | 0.1045 | 0.0034 | 0.32676 | 527 | 55 | 527 | 7 | 527 | 284 | 527 | 7 |
| *McClure-8* | 2.56 | 0.19 | 0.104 | 0.0033 | 0.011778 | 514 | 68 | 514 | 6 | 514 | 362 | 514 | 6 |
| *McClure-9* | 2.5 | 0.16 | 0.1017 | 0.0032 | 0.4146 | 506 | 53 | 506 | 6 | 506 | 288 | 506 | 6 |
| *McClure-10* | 2.17 | 0.16 | 0.1018 | 0.0025 | -0.030138 | 524 | 58 | 524 | 5 | 524 | 303 | 524 | 5 |
| *McClure-11* | 1.109 | 0.067 | 0.0911 | 0.0023 | 0.093203 | 529 | 30 | 529 | 6 | 529 | 149 | 529 | 6 |
| *McClure-12* | 3.62 | 0.26 | 0.1155 | 0.0037 | 0.33927 | 518 | 75 | 518 | 6 | 518 | 399 | 518 | 6 |
| *McClure-13* | 3.01 | 0.2 | 0.1093 | 0.0029 | 0.28035 | 520 | 64 | 520 | 5 | 520 | 342 | 520 | 5 |
| *McClure-14* | 3.57 | 0.25 | 0.1132 | 0.0037 | 0.42086 | 510 | 74 | 510 | 6 | 510 | 401 | 510 | 5 |
| *McClure-15* | 2.82 | 0.17 | 0.1067 | 0.0033 | 0.30934 | 516 | 58 | 516 | 6 | 516 | 305 | 516 | 6 |
| *McClure-16* | 2.94 | 0.15 | 0.1072 | 0.0025 | -0.057056 | 513 | 58 | 513 | 4 | 513 | 305 | 513 | 4 |
| *McClure-17* | 2.24 | 0.14 | 0.0999 | 0.0029 | 0.55528 | 515 | 46 | 515 | 6 | 515 | 248 | 515 | 5 |
| *McClure-18* | 1.39 | 0.084 | 0.095 | 0.0023 | 0.19539 | 535 | 33 | 535 | 6 | 535 | 169 | 535 | 6 |
| *McClure-19* | 2.19 | 0.14 | 0.1009 | 0.0031 | 0.065958 | 519 | 55 | 519 | 6 | 519 | 285 | 519 | 6 |
| *OD306-1* | 80 | 24 | 1.53 | 0.39 | 0.999 | 4462 | 150 | 5984 | 497 | 3485 | 128 | 3498 | 37 |
| *OD306-2* | 3.41 | 0.18 | 0.2756 | 0.0051 | 0.20799 | 1507 | 21 | 1569 | 13 | 1662 | 60 | 1554 | 12 |
| *OD306-3* | 3.45 | 0.18 | 0.277 | 0.006 | 0.20432 | 1516 | 21 | 1576 | 15 | 1706 | 61 | 1556 | 13 |
| *OD306-4* | 3.5 | 0.18 | 0.2759 | 0.0057 | 0.095297 | 1527 | 20 | 1571 | 14 | 1736 | 61 | 1556 | 12 |
| *OD306-5* | 4.06 | 0.74 | 0.284 | 0.013 | 0.96484 | 1646 | 74 | 1611 | 33 | 1879 | 102 | 1589 | 14 |
| *OD306-6* | 3.49 | 0.18 | 0.2746 | 0.0057 | 0.41437 | 1525 | 20 | 1564 | 14 | 1746 | 59 | 1554 | 14 |
| *OD306-7* | 3.32 | 0.18 | 0.2737 | 0.0068 | 0.43279 | 1486 | 21 | 1560 | 17 | 1667 | 61 | 1533 | 15 |
| *OD306-8* | 3.41 | 0.17 | 0.272 | 0.0056 | -0.019805 | 1507 | 20 | 1551 | 14 | 1734 | 61 | 1535 | 11 |
| *OD306-9* | 56 | 23 | 1.14 | 0.38 | 0.99939 | 4105 | 205 | 4904 | 572 | 3092 | 166 | 1580 | 55 |
| *OD306-10* | 3.39 | 0.17 | 0.2711 | 0.0063 | 0.19106 | 1502 | 20 | 1546 | 16 | 1729 | 61 | 1529 | 13 |
| *OD306-11* | 3.46 | 0.2 | 0.2718 | 0.0068 | 0.39711 | 1518 | 23 | 1550 | 17 | 1760 | 64 | 1541 | 16 |
| *OD306-12* | 3.3 | 0.18 | 0.2767 | 0.0063 | 0.17521 | 1481 | 21 | 1575 | 16 | 1625 | 63 | 1541 | 13 |
| *OD306-13* | 46 | 14 | 0.99 | 0.24 | 0.99828 | 3909 | 151 | 4436 | 389 | 3328 | 134 | 1502 | 58 |
| *OD306-14* | 3.29 | 0.17 | 0.2733 | 0.0059 | 0.093587 | 1479 | 20 | 1558 | 15 | 1676 | 62 | 1529 | 12 |
| *OD306-15* | 3.32 | 0.18 | 0.2773 | 0.0061 | 0.1735 | 1486 | 21 | 1578 | 15 | 1671 | 63 | 1546 | 13 |
| *OD306-16* | 3.45 | 0.17 | 0.2825 | 0.0057 | 0.11639 | 1516 | 19 | 1604 | 14 | 1710 | 61 | 1572 | 12 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *OD306-17* | 49 | 19 | 1.05 | 0.32 | 0.99895 | 3972 | 193 | 4627 | 503 | 3203 | 147 | 1682 | 64 |
| *OD306-18* | 3.64 | 0.19 | 0.2795 | 0.0059 | 0.34875 | 1558 | 21 | 1589 | 15 | 1825 | 60 | 1581 | 14 |
| *OD306-19* | 3.33 | 0.17 | 0.2803 | 0.0066 | 0.063301 | 1488 | 20 | 1593 | 17 | 1656 | 62 | 1548 | 13 |
| *OD306-20* | 3.44 | 0.2 | 0.2812 | 0.0068 | 0.20586 | 1514 | 23 | 1597 | 17 | 1733 | 67 | 1568 | 15 |
| *OD306-21* | 3.24 | 0.17 | 0.279 | 0.0057 | 0.37498 | 1467 | 20 | 1586 | 14 | 1601 | 60 | 1551 | 13 |
| *OD306-22* | 3.32 | 0.17 | 0.282 | 0.0057 | 0.42489 | 1486 | 20 | 1601 | 14 | 1627 | 58 | 1568 | 13 |
| *OD306-23* | 3.41 | 0.16 | 0.2815 | 0.0055 | 0.17029 | 1507 | 18 | 1599 | 14 | 1671 | 59 | 1566 | 12 |
| *OD306-24* | 3.37 | 0.17 | 0.2831 | 0.0057 | 0.40163 | 1497 | 20 | 1607 | 14 | 1636 | 58 | 1574 | 13 |
| *OD306-25* | 3.46 | 0.17 | 0.2789 | 0.0056 | 0.27889 | 1518 | 19 | 1586 | 14 | 1712 | 58 | 1564 | 12 |
| *OD306-26* | 3.35 | 0.16 | 0.2772 | 0.0053 | 0.26159 | 1493 | 19 | 1577 | 13 | 1655 | 58 | 1551 | 12 |
| *OD306-27* | 3.43 | 0.16 | 0.2797 | 0.0055 | 0.44141 | 1511 | 18 | 1590 | 14 | 1682 | 57 | 1566 | 13 |
| *OD306-28* | 3.4 | 0.17 | 0.277 | 0.0053 | 0.50671 | 1504 | 20 | 1576 | 13 | 1687 | 59 | 1562 | 13 |
| *OD306-29* | 3.32 | 0.17 | 0.2767 | 0.0056 | 0.16677 | 1486 | 20 | 1575 | 14 | 1651 | 61 | 1545 | 12 |
| *OD306-30* | 3.31 | 0.16 | 0.2785 | 0.0059 | 0.15436 | 1483 | 19 | 1584 | 15 | 1634 | 61 | 1544 | 12 |
| *OD306-31* | 3.81 | 0.17 | 0.2868 | 0.0055 | 0.41689 | 1595 | 18 | 1626 | 14 | 1823 | 55 | 1616 | 13 |
| *OD306-32* | 3.35 | 0.16 | 0.2795 | 0.0052 | 0.24463 | 1493 | 19 | 1589 | 13 | 1634 | 58 | 1559 | 11 |
| *OD306-33* | 3.26 | 0.17 | 0.2771 | 0.0056 | 0.30048 | 1472 | 20 | 1577 | 14 | 1593 | 62 | 1545 | 13 |
| *OD306-34* | 3.378 | 0.16 | 0.275 | 0.0055 | 0.16356 | 1499 | 19 | 1566 | 14 | 1669 | 58 | 1543 | 12 |
| *OD306-35* | 3.45 | 0.18 | 0.2779 | 0.0053 | 0.15915 | 1516 | 21 | 1581 | 13 | 1698 | 61 | 1562 | 12 |
| *OD306-36* | 3.33 | 0.16 | 0.2765 | 0.0056 | 0.2052 | 1488 | 19 | 1574 | 14 | 1644 | 59 | 1543 | 12 |
| *OD306-37* | 3.38 | 0.17 | 0.2789 | 0.0051 | 0.246 | 1500 | 20 | 1586 | 13 | 1678 | 60 | 1563 | 12 |
| *OD306-38* | 3.255 | 0.15 | 0.2819 | 0.0052 | 0.015568 | 1470 | 18 | 1601 | 13 | 1593 | 60 | 1552 | 10 |
| *401-1* | 0.654 | 0.087 | 0.087 | 0.0029 | 0.19862 | 511 | 27 | 538 | 9 | 701 | 151 | 537 | 9 |
| *401-2* | 0.703 | 0.085 | 0.0847 | 0.0025 | -0.07143 | 541 | 25 | 524 | 7 | 916 | 134 | 526 | 7 |
| *401-3* | 0.668 | 0.072 | 0.0864 | 0.0027 | -0.2148 | 519 | 22 | 534 | 8 | 799 | 131 | 532 | 7 |
| *401-4* | 0.67 | 0.076 | 0.085 | 0.0026 | 0.13703 | 521 | 23 | 526 | 8 | 812 | 130 | 526 | 8 |
| *401-5* | 0.71 | 0.073 | 0.0859 | 0.0031 | 0.096896 | 545 | 22 | 531 | 9 | 880 | 109 | 533 | 9 |
| *401-6* | 0.719 | 0.078 | 0.0858 | 0.0028 | -0.14174 | 550 | 23 | 531 | 8 | 971 | 127 | 533 | 7 |
| *401-7* | 0.693 | 0.078 | 0.086 | 0.0026 | 0.085728 | 535 | 23 | 532 | 8 | 883 | 127 | 532 | 7 |
| *401-8* | 0.689 | 0.064 | 0.0844 | 0.0028 | 0.091246 | 532 | 19 | 522 | 8 | 910 | 108 | 524 | 8 |
| *401-9* | 0.69 | 0.064 | 0.0859 | 0.0033 | -0.056118 | 533 | 19 | 531 | 10 | 898 | 112 | 532 | 9 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *401-10* | 0.703 | 0.069 | 0.0852 | 0.0026 | -0.11785 | 541 | 21 | 527 | 8 | 942 | 116 | 529 | 7 |
| *401-11* | 0.714 | 0.084 | 0.0859 | 0.0032 | 0.1458 | 547 | 25 | 531 | 9 | 1010 | 132 | 533 | 9 |
| *401-12* | 0.678 | 0.07 | 0.0883 | 0.0029 | -0.09258 | 526 | 21 | 545 | 9 | 799 | 121 | 542 | 8 |
| *401-13* | 0.67 | 0.062 | 0.0861 | 0.0027 | 0.23107 | 521 | 19 | 532 | 8 | 767 | 101 | 531 | 8 |
| *401-14* | 0.692 | 0.068 | 0.0835 | 0.0024 | 0.2005 | 534 | 20 | 517 | 7 | 951 | 107 | 518 | 7 |
| *401-15* | 0.647 | 0.067 | 0.088 | 0.0026 | 0.03582 | 507 | 21 | 544 | 8 | 717 | 121 | 539 | 7 |
| *401-16* | 0.648 | 0.07 | 0.0847 | 0.0024 | -0.054181 | 507 | 22 | 524 | 7 | 802 | 124 | 522 | 7 |
| *401-17* | 0.651 | 0.073 | 0.083 | 0.0036 | 0.11724 | 509 | 22 | 514 | 11 | 764 | 117 | 513 | 10 |
| *401-18* | 0.731 | 0.073 | 0.0862 | 0.0027 | -0.13213 | 557 | 21 | 533 | 8 | 1030 | 118 | 537 | 7 |
| *401-19* | 0.629 | 0.072 | 0.0862 | 0.0023 | 0.25861 | 495 | 22 | 533 | 7 | 683 | 125 | 532 | 7 |
| *401-20* | 0.68 | 0.065 | 0.0858 | 0.0031 | 0.071153 | 527 | 20 | 531 | 9 | 927 | 113 | 530 | 9 |
| *401-21* | 0.738 | 0.066 | 0.0847 | 0.0028 | 0.062001 | 561 | 19 | 524 | 8 | 1070 | 104 | 529 | 8 |
| *401-22* | 0.664 | 0.068 | 0.0851 | 0.0025 | 0.0060408 | 517 | 21 | 526 | 7 | 840 | 119 | 525 | 7 |
| *401-23* | 0.765 | 0.081 | 0.0858 | 0.0024 | 0.10691 | 577 | 23 | 531 | 7 | 1123 | 119 | 533 | 7 |
| *401-24* | 0.692 | 0.071 | 0.0872 | 0.0032 | 0.038566 | 534 | 21 | 539 | 9 | 868 | 119 | 538 | 9 |
| *401-25* | 0.676 | 0.08 | 0.0859 | 0.0028 | -0.048643 | 524 | 24 | 531 | 8 | 898 | 139 | 530 | 8 |
| *401-26* | 0.675 | 0.076 | 0.0862 | 0.0028 | -0.083838 | 524 | 23 | 533 | 8 | 837 | 129 | 532 | 8 |
| *401-27* | 0.748 | 0.068 | 0.0859 | 0.0031 | 0.12911 | 567 | 20 | 531 | 9 | 1051 | 103 | 536 | 9 |
| *401-28* | 0.701 | 0.067 | 0.0854 | 0.0028 | -0.1516 | 539 | 20 | 528 | 8 | 945 | 115 | 530 | 7 |
| *401-29* | 0.646 | 0.072 | 0.0843 | 0.0029 | 0.11623 | 506 | 22 | 522 | 9 | 783 | 125 | 520 | 8 |
| *401-30* | 0.643 | 0.06 | 0.0855 | 0.0028 | 0.13618 | 504 | 19 | 529 | 8 | 747 | 109 | 526 | 8 |
| *401-31* | 0.668 | 0.063 | 0.0858 | 0.0028 | 0.19508 | 519 | 19 | 531 | 8 | 796 | 110 | 529 | 8 |
| *401-32* | 0.698 | 0.092 | 0.085 | 0.0027 | 0.097673 | 538 | 28 | 526 | 8 | 840 | 138 | 527 | 8 |
| *401-33* | 0.639 | 0.06 | 0.0857 | 0.0024 | -0.11776 | 502 | 19 | 530 | 7 | 701 | 115 | 526 | 6 |
| *401-34* | 0.738 | 0.085 | 0.0856 | 0.0028 | 0.09711 | 561 | 25 | 529 | 8 | 996 | 126 | 532 | 8 |
| *401-35* | 0.677 | 0.08 | 0.0873 | 0.0026 | 0.15447 | 525 | 24 | 540 | 8 | 717 | 126 | 539 | 8 |
| *401-36* | 0.745 | 0.083 | 0.0877 | 0.0028 | 0.15955 | 565 | 24 | 542 | 8 | 965 | 119 | 543 | 8 |
| *401-37* | 0.693 | 0.082 | 0.0854 | 0.0026 | -0.035262 | 535 | 25 | 528 | 8 | 898 | 132 | 529 | 7 |
| *401-38* | 0.693 | 0.068 | 0.0838 | 0.0026 | 0.017777 | 535 | 20 | 519 | 8 | 945 | 113 | 521 | 7 |

## Appendix 5.4 Apatite REE concentrations (ppm) – Chapter 5.

| Apatite Grain | Sr | Y | Zr | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb | Lu | Th | U |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *McClure-1* | 3523 | 206.1 | 3.42 | 1686 | 2825 | 258.2 | 873 | 98.9 | 40.93 | 65.8 | 7.4 | 39.25 | 7.13 | 19.23 | 2.56 | 14.65 | 1.994 | 50.51 | 17.6 |
| *McClure-2* | 3857 | 332.5 | 4.04 | 2409 | 3662 | 286.8 | 916 | 102.4 | 37.4 | 70.9 | 8.43 | 48.1 | 9.99 | 30.77 | 4.72 | 32.05 | 4.43 | 90.1 | 21.28 |
| *McClure-3* | 4076 | 228.7 | 4.22 | 1682 | 2825 | 266.5 | 934 | 113.4 | 36.86 | 77.9 | 8.38 | 45.4 | 8.11 | 21.23 | 2.67 | 15.57 | 2.19 | 51.5 | 18.97 |
| *McClure-4* | 4244 | 316 | 7.89 | 1613 | 3235 | 336.1 | 1284 | 173.9 | 41.88 | 117.1 | 13.32 | 69.4 | 11.84 | 28.99 | 3.48 | 18.29 | 2.3 | 22.63 | 9.22 |
| *McClure-5* | 3953 | 153.1 | 3.61 | 1231 | 2154 | 208.1 | 734 | 88.6 | 27.57 | 59.4 | 6.34 | 32.6 | 5.88 | 14.06 | 1.68 | 9.5 | 1.249 | 22.2 | 8.1 |
| *McClure-6* | 3991 | 305.3 | 11.88 | 2012 | 3857 | 366.1 | 1316 | 167.6 | 48.59 | 110.9 | 12.37 | 64 | 11.61 | 29.09 | 3.56 | 19.5 | 2.444 | 31.81 | 12.91 |
| *McClure-7* | 3817 | 182.8 | 5.66 | 1632 | 2700 | 245.2 | 835 | 95.2 | 33.7 | 62.7 | 6.73 | 36.7 | 6.47 | 17.05 | 2.18 | 12.49 | 1.74 | 46.9 | 14.35 |
| *McClure-8* | 3718 | 200.5 | 3.71 | 1693 | 2728 | 246.6 | 832 | 96 | 36.86 | 63.9 | 6.7 | 37.1 | 6.95 | 18.81 | 2.48 | 15.54 | 2.14 | 40.32 | 13.05 |
| *McClure-9* | 3592 | 163.2 | 2.9 | 1552 | 2540 | 228.7 | 761 | 85.6 | 37.49 | 54.7 | 5.91 | 31.79 | 5.8 | 15.27 | 1.87 | 10.88 | 1.59 | 43 | 14.54 |
| *McClure-10* | 3527 | 202.4 | 4.15 | 1628 | 2774 | 255.1 | 873 | 103.2 | 39.86 | 68.3 | 7.4 | 39.32 | 7.19 | 18.67 | 2.4 | 14 | 1.862 | 33.92 | 14.1 |
| *McClure-11* | 3163 | 273.3 | 3.66 | 2155 | 3777 | 335 | 1132 | 132.9 | 52 | 87 | 9.52 | 51.8 | 9.6 | 25.82 | 3.32 | 19.63 | 2.64 | 110.5 | 31.67 |
| *McClure-12* | 4136 | 251.8 | 2.82 | 1260 | 2381 | 253.6 | 993 | 135.8 | 32.11 | 96.5 | 10.7 | 54.7 | 9.67 | 23.28 | 2.64 | 13.6 | 1.8 | 24.61 | 9.7 |
| *McClure-13* | 3913 | 130.5 | 4.45 | 1517 | 2273 | 197.9 | 667 | 76 | 30.57 | 50.6 | 5.11 | 26.5 | 4.88 | 11.44 | 1.415 | 8.51 | 1.348 | 53 | 15.9 |
| *McClure-14* | 4656 | 235.9 | 4.79 | 1407 | 2626 | 266.6 | 992 | 128.4 | 34.44 | 87.7 | 9.77 | 50.2 | 8.64 | 22.03 | 2.63 | 13.75 | 1.717 | 23.19 | 9.11 |
| *McClure-15* | 3724 | 143 | 3.24 | 1667 | 2490 | 211.4 | 691.7 | 73.5 | 40 | 49.4 | 4.93 | 25.88 | 4.85 | 12.45 | 1.539 | 9.91 | 1.68 | 52.36 | 15.96 |
| *McClure-16* | 3965 | 299.7 | 6.17 | 2219 | 3767 | 326.2 | 1093 | 127.5 | 61.6 | 84.5 | 9.52 | 50.9 | 9.72 | 27.51 | 3.89 | 24.53 | 3.34 | 83.5 | 28.1 |
| *McClure-17* | 3797 | 82.9 | 3.3 | 1324 | 1781 | 139.4 | 429.8 | 41.3 | 20.29 | 26.9 | 2.81 | 14.18 | 2.74 | 7.54 | 0.932 | 5.9 | 1.024 | 43.5 | 14.08 |
| *McClure-18* | 3279 | 258.9 | 4.14 | 2275 | 4011 | 346 | 1165 | 134.3 | 68.9 | 84.5 | 9.31 | 49.5 | 8.9 | 23.75 | 3.09 | 17.75 | 2.52 | 82.1 | 27.68 |
| *McClure-19* | 3623 | 180.8 | 3.19 | 1496 | 2482 | 225.1 | 759.2 | 86.9 | 34.8 | 57.7 | 6.27 | 33.46 | 6.23 | 16.22 | 2.24 | 13.44 | 1.826 | 41.91 | 16.9 |
| | | | | | | | | | | | | | | | | | | | |
| *OD306-1* | 208.2 | 1230 | 0.6 | 2627 | 7370 | 757 | 2785 | 373.7 | 45.2 | 280.6 | 33.63 | 196.9 | 39.2 | 109.7 | 14.81 | 94 | 14.62 | 73.1 | 18.53 |
| *OD306-2* | 202 | 1178 | 0.171 | 2438 | 6934 | 714.9 | 2648 | 351.9 | 43.31 | 263.4 | 32.32 | 187.2 | 37.01 | 103.2 | 13.8 | 88.4 | 14.1 | 64.2 | 18.02 |
| *OD306-3* | 205.1 | 1416 | 0.211 | 2596 | 7390 | 780 | 2925 | 408.7 | 46.4 | 311.3 | 38.28 | 228 | 45.68 | 127.3 | 17.14 | 106.6 | 16.65 | 73.3 | 19.98 |
| *OD306-4* | 200.8 | 1484 | 0.28 | 2702 | 7655 | 804.7 | 3018 | 424.6 | 47.9 | 327.2 | 40.88 | 241 | 48.25 | 134.4 | 18 | 113.8 | 17.18 | 78.5 | 21.11 |
| *OD306-5* | 200.5 | 1320 | 0.145 | 2724 | 7610 | 790 | 2927 | 394.5 | 47.16 | 296.5 | 36.45 | 210.9 | 42.26 | 119 | 15.68 | 100.8 | 15.73 | 77 | 20.2 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *OD306-6* | 195.7 | 1200 | 0.182 | 2569 | 7256 | 753.8 | 2776 | 372.9 | 45.39 | 272 | 32.72 | 193.1 | 38.28 | 107.8 | 14.24 | 92.8 | 14.6 | 70.17 | 18.77 |
| *OD306-7* | 200.9 | 1319 | 0.34 | 2457 | 6991 | 734 | 2741 | 386 | 43.86 | 293.3 | 36.29 | 212 | 42.49 | 117.8 | 15.88 | 100.9 | 15.43 | 70.3 | 19.47 |
| *OD306-8* | 198 | 1420 | 0.36 | 2598 | 7418 | 780 | 2931 | 413.5 | 45.92 | 311.6 | 39.08 | 231.7 | 45.74 | 128.8 | 16.88 | 108.2 | 16.7 | 75.3 | 20.55 |
| *OD306-9* | 231 | 1191 | 0.254 | 2474 | 6900 | 723 | 2658 | 361 | 43.6 | 267.8 | 32.7 | 189.7 | 38.3 | 106.6 | 14.15 | 89.5 | 14.25 | 69.4 | 18.04 |
| *OD306-10* | 196.6 | 1228 | 0.235 | 2659 | 7436 | 764.7 | 2781 | 373.4 | 45.29 | 276.8 | 33.61 | 197.6 | 38.86 | 109.5 | 14.94 | 95.1 | 14.9 | 72.5 | 18.93 |
| *OD306-11* | 198.1 | 1215 | 0.167 | 2392 | 6805 | 713.2 | 2644 | 365.2 | 42.96 | 272.7 | 33.28 | 192.8 | 38.39 | 107.2 | 14.54 | 90.6 | 14.21 | 63.81 | 18.32 |
| *OD306-12* | 198.5 | 1393 | 0.199 | 2562 | 7327 | 770.8 | 2858 | 397.4 | 45.22 | 304.2 | 37.55 | 224.5 | 44.49 | 125.2 | 16.78 | 104.4 | 16.2 | 73.62 | 20.04 |
| *OD306-13* | 208.5 | 1110 | 0.62 | 2396 | 6740 | 700 | 2599 | 347.2 | 43 | 257.6 | 30.81 | 180.8 | 36.12 | 99.7 | 13.42 | 85.3 | 13.46 | 64.9 | 18.11 |
| *OD306-14* | 198.8 | 1305 | 0.208 | 2747 | 7727 | 798 | 2923 | 394 | 48.03 | 293.6 | 36.43 | 212.5 | 41.78 | 119.5 | 15.88 | 101.5 | 15.95 | 78.9 | 20.29 |
| *OD306-15* | 193.5 | 1190 | 0.149 | 2510 | 7124 | 733.9 | 2696 | 361.8 | 45.09 | 273.2 | 32.98 | 193.3 | 38.6 | 106.1 | 14 | 90.3 | 14.46 | 67.03 | 18.77 |
| *OD306-16* | 199.9 | 1354 | 0.22 | 2484 | 7140 | 748.3 | 2815 | 393.8 | 45.54 | 300.2 | 37.03 | 219.7 | 43.77 | 122 | 16.32 | 104.3 | 15.83 | 71.36 | 19.58 |
| *OD306-17* | 194.1 | 1096 | 1.69 | 2396 | 6780 | 699 | 2568 | 337.3 | 42.14 | 250.4 | 30.28 | 175.5 | 35.14 | 97.8 | 13.17 | 82.9 | 13.41 | 64.7 | 17.87 |
| *OD306-18* | 199.2 | 1299 | 0.246 | 2663 | 7576 | 778.4 | 2870 | 387.2 | 46.59 | 292.5 | 35.76 | 210.1 | 41.53 | 116.8 | 15.71 | 100 | 15.87 | 79.28 | 20.03 |
| *OD306-19* | 196.4 | 1229 | 0.3 | 2640 | 7394 | 767 | 2804 | 373.7 | 45.15 | 279.9 | 33.75 | 198.1 | 39.42 | 110.5 | 14.71 | 94.1 | 15.06 | 73.3 | 19.3 |
| *OD306-20* | 197.7 | 1230 | 0.37 | 2400 | 6855 | 716.2 | 2662 | 369.7 | 42.8 | 273.8 | 34.22 | 201.5 | 39.39 | 109.5 | 14.85 | 91.4 | 14.5 | 65.22 | 18.68 |
| *OD306-21* | 224.4 | 1601 | 0.62 | 3883 | 9890 | 998 | 3608 | 484.5 | 55.15 | 356.5 | 43.99 | 260.3 | 51.72 | 144.5 | 19.05 | 122.3 | 18.83 | 140.1 | 29.28 |
| *OD306-22* | 231.5 | 1612 | 0.47 | 3912 | 10060 | 1007 | 3646 | 487.9 | 55 | 361 | 45.13 | 261.6 | 52.78 | 146.7 | 19.75 | 122.5 | 19.19 | 140.8 | 29.77 |
| *OD306-23* | 233.5 | 1609 | 0.48 | 3893 | 9970 | 1000 | 3628 | 480.1 | 55.5 | 364 | 44.15 | 261.1 | 52.22 | 145.9 | 19.45 | 122.4 | 19.17 | 139.3 | 29.35 |
| *OD306-24* | 232.6 | 1618 | 0.5 | 3845 | 9950 | 1001 | 3619 | 484 | 55.35 | 359.5 | 44.58 | 260 | 51.73 | 144.6 | 19.29 | 120.5 | 19.19 | 139.7 | 29.39 |
| *OD306-25* | 231.3 | 1602 | 0.46 | 3818 | 9910 | 997 | 3620 | 482.1 | 55.1 | 353.1 | 44.32 | 256.5 | 51.72 | 143.2 | 19.25 | 120.2 | 18.91 | 139 | 29.4 |
| *OD306-26* | 228.5 | 1624 | 0.51 | 3884 | 10100 | 1006 | 3658 | 487.6 | 56.4 | 362.6 | 44.34 | 262.7 | 52.4 | 145.8 | 19.95 | 124.5 | 19.14 | 140.6 | 29.75 |
| *OD306-27* | 230.6 | 1613 | 0.43 | 3891 | 9980 | 1000 | 3632 | 484.8 | 55.6 | 363.8 | 44.46 | 262.6 | 52.6 | 145.4 | 19.97 | 122.3 | 19.12 | 140.1 | 29.37 |
| *OD306-28* | 230.6 | 1611 | 0.47 | 3840 | 9880 | 1001 | 3637 | 489.1 | 55.89 | 361.3 | 44.32 | 261.3 | 52.1 | 144.6 | 19.53 | 120.6 | 18.89 | 139.6 | 29.26 |
| *OD306-29* | 231.2 | 1595 | 0.6 | 3840 | 9890 | 991 | 3597 | 479.9 | 56.1 | 355.7 | 43.91 | 260.4 | 51.8 | 144.1 | 19.56 | 123.1 | 18.74 | 139.1 | 29.37 |
| *OD306-30* | 227.8 | 1569 | 0.43 | 3822 | 9790 | 984 | 3579 | 478.9 | 54.8 | 352.2 | 43.72 | 257 | 51.72 | 143.2 | 19.19 | 119.2 | 18.69 | 137.9 | 28.97 |
| *OD306-31* | 227.8 | 1595 | 0.86 | 3908 | 9910 | 994 | 3642 | 488 | 55.5 | 363.6 | 44.67 | 262 | 51.72 | 145 | 19.8 | 122.1 | 19.34 | 141.2 | 29.48 |
| *OD306-32* | 224.5 | 1579 | 0.5 | 3810 | 9730 | 977 | 3563 | 476.1 | 54.1 | 356.7 | 44.17 | 256.7 | 51.48 | 142.1 | 19.18 | 118.9 | 18.48 | 137.4 | 28.74 |
| *OD306-33* | 227.3 | 1597 | 0.61 | 3823 | 9820 | 985 | 3575 | 473.7 | 53.95 | 351.7 | 44.3 | 259.4 | 51.26 | 142.2 | 19.39 | 119.5 | 18.53 | 137.6 | 28.84 |
| *OD306-34* | 227.2 | 1590 | 0.47 | 3825 | 9780 | 983.1 | 3590 | 476.8 | 54.8 | 355.9 | 43.8 | 256.5 | 50.35 | 141 | 19.2 | 119.3 | 18.74 | 137.2 | 28.98 |
| *OD306-35* | 228.5 | 1583 | 0.37 | 3790 | 9750 | 976 | 3533 | 475 | 54.14 | 353.2 | 43.19 | 256.7 | 50.38 | 142 | 19 | 118 | 18.45 | 136.6 | 28.74 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *OD306-36* | 228.6 | 1626 | 0.36 | 3922 | 10050 | 1006 | 3660 | 490.9 | 56 | 365.9 | 44.39 | 265.9 | 52.32 | 147.1 | 20.02 | 123 | 19.24 | 141.2 | 29.7 |
| *OD306-37* | 229.3 | 1607 | 0.53 | 3864 | 9960 | 998 | 3615 | 482.2 | 55.4 | 358.3 | 44.07 | 258.8 | 52.4 | 145.4 | 19.59 | 121.8 | 19.09 | 139.8 | 29.45 |
| *OD306-38* | 231.4 | 1628 | 0.35 | 3866 | 9990 | 999 | 3623 | 489.4 | 55.8 | 359.7 | 44.72 | 259.7 | 52.27 | 143.9 | 19.82 | 118.7 | 18.83 | 139.3 | 29.16 |
| | | | | | | | | | | | | | | | | | | | |
| *401-1* | 457.1 | 1495 | 0.51 | 3807 | 9089 | 861.9 | 3068 | 440.3 | 42.66 | 354.8 | 44.05 | 254.7 | 48.61 | 129.9 | 16.14 | 87.7 | 10.48 | 112.8 | 14 |
| *401-2* | 452.8 | 1486 | 0.42 | 3797 | 9027 | 848.9 | 3047 | 440.6 | 43.36 | 353.5 | 43.76 | 250.4 | 48.27 | 127.6 | 16.04 | 88.4 | 10.36 | 112.8 | 13.98 |
| *401-3* | 461 | 1483 | 0.45 | 3842 | 9070 | 866 | 3086 | 448.8 | 43.85 | 355.2 | 44.47 | 255.9 | 48.33 | 131.4 | 16.11 | 88 | 10.46 | 115.1 | 14.3 |
| *401-4* | 458.6 | 1485 | 0.43 | 3807 | 9050 | 862 | 3089 | 445.3 | 43.58 | 363.5 | 44.56 | 256.2 | 49.2 | 131.7 | 16.44 | 89 | 10.55 | 114.3 | 14.27 |
| *401-5* | 455.2 | 1499 | 0.48 | 3819 | 9030 | 863 | 3067 | 447.5 | 43.41 | 359.6 | 44.33 | 255.5 | 49.46 | 130.2 | 16.27 | 88.9 | 10.75 | 114.7 | 14.17 |
| *401-6* | 452.9 | 1493 | 0.63 | 3814 | 8970 | 863 | 3072 | 443.6 | 43.4 | 354.5 | 43.83 | 254.1 | 48.67 | 128.8 | 16.12 | 88.8 | 10.58 | 115.1 | 14.05 |
| *401-7* | 450.6 | 1471 | 0.43 | 3732 | 8933 | 849.9 | 3049 | 444.7 | 42.39 | 351.9 | 44.15 | 252.4 | 48.41 | 128.4 | 15.82 | 87.1 | 10.46 | 113 | 13.82 |
| *401-8* | 449.9 | 1456 | 0.53 | 3741 | 8910 | 848.3 | 3027 | 440 | 42.59 | 350.8 | 43.72 | 249.9 | 48.29 | 130.1 | 15.97 | 86.7 | 10.55 | 113 | 14.1 |
| *401-9* | 452.3 | 1462 | 0.51 | 3738 | 8890 | 850 | 3022 | 440.6 | 42.9 | 352.9 | 43.24 | 250.3 | 48.57 | 127.4 | 15.85 | 86.2 | 10.33 | 113.5 | 13.77 |
| *401-10* | 452.8 | 1455 | 0.43 | 3743 | 8780 | 841 | 2986 | 435 | 42.82 | 352.2 | 43.53 | 248.6 | 47.86 | 128 | 16.01 | 86.4 | 10.25 | 114.7 | 13.94 |
| *401-11* | 447.8 | 1458 | 0.45 | 3723 | 8856 | 849 | 3009 | 439.1 | 42.22 | 351 | 43.34 | 250.2 | 48.56 | 128.4 | 15.87 | 87.2 | 10.48 | 116.5 | 13.91 |
| *401-12* | 452.9 | 1463 | 0.58 | 3696 | 8822 | 847.2 | 2991 | 437.7 | 42.3 | 346.4 | 43.28 | 251.1 | 48.04 | 128.4 | 15.83 | 86.3 | 10.24 | 116.5 | 14.19 |
| *401-13* | 460 | 1467 | 0.4 | 3825 | 9100 | 866 | 3083 | 451.1 | 43.83 | 361 | 44.5 | 258.1 | 48.74 | 131.1 | 16.19 | 87.6 | 10.54 | 120.3 | 14.45 |
| *401-14* | 465.8 | 1515 | 0.43 | 3878 | 9120 | 873.2 | 3112 | 446.5 | 44.14 | 364.7 | 44.81 | 260.4 | 50.16 | 133.4 | 16.63 | 90.6 | 10.97 | 122 | 14.9 |
| *401-15* | 454.5 | 1461 | 0.43 | 3711 | 8850 | 839.8 | 3013 | 439.6 | 42.07 | 351.7 | 43.6 | 249.8 | 48.41 | 129.3 | 15.72 | 87.4 | 10.41 | 117.3 | 14.13 |
| *401-16* | 454.3 | 1466 | 0.42 | 3735 | 8880 | 845.3 | 3040 | 442.6 | 43.4 | 353.7 | 43.75 | 254.3 | 48.8 | 129.7 | 16.15 | 88.8 | 10.35 | 118.1 | 14.51 |
| *401-17* | 450.9 | 1458 | 0.4 | 3691 | 8860 | 833 | 2999 | 440.4 | 42.38 | 348.6 | 42.77 | 251 | 47.95 | 127.5 | 15.89 | 85.7 | 10.26 | 117.6 | 14.56 |
| *401-18* | 452.5 | 1468 | 0.41 | 3733 | 8890 | 850 | 3014 | 435.1 | 42.09 | 352.1 | 43.07 | 251.6 | 48.15 | 128.5 | 16.01 | 86.9 | 10.67 | 117.3 | 14.09 |
| *401-19* | 455.8 | 1460 | 0.48 | 3697 | 8860 | 845 | 3000 | 437.4 | 42.61 | 350.4 | 43.43 | 251.1 | 48.77 | 127.7 | 16.16 | 87.9 | 10.21 | 116.4 | 14.17 |
| *401-20* | 454.2 | 1461 | 0.45 | 3729 | 8870 | 847 | 3025 | 435.2 | 42.64 | 353 | 43.52 | 253.9 | 48.56 | 129 | 16.22 | 89.5 | 10.54 | 116.4 | 14.24 |
| *401-21* | 451.9 | 1475 | 0.44 | 3683 | 8880 | 846 | 3029 | 437 | 41.33 | 348.5 | 44.13 | 252.4 | 48.77 | 129.8 | 16.35 | 85.9 | 10.5 | 117.5 | 14.27 |
| *401-22* | 444.5 | 1456 | 0.48 | 3596 | 8700 | 834 | 2976 | 435.4 | 41.7 | 349.7 | 43.28 | 250.8 | 47.77 | 127.2 | 16.39 | 85.8 | 10.38 | 115.2 | 13.97 |
| *401-23* | 454.1 | 1474 | 0.41 | 3717 | 8880 | 842.8 | 3006 | 438.9 | 43.03 | 353.8 | 43.65 | 250.5 | 48.71 | 128.4 | 16.15 | 86.4 | 10.25 | 117.4 | 14.13 |
| *401-24* | 453.6 | 1463 | 0.63 | 3699 | 8855 | 843.3 | 3006 | 431.5 | 42.72 | 349.7 | 43.32 | 250.1 | 48.25 | 129.4 | 15.85 | 87.3 | 10.56 | 116.1 | 14.11 |
| *401-25* | 456.5 | 1486 | 0.66 | 3759 | 8980 | 855.2 | 3059 | 441.4 | 42.68 | 354 | 44.12 | 253.7 | 48.38 | 128.4 | 16.25 | 87.6 | 10.75 | 117 | 14 |
| *401-26* | 459.1 | 1490 | 0.5 | 3795 | 8970 | 854 | 3047 | 439.4 | 42.9 | 354.4 | 44.29 | 254.2 | 48.75 | 130.8 | 16.06 | 88.1 | 10.66 | 117.4 | 14.2 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *401-27* | 452.6 | 1467 | 0.53 | 3721 | 8890 | 840 | 3007 | 434.9 | 41.73 | 349.9 | 43.97 | 251.6 | 48.55 | 127.3 | 16.22 | 87.9 | 10.42 | 116.7 | 14.09 |
| *401-28* | 445.5 | 1450 | 0.49 | 3647 | 8780 | 836 | 2982 | 430.7 | 42.27 | 349.7 | 43.05 | 246.7 | 47.84 | 128.3 | 15.95 | 85.2 | 10.32 | 115.7 | 13.96 |
| *401-29* | 450.1 | 1441 | 0.55 | 3670 | 8790 | 828 | 2971 | 429.3 | 42.3 | 348.7 | 43.39 | 248.8 | 47.76 | 126.7 | 15.66 | 86.2 | 10.18 | 115.5 | 14.21 |
| *401-30* | 451.2 | 1465 | 0.44 | 3675 | 8820 | 840 | 3001 | 437.9 | 41.93 | 345.1 | 43.93 | 248.5 | 48.12 | 127.6 | 15.8 | 86.9 | 10.58 | 116.4 | 14.14 |
| *401-31* | 454.8 | 1466 | 0.51 | 3762 | 8900 | 846 | 3023 | 437.5 | 43.06 | 355.5 | 44.02 | 250.9 | 48.25 | 128.3 | 15.94 | 87.2 | 10.58 | 117.9 | 14.32 |
| *401-32* | 448.1 | 1456 | 0.58 | 3645 | 8770 | 834 | 2982 | 435.3 | 41.41 | 347.7 | 43.16 | 249.1 | 47.61 | 127.5 | 15.87 | 86.3 | 10.27 | 115.7 | 14.04 |
| *401-33* | 462.4 | 1476 | 0.47 | 3772 | 8950 | 843 | 3020 | 437.1 | 42.8 | 351.1 | 43.69 | 250.8 | 48.52 | 127.9 | 16.26 | 87.2 | 10.44 | 116.4 | 14.1 |
| *401-34* | 458.3 | 1473 | 0.49 | 3751 | 8880 | 844 | 3008 | 438.1 | 42.51 | 349.9 | 43.56 | 251.6 | 48.78 | 129.3 | 15.95 | 85.6 | 10.51 | 117.1 | 14.11 |
| *401-35* | 454 | 1464 | 0.51 | 3702 | 8810 | 835 | 2982 | 437.9 | 42.17 | 345.2 | 43.62 | 247 | 48.15 | 127.9 | 15.55 | 85.4 | 10.48 | 115.1 | 13.9 |
| *401-36* | 447.5 | 1460 | 0.39 | 3648 | 8720 | 829.7 | 2977 | 430.3 | 42.31 | 344.6 | 43.02 | 247.2 | 47.42 | 126 | 15.69 | 85.5 | 10.62 | 113.8 | 13.85 |
| *401-37* | 456.5 | 1471 | 0.5 | 3713 | 8900 | 844 | 3003 | 439.2 | 42.2 | 348.5 | 43.61 | 249.1 | 48.23 | 127.3 | 15.88 | 85.6 | 10.46 | 115.6 | 14.11 |
| *401-38* | 452.2 | 1469 | 0.58 | 3716 | 8900 | 841 | 3004 | 432.2 | 42.24 | 345.7 | 43.1 | 248.7 | 48.27 | 127.2 | 15.74 | 87.8 | 10.34 | 115.6 | 14.07 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-17A-19* | 289 | 1393 | 0.59 | 160 | 549 | 96.8 | 611 | 253.8 | 26.5 | 338 | 48.2 | 275.1 | 48.2 | 118.4 | 14.82 | 82.7 | 9.71 | 7.37 | 5.18 |
| *I16-17A-20* | 283.8 | 1541 | 0.149 | 143.1 | 491 | 88 | 566 | 247.6 | 28.34 | 347.2 | 51 | 301.2 | 53 | 131.4 | 16.53 | 92.8 | 10.95 | 9.25 | 5.8 |
| *I16-17A-21* | 286.2 | 1264 | 0.158 | 109.4 | 384 | 70.8 | 474 | 210.9 | 25.67 | 299.5 | 43.4 | 253.7 | 44.2 | 112 | 13.7 | 74.9 | 9.04 | 9.42 | 6.44 |
| *I16-17A-23* | 290.6 | 1261 | 145 | 102.2 | 358 | 65.1 | 432 | 197.3 | 24.43 | 283 | 42.15 | 249 | 43.76 | 110.8 | 13.62 | 75 | 8.89 | 7.32 | 4.24 |
| *I16-17A-24* | 258.5 | 805 | 0.37 | 11.82 | 38.23 | 7.5 | 57.7 | 48 | 26.68 | 117.9 | 21.16 | 145 | 28.05 | 73.3 | 8.79 | 47.1 | 6.15 | 5.06 | 5.22 |
| *I16-17A-25* | 297.2 | 1726 | 0.23 | 89.6 | 319 | 59.9 | 413 | 213 | 33 | 344 | 53.9 | 327 | 59.9 | 153.3 | 19.16 | 107.3 | 12.97 | 17.3 | 8.72 |
| *I16-17A-26* | 284.4 | 1570 | 0.23 | 203.8 | 700 | 122 | 762 | 310.4 | 30.69 | 390.9 | 54.9 | 316.3 | 53.3 | 131 | 16.5 | 91.6 | 11.2 | 12.52 | 7.34 |
| *I16-17A-27* | 286.4 | 1587 | 0.128 | 109.5 | 367.6 | 65.2 | 428 | 209.2 | 30.08 | 328.5 | 50.12 | 305 | 54.85 | 139.1 | 17.44 | 97.7 | 11.45 | 9.13 | 7.74 |
| *I16-17A-28* | 298.1 | 854 | 3.8 | 24.6 | 81.4 | 16 | 121 | 76.5 | 22.7 | 153.3 | 25.2 | 160 | 30.2 | 76.3 | 9.35 | 51.8 | 6.61 | 5.68 | 7.01 |
| *I16-17A-29* | 289.1 | 1457 | 0.207 | 101.2 | 334.2 | 59.5 | 399.9 | 198.9 | 27.52 | 309.2 | 47.13 | 282.4 | 50.1 | 127.1 | 16.07 | 88.9 | 10.54 | 8.68 | 5.87 |
| *I16-17A-30* | 303 | 1060 | 420 | 187 | 641 | 107.9 | 656 | 241 | 24.09 | 291 | 39.5 | 215.6 | 38.1 | 91 | 10.87 | 61.6 | 7.22 | 8.77 | 5.16 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-07A-2* | 154.7 | 3255 | 0.068 | 178 | 640 | 111.3 | 677 | 303.2 | 22.5 | 467.5 | 87.3 | 611 | 118.8 | 316.1 | 39.15 | 210.8 | 24.65 | 7.49 | 9.04 |
| *I16-07A-3* | 165.6 | 3421 | 0 | 227.6 | 775.8 | 130.6 | 764 | 317.8 | 21.51 | 481.3 | 89.7 | 622.1 | 123.1 | 329.3 | 41.3 | 224.4 | 26.11 | 6.97 | 8.02 |
| *I16-07A-4* | 167.2 | 3548 | 0 | 316.7 | 1071 | 173.5 | 943 | 359.3 | 20.29 | 510.9 | 94 | 652.6 | 131.4 | 347.8 | 42.74 | 224.6 | 26.11 | 6.99 | 9.42 |
| *I16-07A-5* | 156 | 3433 | 0.081 | 175.2 | 608 | 102 | 609 | 277.2 | 25.7 | 460.9 | 87.8 | 622.5 | 125.4 | 329.9 | 40.86 | 219.7 | 25.18 | 6.86 | 9.28 |
| *I16-07A-6* | 160.3 | 3366 | 0.072 | 190.6 | 674 | 117.8 | 724 | 322.4 | 23.86 | 498 | 92.4 | 636 | 123.8 | 321.1 | 40.2 | 216.2 | 24.99 | 10.91 | 10.01 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-07A-7* | 156.9 | 3151 | 410 | 174.9 | 615 | 106.1 | 657 | 296 | 24 | 470 | 85.3 | 591 | 118.5 | 308 | 37.9 | 204 | 23.1 | 9.91 | 10.9 |
| *I16-07A-8* | 155 | 3048 | 0 | 157.2 | 566.7 | 98.1 | 591 | 265.2 | 22.75 | 427.4 | 80.5 | 562.8 | 111.1 | 293.3 | 35.93 | 194 | 22.04 | 5.85 | 8 |
| *I16-07A-9* | 158.5 | 3185 | 0.055 | 148.2 | 526 | 90.7 | 557 | 263.2 | 23.32 | 439 | 83.5 | 594 | 115.8 | 308 | 38.3 | 202.4 | 22.94 | 7.7 | 9.84 |
| *I16-07A-10* | 160.6 | 3297 | 0.046 | 237.4 | 797 | 130.8 | 758 | 311 | 21.55 | 470.5 | 87.2 | 606 | 120.8 | 319.6 | 40.47 | 217.1 | 25.3 | 8.86 | 8.77 |
| *I16-07A-11* | 157.6 | 2781 | 0.089 | 168.8 | 564.6 | 93.4 | 552.2 | 241.5 | 20.71 | 394.9 | 73 | 511 | 101 | 265.2 | 32.46 | 175.5 | 20.32 | 4.7 | 6.64 |
| *I16-07A-12* | 46 | 800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.8 | 40 | 12.9 | 52 | 7.8 | 73 | 6.8 | 0 | 0 |
| *I16-07A-13* | 262.1 | 2292 | 0.096 | 115.5 | 393 | 68 | 426.2 | 207.2 | 16.11 | 345.1 | 63.6 | 440.6 | 86.2 | 222.6 | 27.06 | 142.9 | 16.36 | 4.5 | 4.88 |
| *I16-07A-15* | 227.7 | 2252 | 0 | 113.5 | 390.3 | 65.9 | 404.7 | 195.8 | 17.51 | 325.9 | 60.8 | 422.6 | 81.9 | 214.7 | 25.84 | 139.5 | 16.3 | 4.24 | 5.8 |
| *I16-07A-16* | 166.9 | 3145 | 0.085 | 154.9 | 549.4 | 97.1 | 604 | 281.8 | 26.46 | 457 | 85.9 | 597 | 116.4 | 299.2 | 37.7 | 201.2 | 23.1 | 9.37 | 10.18 |
| *I16-07A-17* | 177.1 | 2724 | 0 | 155.1 | 559.3 | 97.4 | 585 | 260.6 | 21.42 | 413 | 76 | 530 | 100.8 | 261.8 | 31.87 | 167.7 | 19.13 | 10.09 | 8.01 |
| *I16-07A-18* | 154.8 | 2978 | 57 | 171 | 573.6 | 96.2 | 569 | 250.3 | 21.31 | 412.6 | 77.3 | 549 | 108.9 | 285.4 | 35.15 | 190.1 | 21.73 | 5.84 | 7.45 |
| *I16-07A-19* | 191.3 | 2894 | 0.094 | 267.9 | 940 | 154.7 | 868 | 326.5 | 19.09 | 463.2 | 82.8 | 557.6 | 109.1 | 282.3 | 34.29 | 180.2 | 20.62 | 7.56 | 7.99 |
| *I16-07A-20* | 152.3 | 2537 | 144 | 160.5 | 553.8 | 93.9 | 574.9 | 253.9 | 21.78 | 396.9 | 71.2 | 485.3 | 92.3 | 236.1 | 28.69 | 151.4 | 16.82 | 3.96 | 5.28 |
| *I16-07A-21* | 159.2 | 3424 | 0.201 | 285.6 | 962 | 159.2 | 908 | 360.6 | 22.98 | 521.5 | 95.4 | 653.7 | 127 | 333.7 | 41.41 | 222.9 | 26.24 | 14.52 | 10.21 |
| *I16-07A-22* | 174.9 | 3389 | 0 | 323.1 | 1065 | 169 | 917 | 350.4 | 19.52 | 496.5 | 90.5 | 632 | 125.2 | 331.9 | 40.99 | 218.1 | 25.27 | 8.89 | 9.03 |
| *I16-07A-23* | 168.6 | 3374 | 0.028 | 241.2 | 793 | 128.7 | 735 | 309.2 | 22.54 | 482.5 | 89.2 | 618.6 | 123.3 | 325.2 | 39.91 | 216.1 | 25.09 | 5.75 | 6.73 |
| *I16-07A-24* | 184.2 | 2629 | 70 | 97.8 | 373 | 68 | 434.5 | 217.1 | 20.98 | 379.1 | 71.9 | 496.6 | 96.8 | 251.1 | 30.41 | 162.5 | 18.34 | 4.89 | 5.42 |
| *I16-07A-25* | 148.6 | 3368 | 0 | 176.9 | 635 | 112.4 | 680 | 306 | 24.74 | 490 | 90.2 | 626 | 123.3 | 323.7 | 39.81 | 209 | 24.28 | 7.35 | 8.2 |
| *I16-07A-26* | 151.4 | 3178 | 0 | 124.2 | 476.1 | 86.5 | 543 | 258.8 | 21.5 | 432.9 | 81.8 | 578.1 | 116.3 | 309.1 | 37.37 | 195.5 | 22.72 | 4.34 | 5.45 |
| *I16-07A-28* | 162.1 | 3505 | 120 | 163.7 | 583 | 99.6 | 607 | 280.5 | 24.25 | 467 | 89.7 | 643 | 127.7 | 343.5 | 42.3 | 227 | 26.29 | 12.74 | 12.79 |
| *I16-07A-29* | 162.7 | 3017 | 61 | 159.2 | 598.5 | 109.2 | 694.2 | 312.8 | 23.81 | 471.3 | 86.3 | 584.7 | 112.4 | 290.7 | 35.85 | 188.5 | 21.29 | 6.81 | 9.45 |
| *I16-07A-30* | 161.3 | 2954 | 16 | 195.5 | 671 | 112.7 | 680 | 290.1 | 20.29 | 460 | 83 | 563 | 108.5 | 277.4 | 34.1 | 180.7 | 21.32 | 7.07 | 8.41 |
| *I16-07A-31* | 155.6 | 2492 | 0.01 | 220.2 | 876 | 150.6 | 833 | 321 | 18.59 | 420 | 75.5 | 504 | 94.2 | 238.2 | 29.61 | 157.7 | 18.45 | 2.22 | 3.03 |
| *I16-07A-32* | 154.7 | 2730 | 0 | 184 | 637.2 | 107.3 | 635.8 | 266.4 | 19.3 | 406.6 | 74.3 | 513.1 | 100.8 | 263.3 | 32.91 | 173.7 | 19.91 | 4.73 | 6.6 |
| *I16-07A-33* | 149.3 | 2372 | 0 | 101.9 | 365.1 | 63.57 | 398.2 | 194.4 | 19.68 | 345.3 | 64.17 | 445.3 | 87.6 | 222.6 | 26.75 | 138.3 | 15.69 | 3.47 | 4.34 |
| *I16-07A-34* | 170.4 | 3252 | 0.142 | 131 | 471 | 84.4 | 530 | 267.5 | 25.7 | 465 | 87.3 | 617 | 120 | 311.1 | 37.92 | 201.5 | 23.25 | 8.93 | 8.86 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-18A-1* | 94.4 | 2960 | 0.075 | 274 | 995 | 165.1 | 897 | 454 | 60.1 | 638 | 120.7 | 734 | 117.4 | 281 | 36.3 | 215 | 25.8 | 27.1 | 42.1 |
| *I16-18A-2* | 101.2 | 2322 | 0 | 246.5 | 839 | 135 | 723 | 341.9 | 37.31 | 478 | 88.5 | 543 | 90.3 | 220.4 | 29.16 | 174.3 | 21.02 | 4.87 | 13.54 |
| *I16-18A-3* | 97.1 | 2500 | 0.128 | 290 | 1034 | 173.4 | 936 | 458 | 54.9 | 599 | 108.2 | 647 | 100.1 | 233.7 | 29.7 | 173.3 | 19.67 | 21 | 32.2 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-18A-4* | 99.8 | 2134 | 0.008 | 251.7 | 841 | 133.7 | 706 | 334.8 | 35.53 | 458.7 | 83.1 | 501.2 | 81.6 | 200.9 | 25.98 | 152.5 | 18.29 | 3.34 | 10.36 |
| *I16-18A-5* | 110.4 | 3870 | 0.39 | 334.6 | 1226 | 202.7 | 1105 | 562 | 56.7 | 770 | 145.5 | 900 | 149.6 | 378 | 51.5 | 316 | 38.7 | 26 | 30.26 |
| *I16-18A-6* | 104.5 | 2419 | 0 | 271.5 | 946 | 150.6 | 808 | 386.8 | 42.1 | 519.9 | 96.3 | 576.9 | 93.5 | 226.8 | 30.11 | 179.9 | 21.27 | 8.2 | 16.99 |
| *I16-18A-7* | 102.2 | 3200 | 0.103 | 310.4 | 1091 | 176.3 | 922 | 453 | 45.3 | 637 | 119.5 | 747 | 124.8 | 308 | 42.5 | 256.6 | 31.7 | 11.45 | 22.7 |
| *I16-18A-8* | 101.7 | 2401 | 0.045 | 247 | 848 | 134.6 | 710 | 337.5 | 37.62 | 484.5 | 90.6 | 557.3 | 90.9 | 224 | 29.61 | 178.2 | 21.99 | 4.27 | 11.42 |
| *I16-18A-9* | 94.5 | 1626 | 0 | 219.1 | 728 | 115 | 615 | 287.3 | 32.78 | 388.7 | 68.9 | 401 | 63.2 | 150.4 | 18.83 | 105.5 | 12.94 | 2.6 | 6.38 |
| *I16-18A-10* | 95.6 | 2620 | 0.049 | 251.4 | 933 | 158.5 | 872 | 446 | 49.8 | 598 | 108.9 | 651 | 105.1 | 251 | 33.1 | 191.9 | 22.8 | 18.3 | 29.9 |
| *I16-18A-11* | 96.1 | 2008 | 0 | 193.9 | 704 | 115 | 615.2 | 297 | 32.84 | 421.7 | 78.1 | 474.7 | 76.8 | 186.6 | 23.73 | 139 | 17.16 | 2.82 | 8.15 |
| *I16-18A-12* | 96.8 | 1952 | 0.038 | 188.8 | 687 | 112.9 | 616 | 308.9 | 31.68 | 421 | 77.1 | 462 | 75 | 181 | 23.42 | 136.9 | 16.23 | 2.68 | 7.36 |
| *I16-18A-13* | 143.5 | 2310 | 0.3 | 200 | 748 | 125.4 | 691 | 357 | 37 | 495 | 93.3 | 574 | 94.2 | 230 | 30.1 | 177 | 22 | 17.7 | 26.5 |
| *I16-18A-15* | 100.7 | 3200 | 0.117 | 320.5 | 1111 | 180.6 | 958 | 465 | 44.7 | 637 | 120.4 | 745 | 124.1 | 312.4 | 41.1 | 248.7 | 30.75 | 17.2 | 27.8 |
| *I16-18A-16* | 99.8 | 3197 | 0.25 | 331.1 | 1159 | 187 | 976 | 485 | 45.2 | 652 | 121.8 | 741 | 123.5 | 304 | 41.3 | 250 | 31 | 14.2 | 21.4 |
| *I16-18A-17* | 98.9 | 1868 | 0 | 217 | 767 | 125.2 | 673 | 326 | 37 | 425 | 76.3 | 461 | 70.9 | 176 | 22.78 | 136 | 17.03 | 4.15 | 8.49 |
| *I16-18A-18* | 100.6 | 2398 | 0.145 | 240.8 | 844 | 136.4 | 732 | 357 | 41 | 496 | 92.7 | 568 | 94 | 229.5 | 30.01 | 181.3 | 22.22 | 8.12 | 18 |
| *I16-18A-19* | 98.1 | 2560 | 0 | 254.5 | 940 | 157.3 | 853 | 421 | 47.1 | 567 | 104.5 | 628 | 100.9 | 244 | 31.7 | 190 | 22.3 | 12.3 | 23.3 |
| *I16-18A-20* | 100 | 1996 | 0 | 233.9 | 815.3 | 133.5 | 713.1 | 335.2 | 35.52 | 447 | 80.7 | 487.3 | 77.6 | 185.9 | 23.79 | 139.2 | 16.65 | 3.63 | 9.76 |
| *I16-18A-21* | 100.7 | 2484 | 0 | 269.7 | 920 | 145.7 | 757 | 368.8 | 36.35 | 501.9 | 92.3 | 571.2 | 95.2 | 236.9 | 31.46 | 185.9 | 23.14 | 5.09 | 11.62 |
| *I16-18A-22* | 100.4 | 1882 | 0 | 196 | 692 | 112.9 | 611 | 293.2 | 30.97 | 409.1 | 73.9 | 443.2 | 72 | 175.8 | 22.31 | 129.5 | 15.91 | 2.84 | 8.67 |
| *I16-18A-23* | 98.4 | 4020 | 0.63 | 406 | 1447 | 233 | 1226 | 601 | 61.1 | 816 | 155.5 | 946 | 155 | 388 | 53.2 | 326 | 39.9 | 29.7 | 26.3 |
| *I16-18A-24* | 97.6 | 1990 | 0 | 249.1 | 846 | 134.7 | 711 | 336.3 | 35.38 | 427.8 | 75.4 | 459 | 75.6 | 186.7 | 24.83 | 148.1 | 17.99 | 4.6 | 10.79 |
| *I16-18A-25* | 93 | 1554 | 0 | 185.7 | 628 | 103.7 | 571 | 273.9 | 31.7 | 373.8 | 65.4 | 382.2 | 61.7 | 143.8 | 17.87 | 97.1 | 11.51 | 2.09 | 5.04 |
| *I16-18A-26* | 98.4 | 2136 | 0 | 268.4 | 920 | 146 | 771 | 358.2 | 35.47 | 473 | 85.4 | 513.1 | 83 | 200.9 | 26.79 | 158.7 | 19.71 | 3.95 | 9.79 |
| *I16-18A-27* | 114.3 | 1892 | 0 | 197.1 | 693 | 112.1 | 615 | 299.1 | 28.09 | 415 | 75.7 | 455 | 75.1 | 181.3 | 22.94 | 131.6 | 15.68 | 4.8 | 10.45 |
| *I16-18A-28* | 104.5 | 2237 | 0 | 237.1 | 817 | 129.9 | 690 | 334.2 | 33.65 | 463.5 | 84.9 | 521.7 | 85.3 | 209.9 | 28.42 | 169.8 | 21 | 3.79 | 10.29 |
| *I16-18A-29* | 102.8 | 2238 | 0 | 234.5 | 816 | 131.7 | 700.4 | 333.4 | 35.44 | 462.5 | 83.7 | 511.1 | 86.3 | 213.6 | 27.85 | 164 | 20.07 | 3.92 | 9.38 |
| *I16-18A-30* | 97.3 | 2000 | 0.053 | 233 | 819 | 135.6 | 720 | 350 | 36.6 | 472 | 85.1 | 498 | 78.6 | 183 | 23.8 | 133.1 | 15.8 | 5.4 | 13.3 |
| *I16-18A-31* | 97.5 | 2590 | 0.136 | 303 | 1062 | 173.2 | 914 | 435 | 49.9 | 581 | 106.8 | 639 | 102.2 | 243 | 31.8 | 189 | 22.3 | 13.37 | 25 |
| *I16-18A-32* | 96.2 | 3720 | 0.44 | 339 | 1240 | 204.1 | 1094 | 555 | 57.8 | 759 | 144.3 | 884 | 144.5 | 355 | 47.9 | 289 | 35.1 | 28.1 | 36.7 |
| *I16-18A-33* | 95 | 1677 | 0 | 223.6 | 739 | 118.9 | 629 | 299.7 | 32.8 | 394.6 | 70 | 409.4 | 65.5 | 153.8 | 19.08 | 108.5 | 13.04 | 2.34 | 6.94 |
| *I16-18A-34* | 95.6 | 1616 | 0.04 | 196.6 | 675 | 110.2 | 595 | 291.7 | 33.45 | 384.7 | 68.6 | 405 | 62.9 | 147.7 | 18.73 | 107.1 | 12.97 | 2.95 | 7.46 |

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| *I16-18A-35* | 97.4 | 3036 | 0.124 | 289.1 | 1033 | 166.5 | 891 | 448.5 | 48.3 | 614.4 | 117.2 | 722 | 118.2 | 291.1 | 38.5 | 229.6 | 27.69 | 13.12 | 23.63 |
| *I16-18A-36* | 89.9 | 3170 | 0.306 | 268.8 | 1029 | 175 | 954 | 509 | 65 | 705 | 134 | 806 | 127.7 | 308 | 40.2 | 235 | 27.6 | 34.7 | 54.7 |
| *I16-18A-37* | 98.2 | 2205 | 0 | 252.2 | 862 | 135.6 | 708 | 332.5 | 33.8 | 458 | 85 | 521.1 | 85 | 209.1 | 27.43 | 163.2 | 20.52 | 4.21 | 10.07 |
| *I16-18A-38* | 112.5 | 1253 | 0 | 120.1 | 442.9 | 74.3 | 423.6 | 217.7 | 23.01 | 302.1 | 54.15 | 318 | 50.24 | 115.9 | 14.01 | 79.7 | 9.43 | 1.352 | 5.01 |
| *I16-32A-1* | 1004 | 667 | 0 | 12.94 | 40.71 | 8.65 | 63.6 | 49.3 | 10.6 | 107.1 | 19.27 | 123.1 | 22.52 | 57.3 | 7.5 | 44.1 | 5.5 | 0.827 | 0.322 |
| *I16-32A-2* | 683 | 2020 | 0 | 14.6 | 48.3 | 11.9 | 108.1 | 147 | 22.9 | 319 | 58.6 | 367 | 63.3 | 167 | 22.3 | 140 | 18.6 | 1.28 | 0.38 |
| *I16-32A-3* | 6.10E+03 | 5.50E+05 | 520 | 1.33E+05 | 6.80E+04 | 3.03E+04 | 1.30E+05 | 3.60E+04 | 5250 | 6.04E+04 | 1.19E+04 | 8.30E+04 | 1.91E+04 | 5.44E+04 | 8.70E+03 | 5.70E+04 | 8.00E+03 | 92 | 7.80E+04 |
| *I16-32A-4* | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value | no value |
| *I16-32A-5* | 728 | 941 | 0 | 7.24 | 30.87 | 6.56 | 50 | 48.5 | 11.72 | 124.9 | 24.34 | 173.1 | 32.68 | 86.7 | 11.44 | 70.5 | 8.91 | 0.347 | 0.37 |
| *I16-32A-6* | 684 | 2590 | 1.06 | 50.7 | 214 | 48.2 | 380 | 294 | 21.87 | 468 | 83.1 | 521 | 91.5 | 237 | 32.4 | 203.8 | 26 | 17.3 | 4.63 |
| *I16-32A-7* | 356 | 2110 | 3.24 | 22 | 60.4 | 15.8 | 121 | 119 | 12.78 | 238 | 41.6 | 266 | 54.2 | 158 | 21.2 | 140 | 21.9 | 7.14 | 1.8 |
| *CO17-58A-1* | 281.4 | 1561 | 0.3 | 105 | 643 | 157.5 | 1170 | 489 | 24.41 | 577 | 71.2 | 372.2 | 61.8 | 136.4 | 14.81 | 73.7 | 9.16 | 3.89 | 14.44 |
| *CO17-58A-2* | 247 | 1578 | 0.242 | 1033 | 2659 | 346.3 | 1598 | 434.2 | 17.86 | 451 | 61.1 | 344.4 | 61.6 | 150.7 | 16.81 | 89.2 | 11.37 | 1.68 | 6.93 |
| *CO17-58A-3* | 264.1 | 1319 | 0 | 424.3 | 1357 | 227.7 | 1302 | 429.2 | 18.1 | 467.6 | 58.79 | 308.3 | 50.97 | 114 | 11.68 | 56.5 | 6.68 | 0.788 | 8.69 |
| *CO17-58A-4* | 198.5 | 1520 | 0.132 | 191.7 | 880 | 175.1 | 1114 | 413.2 | 18.18 | 477 | 63 | 342 | 58.5 | 137.5 | 15.25 | 79.8 | 10.12 | 0.217 | 9.75 |
| *CO17-58A-5* | 277.6 | 1265 | 0.117 | 360.9 | 1273 | 220.9 | 1294 | 438.2 | 20.61 | 478.7 | 58.4 | 299.3 | 49.3 | 109.6 | 12.05 | 60.9 | 7.76 | 1.287 | 8.9 |
| *CO17-58A-6* | 269.5 | 1499 | 0.3 | 121.8 | 703.6 | 160.1 | 1102 | 449.2 | 23.5 | 519.8 | 66.04 | 349.8 | 59.5 | 133.6 | 14.7 | 73 | 9.13 | 0.151 | 11.46 |
| *CO17-58A-7* | 269.7 | 1540 | 0.29 | 241.7 | 1173 | 214.4 | 1239 | 452 | 20.71 | 498 | 64 | 346.6 | 60.5 | 140.2 | 16.31 | 88.5 | 11.31 | 0.008 | 7.84 |
| *CO17-58A-8* | 225.4 | 2140 | 0.43 | 5.20E+03 | 1.12E+04 | 1280 | 5.30E+03 | 1130 | 37.9 | 920 | 104 | 514 | 85.6 | 195.4 | 21.84 | 114.9 | 15.19 | 9.6 | 15.9 |
| *CO17-58A-9* | 280 | 1551 | 0.2 | 98.6 | 643.3 | 156 | 1127 | 462 | 26.62 | 540.6 | 69.3 | 364.1 | 61 | 135.5 | 14.94 | 74.4 | 9.19 | 0.12 | 16.27 |
| *CO17-58A-10* | 252.8 | 1527 | 0.212 | 1032 | 2944 | 415.6 | 2048 | 563.7 | 18.28 | 563.8 | 69.2 | 361.7 | 59.5 | 135 | 14.73 | 74.3 | 9.47 | 3.5 | 11.68 |
| *CO17-58A-11* | 264.7 | 1432 | 1.56 | 1071 | 2943 | 414 | 2061 | 569 | 19.72 | 565 | 67 | 342.9 | 57.2 | 128.1 | 14.11 | 71.9 | 8.88 | 6.16 | 12.99 |
| *CO17-58A-12* | 299.1 | 3920 | 3.22 | 1.05E+05 | 1.96E+05 | 18680 | 6.26E+04 | 7400 | 138.1 | 3790 | 316 | 1231 | 167 | 311.2 | 30.42 | 139.5 | 16.88 | 8620 | 323 |
| *CO17-58A-13* | 266.7 | 1404 | 0.093 | 90.6 | 516.5 | 119.5 | 844 | 366.5 | 21.68 | 444.1 | 58.1 | 319.8 | 54.27 | 124.4 | 14.04 | 72 | 9.16 | 0.0306 | 8.78 |
| *CO17-58A-14* | 281.1 | 1458 | 0.4 | 189.5 | 902 | 184.4 | 1214 | 469 | 28.55 | 533 | 66.3 | 341.8 | 57.5 | 128.5 | 14.22 | 71.6 | 9.18 | 2.63 | 12.55 |
| *CO17-58A-15* | 265.3 | 1574 | 0.24 | 225.8 | 1092 | 195.5 | 1089 | 384 | 21.67 | 433 | 59.1 | 338 | 61.2 | 150.5 | 17.4 | 92.9 | 11.84 | 0.0167 | 8.4 |
| *CO17-58A-16* | 271.7 | 1955 | 0.191 | 1125 | 2938 | 387.1 | 1813 | 514 | 21.56 | 545 | 73.8 | 417.9 | 75.3 | 183 | 21.35 | 113 | 14.09 | 1.348 | 11.25 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-58A-17* | 246.4 | 1839 | 0.303 | 509 | 1936 | 325.2 | 1816 | 572 | 23.74 | 603.5 | 77 | 414.1 | 71.4 | 164.8 | 18.75 | 96.2 | 12.3 | 2.65 | 14.84 |
| *CO17-58A-18* | 297.6 | 1806 | 0.251 | 418.3 | 1695 | 281.5 | 1502 | 468.9 | 22.8 | 514.3 | 69 | 392.5 | 69.4 | 169.5 | 19.43 | 104.1 | 13.3 | 0.995 | 9.94 |
| *CO17-58A-19* | 221.4 | 1155 | 0.23 | 98.8 | 559 | 126.9 | 884 | 358.4 | 18.19 | 417.4 | 51.6 | 271.7 | 44.5 | 102 | 10.86 | 57.1 | 7.13 | 0.063 | 7.54 |
| *CO17-58A-20* | 246.6 | 1270 | 0.048 | 73 | 368.4 | 80.6 | 566.7 | 254.7 | 13.63 | 332.8 | 45.99 | 267.2 | 48.52 | 116.1 | 13.12 | 68.2 | 8.55 | 0.083 | 3.54 |
| *CO17-58A-21* | 303.1 | 1275 | 0.063 | 807 | 2361 | 344.1 | 1746 | 496.1 | 17.42 | 487.3 | 58.6 | 303 | 49.53 | 109.4 | 11.77 | 59.9 | 7.54 | 1.858 | 9.46 |
| *CO17-58A-22* | 202.5 | 1634 | 0.125 | 1200 | 3137 | 393.3 | 1775 | 469 | 16.14 | 472.2 | 62.6 | 353.3 | 62.7 | 154.1 | 17.81 | 96.6 | 12.16 | 0.538 | 9.8 |
| *CO17-58A-23* | 249.4 | 2071 | 0.38 | 143.4 | 798 | 173 | 1162 | 469.6 | 27.15 | 562.5 | 77.1 | 442.1 | 79 | 191.6 | 22.22 | 115.4 | 14.9 | 1.029 | 12.88 |
| *CO17-58A-24* | 266.1 | 1359 | 0.239 | 162.1 | 879 | 187.5 | 1245 | 464.6 | 25.52 | 519 | 63.6 | 325.8 | 53.2 | 116 | 12.42 | 62.4 | 7.72 | 2.57 | 12.13 |
| *CO17-58A-25* | 247.3 | 1283 | 0.093 | 1063 | 2728 | 358.4 | 1699 | 453.6 | 15.82 | 448.1 | 54.92 | 289.8 | 48.83 | 116.3 | 12.93 | 69.3 | 9.08 | 1.595 | 6.1 |
| *CO17-58A-26* | 318.8 | 1476 | 0.52 | 256.9 | 1085 | 207.8 | 1291 | 468.3 | 25.07 | 522.5 | 66.1 | 348.8 | 57.51 | 130.3 | 13.95 | 69.1 | 8.76 | 1.019 | 12.32 |
| *CO17-58A-27* | 296.9 | 1641 | 0.22 | 853 | 2559 | 374.9 | 1929 | 569 | 21.06 | 576.9 | 72.5 | 380.2 | 64.2 | 146.9 | 16.63 | 88.2 | 11.47 | 7.37 | 16.32 |
| *CO17-58A-28* | 279.2 | 1511 | 0.24 | 69.2 | 447 | 109.2 | 806 | 359.3 | 22.95 | 444.5 | 58.1 | 328 | 58.2 | 138.6 | 15.91 | 84.9 | 10.67 | 0.314 | 8.5 |
| *CO17-58A-29* | 236.7 | 1800 | 1.36 | 3.90E+03 | 9.30E+03 | 1120 | 4.70E+03 | 1020 | 21 | 820 | 90 | 433 | 70.3 | 148 | 15 | 73.6 | 8.91 | 6.9 | 11.5 |
| *CO17-58A-30* | 193 | 1719 | 0.144 | 993 | 2586 | 335.6 | 1563 | 444.3 | 14.88 | 476.1 | 65.8 | 375.5 | 67.6 | 162.8 | 18.5 | 98.8 | 12.16 | 0.82 | 8.36 |
| | | | | | | | | | | | | | | | | | | | |
| *CO17-26A-1* | 670 | 1234 | 0.052 | 33.74 | 85.1 | 12.79 | 71.8 | 34.9 | 60.8 | 98.6 | 23.11 | 193.8 | 44.13 | 123.3 | 15.35 | 88.8 | 12.13 | 0.16 | 1.93 |
| *CO17-26A-2* | 655.1 | 1978 | 266 | 29.29 | 96.5 | 16.63 | 101.1 | 59.9 | 63.4 | 168.5 | 38.84 | 322.3 | 71 | 195.3 | 25.42 | 150.5 | 20.21 | 2.74 | 16.26 |
| *CO17-26A-3* | 711 | 1353 | 0 | 24.68 | 75.5 | 12.57 | 78.6 | 46.1 | 50.2 | 131.1 | 29.1 | 230.5 | 49.8 | 135.7 | 16.27 | 96.1 | 12.78 | 0.673 | 7.01 |
| *CO17-26A-4* | 622 | 1524 | 0.026 | 24.23 | 81.6 | 14.12 | 86.3 | 48.8 | 42.53 | 132.6 | 29.49 | 243.8 | 55.2 | 151 | 19.43 | 114.3 | 15.58 | 1.383 | 9.94 |
| *CO17-26A-5* | 722 | 1710 | 0.047 | 34.64 | 113 | 18.95 | 111.6 | 59.5 | 70.9 | 159.9 | 35.5 | 288 | 63.1 | 170.3 | 22.09 | 128.8 | 17.08 | 1.72 | 11.27 |
| *CO17-26A-6* | 660 | 1911 | 340 | 36.6 | 109.1 | 18.1 | 111.9 | 63.5 | 61.1 | 175.8 | 38.69 | 312.9 | 70.3 | 192.3 | 24.28 | 143 | 19.94 | 2.1 | 13.68 |
| *CO17-26A-7* | 722 | 1357 | 10.7 | 32.31 | 94.3 | 15.16 | 86.1 | 46.2 | 56.4 | 123.5 | 27.15 | 223.5 | 49.6 | 135.8 | 17.25 | 99.3 | 13.19 | 0.866 | 8.77 |
| *CO17-26A-8* | 632.6 | 1892 | 2070 | 31.13 | 102.1 | 17.64 | 110.1 | 61.6 | 60.5 | 166.5 | 36.56 | 303.6 | 68.6 | 191.7 | 25.27 | 154.4 | 21.01 | 2.87 | 15.21 |
| *CO17-26A-9* | 588 | 1867 | 1320 | 32.4 | 98 | 17.95 | 109.7 | 61.8 | 51.2 | 170.9 | 37.5 | 306 | 66.8 | 185.4 | 23.67 | 143.4 | 20.28 | 2.69 | 14.55 |
| *CO17-26A-10* | 714 | 1606 | 62 | 32.04 | 98 | 15.44 | 85.9 | 41.4 | 61.6 | 106 | 26.35 | 235.7 | 56.2 | 161.3 | 21.13 | 124.2 | 16.59 | 1.086 | 10.14 |
| *CO17-26A-11* | 755 | 1914 | 54 | 25.4 | 82.4 | 14.48 | 94.9 | 56.3 | 44.4 | 157.5 | 35.19 | 294.2 | 66.7 | 186 | 24.21 | 149.5 | 20.59 | 1.82 | 12.37 |
| *CO17-26A-12* | 581 | 1657 | 0.032 | 26.2 | 89.6 | 15.81 | 103.1 | 60.6 | 42.5 | 156.2 | 34.3 | 269.1 | 58.8 | 161.7 | 20.74 | 126.1 | 17.46 | 1.25 | 10.66 |
| *CO17-26A-13* | 596.6 | 2236 | 0.76 | 32.49 | 115 | 21.16 | 139.4 | 81.3 | 57.5 | 212.2 | 46.1 | 370.1 | 79.5 | 219.3 | 28.16 | 171.1 | 23.3 | 2.89 | 17.73 |
| *CO17-26A-14* | 569.1 | 1940 | 0.044 | 36.53 | 131.5 | 24.44 | 177.7 | 98.1 | 44.77 | 228.3 | 45.14 | 337.9 | 69.6 | 183.4 | 23.68 | 138.6 | 19.3 | 1.709 | 15.23 |

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| *CO17-26A-15* | 589.6 | 1810 | 350 | 36.64 | 127.7 | 24.06 | 172.9 | 99.7 | 45.9 | 223.9 | 43.85 | 315.6 | 65.36 | 169.1 | 21.01 | 124.1 | 16.85 | 2.01 | 10.79 |
| *CO17-26A-16* | 566.5 | 2276 | 0 | 31.61 | 104.3 | 17.55 | 112.6 | 69.6 | 62.6 | 194.3 | 44.64 | 364.2 | 80.8 | 222.9 | 29.07 | 177.6 | 24.07 | 2.237 | 16.01 |
| *CO17-26A-17* | 569.2 | 2714 | 0.18 | 42.3 | 142.3 | 25.71 | 169.6 | 103.1 | 71.1 | 274.8 | 58.8 | 457.2 | 97.4 | 263.5 | 34.45 | 209.8 | 28.98 | 4.65 | 21.47 |
| *CO17-26A-18* | 606 | 2185 | 0 | 34.91 | 116.6 | 20.07 | 120 | 65.4 | 71.6 | 169.3 | 39 | 335.2 | 77 | 222.8 | 29.61 | 186.6 | 25.87 | 3.24 | 22.28 |
| *CO17-26A-19* | 573 | 1661 | 0 | 27.1 | 94 | 16.45 | 103.2 | 54.4 | 41.9 | 143.3 | 31.4 | 264.1 | 58.2 | 162.9 | 21.11 | 130.4 | 18.22 | 1.44 | 8.58 |
| *CO17-26A-20* | 675 | 1147 | 410 | 24.46 | 76.76 | 12.9 | 75.2 | 37.5 | 40.07 | 89.1 | 21.13 | 174.9 | 40.5 | 116.7 | 15.16 | 89.5 | 11.91 | 1.016 | 7.42 |
| *CO17-26A-21* | 601 | 1501 | 61 | 26.72 | 85.5 | 14.38 | 87.1 | 49.5 | 48.56 | 127.2 | 28.72 | 237.9 | 53.7 | 150.6 | 19.96 | 119 | 16.71 | 1.046 | 8.67 |
| *CO17-26A-22* | 558.5 | 1796 | 0.021 | 27.23 | 90.4 | 16.41 | 106.6 | 64.6 | 49.5 | 172.3 | 37.01 | 292.7 | 63.9 | 176 | 22.51 | 136.6 | 18.89 | 0.837 | 8.8 |
| *CO17-26A-23* | 596.3 | 1766 | 370 | 28.86 | 94.4 | 16.38 | 99.1 | 53.5 | 52.6 | 142.9 | 33.17 | 279.3 | 63.2 | 176.8 | 23.43 | 142.7 | 19.63 | 1.571 | 10.93 |
| *CO17-26A-24* | 566.9 | 1792 | 0 | 24.06 | 81.7 | 14.61 | 99.2 | 59.6 | 47 | 162.3 | 36.62 | 293.3 | 64.29 | 174.2 | 22.34 | 132.7 | 18.4 | 0.962 | 9.79 |
| *CO17-26A-25* | 555.3 | 1736 | 0.29 | 30.53 | 103.3 | 18.05 | 121 | 69.8 | 43.5 | 181.7 | 38.13 | 290.9 | 63.1 | 166.7 | 21.58 | 127.2 | 17.66 | 0.921 | 8.52 |
| *CO17-26A-26* | 557.6 | 1628 | 0 | 35.34 | 117.8 | 20.13 | 125.1 | 62.9 | 43.4 | 149.6 | 31.94 | 257 | 57 | 161.8 | 21.13 | 129.8 | 18.25 | 0.965 | 8.8 |
| *CO17-26A-27* | 605 | 2063 | 8.3 | 27.82 | 93.6 | 16.57 | 98.7 | 59.9 | 53.2 | 183.2 | 41.7 | 342.5 | 75.7 | 204.8 | 26.32 | 155.3 | 21.38 | 2.58 | 15.61 |
| *CO17-26A-28* | 555.1 | 1677 | 12.1 | 29.94 | 101.3 | 17.56 | 111.3 | 63.2 | 42.72 | 166.7 | 35.96 | 279.8 | 59.89 | 163.2 | 21.1 | 125.7 | 17.4 | 0.695 | 7.36 |
| *CO17-26A-29* | 630 | 2260 | 0.121 | 38.2 | 115.3 | 18.65 | 116.2 | 69.3 | 65.3 | 196.1 | 44.9 | 368.5 | 80.8 | 224.2 | 28.7 | 171.9 | 23.17 | 2.86 | 16.52 |
| *CO17-26A-30* | 625 | 1631 | 860 | 23.66 | 78.2 | 13.27 | 85.1 | 49.8 | 45.6 | 137.8 | 31.44 | 260.1 | 58.1 | 161.5 | 20.5 | 124 | 16.99 | 1.64 | 10.21 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-62A-1* | 329.9 | 533 | 0.99 | 570.7 | 1411 | 191.8 | 852 | 167.5 | 33.03 | 148.7 | 18.45 | 103.2 | 19.28 | 48.1 | 6.06 | 34.95 | 4.98 | 1.75 | 1.831 |
| *I16-62A-2* | 362.9 | 953 | 0.51 | 352.6 | 1100 | 174.6 | 890 | 212.2 | 88.4 | 215.9 | 29.01 | 173.1 | 33.47 | 92.2 | 12.89 | 83.2 | 12.78 | 5.36 | 3.88 |
| *I16-62A-3* | 362.9 | 1266 | 3 | 486 | 1511 | 242 | 1230 | 283.3 | 103.5 | 280.1 | 38.39 | 232 | 46.13 | 126.1 | 17.67 | 118.7 | 17.84 | 6.33 | 4.89 |
| *I16-62A-4* | 326 | 632 | 1.11 | 423.5 | 1314 | 188.4 | 900 | 185.3 | 37.22 | 169.8 | 21.36 | 122.6 | 23.11 | 59 | 7.42 | 45.3 | 6.61 | 1.295 | 2.49 |
| *I16-62A-5* | 362.1 | 1026 | 1.03 | 63.2 | 334 | 70.3 | 458 | 163.3 | 56 | 192.4 | 28.8 | 180.7 | 35.7 | 102.5 | 14.75 | 93.8 | 14 | 5.18 | 2.89 |
| *I16-62A-6* | 385.7 | 759 | 0.6 | 42.8 | 237.7 | 52 | 348.1 | 130.3 | 41.5 | 148.2 | 21.92 | 138.1 | 27.19 | 74.4 | 10.31 | 64 | 9.65 | 1.57 | 2.56 |
| *I16-62A-7* | 345.3 | 568 | 1.32 | 510 | 1433 | 195.3 | 909 | 172.6 | 48 | 156.8 | 19.49 | 110.2 | 20.66 | 53.1 | 6.89 | 41.3 | 5.86 | 5.81 | 3.05 |
| *I16-62A-8* | 308 | 690 | 0.228 | 113 | 642 | 121.9 | 677 | 172.5 | 42.53 | 172.5 | 23.3 | 132.6 | 24.82 | 64.9 | 8.17 | 45.8 | 6.68 | 0.473 | 3.17 |
| *I16-62A-9* | 316 | 620 | 0.23 | 295.8 | 1122 | 169.1 | 826 | 179 | 28.4 | 164.7 | 21.37 | 122.5 | 22.85 | 56.2 | 6.86 | 38.4 | 5.15 | 2.56 | 1.97 |
| *I16-62A-10* | 329.5 | 1065 | 0.85 | 498 | 1484 | 219.3 | 1113 | 266.7 | 45.8 | 269 | 36 | 211.2 | 38.96 | 100 | 12.59 | 69.9 | 9.51 | 3.87 | 3.83 |
| *I16-62A-11* | 335.2 | 708 | 0.94 | 23.7 | 158.5 | 39.6 | 295 | 108.5 | 40.1 | 133.6 | 19.04 | 123 | 24.82 | 70.3 | 9.85 | 65.9 | 10.11 | 0.401 | 2.62 |
| *I16-62A-12* | 0 | 0 | 0 | 0 | 370 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *I16-62A-13* | 337 | 504 | 0.51 | 135.8 | 479.6 | 81.7 | 448 | 110.1 | 30.12 | 113.4 | 15.39 | 95 | 18.28 | 49.2 | 6.29 | 38.9 | 5.76 | 0.357 | 1.451 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-62A-14* | 348.8 | 1177 | 1.67 | 243.9 | 969 | 168.3 | 916 | 243.3 | 79.3 | 246.6 | 34.88 | 217.8 | 42.33 | 119.5 | 16.78 | 107 | 16 | 7.37 | 4.14 |
| *I16-62A-15* | 335.9 | 484.4 | 0.73 | 108.1 | 455.7 | 77.9 | 426 | 109.6 | 25.42 | 112 | 15.5 | 91.3 | 17.33 | 46.2 | 6.09 | 37.8 | 5.93 | 0.44 | 1.306 |
| *I16-62A-16* | 341.2 | 735 | 2.04 | 462 | 1561 | 227.8 | 1058 | 215.4 | 48.3 | 198.1 | 25.02 | 142.9 | 26.71 | 68 | 8.57 | 49.7 | 7 | 8.59 | 3.91 |
| *I16-62A-17* | 354.6 | 843 | 0.47 | 453.7 | 1357 | 197.9 | 960 | 204 | 58.3 | 186.7 | 25.61 | 154.4 | 30.09 | 82.8 | 11.52 | 71 | 10.79 | 5.92 | 3.5 |
| *I16-62A-18* | 364.7 | 1196 | 0.47 | 133.6 | 620.5 | 120.8 | 729 | 218.3 | 69.3 | 236.9 | 34.3 | 213.6 | 41.8 | 118.6 | 16.83 | 114.3 | 17.12 | 5.37 | 3.77 |
| *I16-62A-19* | 360 | 759 | 0.46 | 353.7 | 1176 | 178.8 | 912 | 203.2 | 49.8 | 192.1 | 25.33 | 146.9 | 27.68 | 69.8 | 8.76 | 54.3 | 8.09 | 7.13 | 3 |
| *I16-62A-20* | 336.4 | 601 | 0.31 | 281.5 | 994 | 149.9 | 749 | 159.9 | 29.99 | 146.7 | 18.97 | 112.8 | 21.64 | 58.2 | 7.97 | 48.2 | 6.98 | 1.25 | 1.87 |
| *I16-62A-21* | 339.4 | 928 | 0.34 | 659 | 1960 | 267 | 1262 | 261.3 | 30.6 | 238.6 | 30.87 | 177.8 | 33.41 | 84.9 | 10.69 | 60.7 | 8.1 | 7.04 | 3.79 |
| *I16-62A-22* | 384.8 | 947 | 0.85 | 502 | 1810 | 266.5 | 1268 | 267.3 | 45.6 | 239.8 | 30.93 | 180.4 | 34.14 | 91.8 | 11.84 | 71.2 | 10.23 | 9.72 | 4.57 |
| *I16-62A-23* | 357 | 442 | 0.28 | 255.7 | 926 | 134.9 | 644 | 130 | 20.7 | 115.6 | 15.06 | 84.8 | 15.68 | 41.3 | 5.16 | 30.5 | 4.2 | 0.852 | 1.158 |
| *I16-62A-24* | 300.1 | 534 | 1.06 | 380.6 | 1198 | 168 | 790 | 158.7 | 21.09 | 143.4 | 18.25 | 104.2 | 19.73 | 50.6 | 6.36 | 38.2 | 5.58 | 4.2 | 2.76 |
| *I16-62A-25* | 356.2 | 597 | 0.68 | 435 | 1473 | 203.5 | 931 | 180.3 | 38.6 | 158.4 | 19.95 | 115.7 | 21.46 | 54.9 | 7.22 | 42.3 | 6.28 | 3.15 | 2.79 |
| *I16-62A-26* | 347 | 612 | 0.28 | 155.8 | 565 | 97.5 | 518 | 129.2 | 41.9 | 129.6 | 18.25 | 113.2 | 21.76 | 59.6 | 8.07 | 50.4 | 7.43 | 2.36 | 1.99 |
| *I16-62A-27* | 330.3 | 640 | 0.94 | 296.3 | 1027 | 151.9 | 744 | 158.7 | 38.83 | 145 | 19.67 | 117.8 | 22.75 | 62.7 | 8.58 | 52.2 | 7.79 | 0.671 | 2.366 |
| *I16-62A-28* | 350.5 | 969 | 0.45 | 240.5 | 727 | 123.9 | 661 | 187 | 55.2 | 202.2 | 28.71 | 177.3 | 35.04 | 93.8 | 12.73 | 78.2 | 11.59 | 1.509 | 3.77 |
| | | | | | | | | | | | | | | | | | | | |
| *CO17-55A-1* | 229.9 | 616 | 0.36 | 2370 | 5.60E+03 | 580 | 2140 | 293 | 25.4 | 202 | 23 | 123 | 21.8 | 53.9 | 6.48 | 37 | 5.1 | 0.194 | 2.2 |
| *CO17-55A-2* | 208.8 | 515 | 0.62 | 574.1 | 1533 | 203.4 | 931 | 175.3 | 21 | 148.1 | 17.72 | 100.9 | 18.98 | 48.7 | 5.82 | 32.6 | 4.59 | 0.116 | 2.8 |
| *CO17-55A-3* | 253.4 | 362.2 | 0.46 | 195.2 | 785 | 125.6 | 614.3 | 118 | 21.78 | 99.3 | 12.25 | 68.8 | 12.55 | 32.81 | 4.18 | 24.4 | 3.57 | 0.071 | 2.093 |
| *CO17-55A-4* | 239.8 | 265.4 | 0.22 | 649.1 | 1624 | 183.7 | 719 | 106.6 | 11.76 | 82.6 | 9.86 | 52.3 | 9.71 | 24.85 | 3.03 | 17.33 | 2.45 | 0 | 1.704 |
| *CO17-55A-5* | 247.5 | 669 | 0.98 | 105.7 | 569.4 | 114.9 | 685 | 182.8 | 31.88 | 178.6 | 22.76 | 130.2 | 24.67 | 61.6 | 7.59 | 42.6 | 5.86 | 0.0341 | 4.02 |
| *CO17-55A-6* | 268.1 | 388.9 | 0.2 | 541.1 | 1513 | 195 | 837 | 140.8 | 21.15 | 110.4 | 13.1 | 71.5 | 13.57 | 36.1 | 4.57 | 26.87 | 4.07 | 0.101 | 2.11 |
| *CO17-55A-7* | 210.5 | 498.4 | 1.11 | 788 | 2060 | 257.1 | 1096 | 182.3 | 22.08 | 146.4 | 17.44 | 94.9 | 18.06 | 46.5 | 5.82 | 33.3 | 4.86 | 0.226 | 3.63 |
| *CO17-55A-8* | 239.2 | 512.5 | 1.37 | 176.5 | 812 | 141.7 | 746 | 158 | 33.7 | 137.2 | 17.03 | 97.2 | 17.84 | 47.29 | 5.95 | 34.21 | 4.93 | 0.04 | 3.5 |
| *CO17-55A-9* | 273 | 838 | 1.8 | 523.8 | 1624 | 234.8 | 1137 | 241.2 | 37.13 | 218.5 | 27.98 | 160.3 | 30.53 | 80.6 | 10.33 | 59.8 | 8.48 | 0.306 | 5.59 |
| *CO17-55A-10* | 252.8 | 412.8 | 0.75 | 791 | 2050 | 246.9 | 1014 | 160.8 | 22.48 | 124.6 | 14.77 | 79.8 | 14.85 | 38.28 | 4.52 | 26.73 | 3.76 | 0.246 | 2.89 |
| *CO17-55A-11* | 278.1 | 438 | 0.8 | 108.4 | 543 | 103.8 | 588 | 137 | 24.01 | 121.1 | 14.93 | 82.7 | 15.69 | 40.5 | 4.99 | 29.7 | 4.43 | 0.092 | 2.4 |
| *CO17-55A-12* | 250.7 | 433.2 | 1.05 | 98.3 | 471.7 | 87.8 | 509.9 | 121.4 | 27.2 | 115.4 | 14.31 | 82 | 15.51 | 40.7 | 4.94 | 28.3 | 4.15 | 0.061 | 2.179 |
| *CO17-55A-13* | 224.6 | 535 | 0.31 | 691.3 | 1928 | 257.2 | 1134 | 195.2 | 13.84 | 160.1 | 19.1 | 104.6 | 19.62 | 48.8 | 5.9 | 31.24 | 4.49 | 0.087 | 1.698 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-55A-14* | 209.7 | 537.7 | 0.67 | 692.1 | 1883 | 246.5 | 1102 | 195.7 | 17 | 161.9 | 19.25 | 107.9 | 19.58 | 50.3 | 6.24 | 35.17 | 4.94 | 0.136 | 2.464 |
| *CO17-55A-15* | 233.2 | 567 | 0.97 | 776 | 2131 | 268.3 | 1146 | 195.4 | 20.92 | 160.9 | 19.16 | 108.6 | 20.4 | 53.2 | 6.61 | 39.1 | 5.49 | 0.338 | 3.52 |
| *CO17-55A-16* | 237.3 | 805 | 1.03 | 33.93 | 232.8 | 47.5 | 375.3 | 175.7 | 32.36 | 194.1 | 26.08 | 155.8 | 30.06 | 78.5 | 9.44 | 55.8 | 8.04 | 0.0169 | 3.91 |
| *CO17-55A-17* | 239.7 | 411.4 | 0.46 | 522 | 1598 | 215.7 | 948 | 161.8 | 17.63 | 131.2 | 14.99 | 81.3 | 15.04 | 37.55 | 4.33 | 24.7 | 3.38 | 0.081 | 2.215 |
| *CO17-55A-18* | 221.8 | 581.1 | 0.43 | 259.3 | 888 | 143.2 | 753 | 171.8 | 24.07 | 156.9 | 19.72 | 111.8 | 21.01 | 54.2 | 6.65 | 36.5 | 5 | 0.0338 | 2.562 |
| *CO17-55A-19* | 271 | 246.3 | 0.219 | 404.7 | 1240 | 158.3 | 659.4 | 102.4 | 14.97 | 80.3 | 9.01 | 47.6 | 8.76 | 22.12 | 2.54 | 13.79 | 2.17 | 0.0371 | 1.885 |
| *CO17-55A-20* | 232.4 | 682.6 | 0.96 | 49.27 | 333.7 | 76.3 | 517.5 | 155.6 | 27.73 | 165.1 | 21.85 | 130.7 | 24.82 | 63.3 | 7.89 | 45.4 | 6.25 | 0.03 | 3.34 |
| *CO17-55A-21* | 257.1 | 410.3 | 0.81 | 116.9 | 504.3 | 90.8 | 511.3 | 121.6 | 27.66 | 113 | 14.08 | 78.4 | 14.61 | 37.6 | 4.63 | 25.98 | 3.8 | 0.0257 | 2.053 |
| *CO17-55A-22* | 238.2 | 339.2 | 0.8 | 566 | 1484 | 184.9 | 784 | 125.5 | 19.4 | 101.5 | 11.45 | 61.6 | 11.86 | 30.6 | 3.93 | 23.6 | 3.38 | 0.066 | 3.29 |
| *CO17-55A-23* | 235.2 | 286.8 | 0.54 | 805 | 1982 | 222.2 | 851 | 120.7 | 20.46 | 93.8 | 10.82 | 56.5 | 10.29 | 26.48 | 3.16 | 17.4 | 2.63 | 0.119 | 3.66 |
| *CO17-55A-24* | 250.7 | 562.3 | 1.15 | 497.6 | 1631 | 237.1 | 1112 | 209.8 | 24.93 | 178.7 | 21.08 | 113.6 | 20.55 | 49.8 | 5.89 | 32.7 | 4.65 | 0.089 | 3.14 |
| *CO17-55A-25* | 231 | 226.4 | 0.76 | 719.5 | 1709 | 192.3 | 742.7 | 103.9 | 17.53 | 72.2 | 8.2 | 42.7 | 7.82 | 20.23 | 2.59 | 14.78 | 2.22 | 0.091 | 2.48 |
| *CO17-55A-26* | 205.2 | 434.7 | 1 | 1045 | 2579 | 299.5 | 1169 | 168.1 | 18.3 | 126.3 | 14.81 | 82.2 | 14.99 | 39.11 | 5.17 | 30 | 4.23 | 0.199 | 3.22 |
| *CO17-55A-27* | 200.3 | 738 | 0.91 | 960 | 2770 | 379 | 1660 | 279 | 22.4 | 229 | 27.2 | 149.2 | 27.83 | 68.2 | 8.32 | 45.2 | 6.48 | 0.089 | 2.88 |
| *CO17-55A-28* | 222 | 482.6 | 0.167 | 720.2 | 1707 | 225.9 | 1005 | 171.8 | 20.91 | 150.3 | 17.64 | 95.4 | 18.08 | 45.9 | 5.54 | 32.57 | 4.34 | 0.182 | 2.896 |
| *CO17-55A-29* | 233.6 | 723 | 1.15 | 137.8 | 580.1 | 105.9 | 613.5 | 170.6 | 27.21 | 175.9 | 23.42 | 141.2 | 27.24 | 72.5 | 9.33 | 54.3 | 7.66 | 0.07 | 3.69 |
| *CO17-55A-30* | 244 | 391 | 0.56 | 844 | 2160 | 255 | 1032 | 161.6 | 23.39 | 123.3 | 14.13 | 75.7 | 13.79 | 34.99 | 4.3 | 24.04 | 3.46 | 0.126 | 3.52 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-34A-1* | 147.2 | 321 | 0 | 49.3 | 141 | 21.3 | 122 | 37.9 | 9 | 54.5 | 8.05 | 51.7 | 11.3 | 32.2 | 4.12 | 26.2 | 4.19 | 1.29 | 10.6 |
| *I16-34A-2* | 144 | 351.5 | 0 | 27.17 | 103 | 19.03 | 121.7 | 42.6 | 8.91 | 60.6 | 8.69 | 56.4 | 12.28 | 35.7 | 4.85 | 31.14 | 5.24 | 0.473 | 7.02 |
| *I16-34A-3* | 142.9 | 1311 | 0.49 | 142.6 | 492 | 79.6 | 440 | 130.6 | 34.3 | 171 | 26.08 | 179.4 | 41.53 | 134.3 | 20.71 | 139.8 | 24.63 | 11.31 | 60.1 |
| *I16-34A-4* | 144 | 185.6 | 0 | 21.64 | 69.7 | 11.38 | 64.7 | 20.9 | 4.53 | 27.8 | 3.91 | 27.2 | 6.03 | 18.64 | 2.64 | 18.11 | 3.28 | 0.091 | 1.547 |
| *I16-34A-5* | 138.3 | 205.9 | 0 | 12.05 | 42.5 | 8.71 | 60.1 | 23.39 | 4.41 | 36.2 | 5.2 | 32.95 | 7.05 | 19.98 | 2.67 | 15.38 | 2.67 | 0.056 | 1.013 |
| *I16-34A-6* | 142.4 | 313 | 0.058 | 23.79 | 85.3 | 14.81 | 92.7 | 32.6 | 6.81 | 47.6 | 7.04 | 47.4 | 10.69 | 31.7 | 4.33 | 28.5 | 5.03 | 0.426 | 3.98 |
| *I16-34A-7* | 146.5 | 457 | 0 | 64.1 | 224 | 37.3 | 213 | 59.7 | 11.17 | 75.8 | 10.76 | 70.7 | 15.7 | 45.7 | 6.62 | 42.7 | 7.14 | 9.9 | 21.3 |
| *I16-34A-8* | 139.5 | 497 | 0.049 | 58.9 | 183 | 29.4 | 170 | 56.9 | 9.7 | 79.3 | 11.6 | 78.3 | 17.3 | 50 | 6.74 | 41.6 | 6.65 | 2.56 | 15 |
| *I16-34A-9* | 143.4 | 136.9 | 0 | 20.82 | 59.7 | 8.88 | 50 | 14.68 | 4.21 | 20.8 | 3.06 | 19.73 | 4.54 | 13.93 | 1.872 | 11.75 | 2.08 | 0.064 | 1.034 |
| *I16-34A-10* | 145.8 | 418 | 0.093 | 58.8 | 202 | 34.9 | 207 | 57.1 | 10 | 76 | 10.6 | 66.6 | 14.3 | 40.9 | 5.39 | 33.8 | 5.53 | 2.43 | 18.2 |
| *I16-34A-11* | 146 | 247 | 0 | 26.2 | 85 | 13.9 | 79.5 | 27 | 6.07 | 36.6 | 5.48 | 38.1 | 7.87 | 24.5 | 3.7 | 24.4 | 4.11 | 0.146 | 2.07 |
| *I16-34A-12* | 151.4 | 226.5 | 0 | 36.8 | 104.9 | 15.82 | 88.3 | 26.5 | 6.99 | 36.1 | 5.44 | 35.7 | 7.83 | 21.7 | 2.88 | 19.2 | 3.1 | 0.201 | 2.81 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-34A-13* | 147.3 | 211.9 | 0 | 18.01 | 62.9 | 11.25 | 69.6 | 23.49 | 5.08 | 35 | 5.01 | 32.1 | 6.92 | 20.33 | 2.84 | 17.45 | 2.84 | 0.114 | 1.856 |
| *I16-34A-14* | 139.4 | 150.7 | 0 | 17.29 | 51.4 | 8.29 | 49.2 | 16.5 | 3.85 | 23.3 | 3.42 | 22.8 | 5.13 | 16 | 2.02 | 13.03 | 2.34 | 0.077 | 0.94 |
| *I16-34A-15* | 146 | 224.2 | 0 | 24.5 | 72.9 | 11.53 | 65.6 | 22.5 | 5.17 | 34.2 | 5.26 | 35.1 | 7.65 | 22.2 | 3.21 | 19.68 | 3.22 | 0.229 | 2.61 |
| *I16-34A-16* | 133.7 | 656 | 0.092 | 30.7 | 119.9 | 23.8 | 164 | 65.5 | 17.51 | 97.2 | 14.73 | 99.8 | 21.5 | 65.7 | 9.67 | 65 | 10.99 | 0.63 | 7.6 |
| *I16-34A-17* | 144.1 | 946 | 0.52 | 83.1 | 285 | 47.8 | 286 | 97.5 | 20.8 | 139.1 | 21.4 | 142.9 | 32.1 | 96 | 13.35 | 86.4 | 14.43 | 6.71 | 33.6 |
| *I16-34A-18* | 135.5 | 251.1 | 0 | 14.27 | 54.4 | 11 | 76.9 | 29.3 | 6.69 | 43 | 6.1 | 39.2 | 8.17 | 24.55 | 3.33 | 21.06 | 3.68 | 0.0331 | 0.761 |
| *I16-34A-19* | 141.5 | 79.9 | 0 | 20.35 | 55.2 | 7.18 | 33.5 | 7.39 | 4.75 | 9.88 | 1.35 | 9.11 | 2.28 | 7.93 | 1.21 | 9.89 | 2.14 | 0.112 | 1.213 |
| *I16-34A-20* | 144.9 | 586.2 | 0 | 32.5 | 115.3 | 20.96 | 135.1 | 52.4 | 11.48 | 81.9 | 12.84 | 87.7 | 19.74 | 59.7 | 8.36 | 53.5 | 9 | 0.717 | 8.75 |
| *I16-34A-21* | 142.3 | 422.3 | 0.068 | 59.5 | 171.1 | 23.77 | 119.8 | 35.4 | 11.74 | 53.2 | 8.38 | 56.3 | 13.2 | 43.6 | 6.72 | 47.3 | 8.92 | 0.666 | 8.19 |
| *I16-34A-22* | 145.7 | 211.7 | 0 | 21.38 | 69.5 | 11.95 | 73.8 | 23.97 | 5.17 | 33.8 | 4.94 | 32.1 | 7.06 | 20.85 | 2.91 | 18.48 | 3.12 | 0.06 | 0.953 |
| *I16-34A-23* | 140.3 | 213.8 | 0 | 15.06 | 55.6 | 10.65 | 73.9 | 25.1 | 4.04 | 35.5 | 5.19 | 32.7 | 7.05 | 19.99 | 2.58 | 15.7 | 2.61 | 0.038 | 0.494 |
| *I16-34A-24* | 145.5 | 296.3 | 0 | 26.37 | 84.7 | 14.53 | 90.6 | 31.57 | 5.46 | 44.4 | 6.78 | 44.8 | 10 | 29.5 | 4.21 | 26.58 | 4.51 | 0.169 | 1.322 |
| *I16-34A-25* | 148.8 | 451.5 | 0.117 | 60.6 | 188.3 | 28.89 | 160.9 | 49.5 | 14.36 | 68.4 | 10.15 | 67.8 | 15.11 | 44.7 | 6.44 | 43.3 | 7.23 | 0.911 | 10.77 |
| *I16-34A-26* | 141 | 107.9 | 0 | 18.75 | 52.7 | 8.07 | 48.7 | 13.92 | 5.29 | 20.9 | 2.78 | 16.32 | 3.59 | 10.39 | 1.367 | 8.92 | 1.68 | 0.052 | 0.495 |
| *I16-34A-27* | 143.5 | 721 | 0.24 | 78.3 | 266.6 | 44 | 249.4 | 76 | 26.88 | 101.9 | 15.61 | 103.6 | 23.39 | 72.9 | 10.71 | 75.2 | 13.48 | 2.33 | 18.6 |
| *I16-34A-28* | 143.1 | 148 | 0 | 24.76 | 70.9 | 10.62 | 58.3 | 16.32 | 4.87 | 22.3 | 3.1 | 20.76 | 4.77 | 14.27 | 1.96 | 13.44 | 2.4 | 0.055 | 0.817 |
| *I16-34A-29* | 141.3 | 272.3 | 0 | 22.54 | 81.7 | 15.49 | 103.6 | 36.3 | 6.6 | 49.4 | 7.02 | 43 | 9.03 | 26.7 | 3.54 | 23.1 | 3.98 | 0.096 | 1.099 |
| *I16-34A-30* | 135.2 | 850 | 0.28 | 71.5 | 237 | 37.5 | 218 | 76 | 16.2 | 118 | 18.3 | 130 | 29.1 | 92 | 13.4 | 88 | 15.6 | 5.02 | 28.7 |
| *I16-34A-31* | 143.5 | 319 | 0 | 26.5 | 90.8 | 15.6 | 96.1 | 31.8 | 6.02 | 46.6 | 6.92 | 46.9 | 10.29 | 31.5 | 4.36 | 27.6 | 4.87 | 0.274 | 2.51 |
| *I16-34A-32* | 145.3 | 214.8 | 0 | 28.51 | 85.6 | 13.52 | 78.2 | 23.62 | 5.1 | 35 | 5.05 | 33.04 | 7.15 | 21 | 2.77 | 16.85 | 2.81 | 0.177 | 2.24 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-52A-1* | 1151 | 1169 | 0.23 | 84.7 | 345 | 61.8 | 377 | 124.1 | 24.78 | 184.8 | 31.07 | 204.3 | 39.59 | 105.2 | 14.13 | 82.7 | 10.39 | 8.26 | 45.19 |
| *I16-52A-2* | 1402 | 1340 | 1.44 | 249 | 766 | 115.6 | 615 | 176 | 28.08 | 217.3 | 35 | 235.2 | 45.9 | 123.5 | 16.4 | 97.1 | 11.59 | 7.32 | 4.5 |
| *I16-52A-3* | 1769 | 1021 | 2.78 | 1500 | 3830 | 429.9 | 1773 | 296.7 | 50.6 | 235.7 | 31.24 | 185.1 | 34.2 | 91.1 | 12.11 | 71.2 | 9.1 | 10.57 | 38 |
| *I16-52A-4* | 2336 | 969 | 2.28 | 681 | 1846 | 244.3 | 1127 | 218.3 | 35.07 | 198.8 | 28.38 | 174.7 | 32.1 | 84.5 | 11.62 | 68.7 | 8.71 | 11.84 | 4.79 |
| *I16-52A-5* | 1768 | 994 | 1.31 | 599.6 | 1633 | 222.6 | 1082 | 252.2 | 31.31 | 259.8 | 36.1 | 212.4 | 37.1 | 87.5 | 10.42 | 53.3 | 6.4 | 7.57 | 3.96 |
| *I16-52A-6* | 558 | 2178 | 1.33 | 445 | 1413 | 222.3 | 1197 | 404.3 | 33 | 477 | 73.5 | 454.4 | 82.3 | 201.2 | 23.09 | 119.1 | 13.52 | 8.6 | 20.26 |
| *I16-52A-7* | 2480 | 866 | 2.12 | 635 | 1679 | 220 | 993 | 186 | 31.97 | 167 | 23.62 | 148.7 | 28.25 | 75.9 | 10.44 | 62.9 | 7.77 | 7.64 | 3.75 |
| *I16-52A-8* | 2709 | 719 | 5.5 | 747 | 1966 | 251.7 | 1115 | 197.9 | 34.03 | 161.6 | 21.72 | 130.1 | 24.18 | 62.5 | 8.66 | 52.5 | 6.6 | 8.14 | 4.05 |
| *I16-52A-9* | 2061 | 1273 | 1.62 | 1035 | 2747 | 353 | 1585 | 323.3 | 34.72 | 297.2 | 41.2 | 245.7 | 44.9 | 113.4 | 14.62 | 86.6 | 10.45 | 34.35 | 20.02 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-52A-10* | 933 | 1859 | 2.44 | 181 | 586 | 95.4 | 575 | 197 | 31.6 | 285 | 48 | 328.7 | 63.8 | 169.6 | 22.29 | 126.7 | 16.1 | 10.3 | 5.94 |
| *I16-52A-11* | 1201 | 1515 | 1.26 | 223 | 710 | 110 | 612 | 185 | 30.37 | 238.5 | 39.61 | 267.6 | 52 | 138 | 18.44 | 105.5 | 13.53 | 8.43 | 5.41 |
| *I16-52A-12* | 2784 | 899 | 1.84 | 745 | 1902 | 245.3 | 1106 | 215.8 | 31.09 | 189.4 | 26.8 | 164.5 | 30.21 | 80.3 | 10.7 | 64 | 8.05 | 7.09 | 3.16 |
| *I16-52A-13* | 2258 | 1070 | 2.35 | 699 | 1783 | 234.9 | 1089 | 230.9 | 31.86 | 213 | 30.46 | 186.1 | 34.6 | 89.4 | 12.25 | 71.8 | 8.98 | 8.23 | 3.55 |
| *I16-52A-14* | 2827 | 694 | 2.22 | 845 | 2159 | 276.6 | 1218 | 221 | 31.6 | 172.9 | 23.06 | 134.2 | 24.19 | 60.6 | 7.93 | 43.1 | 5.42 | 7.61 | 3.59 |
| *I16-52A-15* | 2933 | 728 | 2.13 | 868 | 2182 | 277.5 | 1205 | 218.8 | 32.52 | 175.7 | 23.66 | 135.2 | 24.49 | 63.2 | 8.26 | 49.1 | 6.07 | 7.49 | 3.58 |
| *I16-52A-17* | 2580 | 817 | 1.67 | 726 | 1834 | 237 | 1070 | 208.5 | 30.66 | 186 | 25.73 | 150.4 | 27.58 | 71.3 | 9.36 | 53.9 | 6.84 | 7.06 | 3.331 |
| *I16-52A-18* | 1654 | 1503 | 1.57 | 369 | 1073 | 157.1 | 808 | 208.6 | 29.36 | 239.1 | 38.86 | 258.6 | 50.3 | 136 | 18.38 | 110.1 | 13.71 | 8.4 | 4.57 |
| *I16-52A-19* | 2224 | 976 | 2.88 | 764 | 1992 | 259 | 1192 | 237.2 | 35.91 | 206.4 | 29.1 | 174.4 | 31.6 | 81.6 | 10.82 | 63.3 | 8.07 | 13.57 | 4.92 |
| *I16-52A-20* | 2640 | 901 | 2.01 | 763 | 1978 | 255.2 | 1166 | 221.4 | 32.36 | 191 | 26.04 | 159.2 | 29.8 | 78.3 | 10.62 | 65.1 | 7.84 | 8.11 | 4.01 |
| *I16-52A-21* | 2514 | 960 | 1.49 | 719 | 1843 | 239.3 | 1093 | 215.4 | 30.6 | 196.8 | 27.4 | 172.1 | 31.4 | 83.6 | 11.3 | 69.1 | 8.48 | 6.86 | 3.39 |
| *I16-52A-22* | 2415 | 986 | 1.92 | 686 | 1773 | 233.8 | 1072 | 212.1 | 30.84 | 194 | 28.18 | 173.1 | 32 | 85.8 | 11.58 | 69.9 | 8.54 | 7.65 | 3.68 |
| *I16-52A-23* | 1314 | 1464 | 1.47 | 308.8 | 913 | 134.7 | 711 | 196.2 | 31.02 | 235.8 | 38.8 | 256.1 | 48.8 | 130.1 | 17.3 | 100.8 | 12.73 | 8.24 | 4.63 |
| *I16-52A-24* | 1781 | 1177 | 1.75 | 481 | 1339 | 185 | 914 | 227.4 | 31.1 | 230.6 | 34.7 | 212.4 | 38.6 | 99.3 | 12.72 | 76.7 | 9.3 | 7.47 | 3.81 |
| *I16-52A-25* | 1127 | 1157 | 0.042 | 12.42 | 47.1 | 9.45 | 73.3 | 47.9 | 30.35 | 120.5 | 25.39 | 196.2 | 41.35 | 111 | 14.23 | 77.9 | 9.37 | 2.4 | 8.76 |
| *I16-52A-26* | 1898 | 775 | 2.3 | 798 | 2059 | 268.3 | 1217 | 240.3 | 31.01 | 202.2 | 26.73 | 155.9 | 26.85 | 64.5 | 7.89 | 41.35 | 4.9 | 8.17 | 3.74 |
| *I16-52A-27* | 1780 | 930 | 1.44 | 169.1 | 567 | 90.6 | 498 | 130.8 | 24.4 | 158.2 | 24.73 | 165.6 | 32.1 | 84.7 | 10.77 | 60.4 | 7.47 | 5.69 | 3.74 |
| *I16-52A-28* | 1091 | 1624 | 1.41 | 159.5 | 517 | 86 | 509 | 172.3 | 29.76 | 240.6 | 41.64 | 283.3 | 55.8 | 147.9 | 20.02 | 114.9 | 14.06 | 7.83 | 4.48 |
| *I16-52A-29* | 1308 | 1763 | 1.94 | 489.6 | 1445 | 210.3 | 1098 | 327.1 | 39.3 | 432 | 61.7 | 377.2 | 70.9 | 175.2 | 20.3 | 110.2 | 13.83 | 30.13 | 33.92 |
| *I16-52A-30* | 1454 | 1362 | 1.16 | 360 | 1020 | 148 | 772 | 209 | 27.5 | 245.9 | 37.99 | 249.2 | 46.6 | 121.6 | 15.99 | 93.2 | 11.45 | 6.8 | 3.49 |
| *I16-52A-31* | 2503 | 705 | 2.01 | 839 | 2147 | 273.6 | 1224 | 224.3 | 32.8 | 182.9 | 23.53 | 135.5 | 24.16 | 59.2 | 7.69 | 44.8 | 5.58 | 8.16 | 3.81 |
| *I16-52A-32* | 1541 | 1369 | 1.5 | 293.9 | 880 | 131.9 | 704 | 192.8 | 29.18 | 229.5 | 37.3 | 241.8 | 45.6 | 121.7 | 16.05 | 92.5 | 11.75 | 7.22 | 4 |
| *I16-52A-33* | 2286 | 1079 | 3.8 | 685 | 1778 | 233.1 | 1094 | 243.2 | 30.48 | 235.7 | 34.2 | 207.6 | 37.8 | 95.9 | 12.29 | 71.6 | 8.9 | 7.01 | 3.59 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-54A-2* | 457.7 | 3635 | 0.55 | 9.27 | 51.9 | 16.06 | 173.3 | 165.2 | 48.2 | 386 | 71.3 | 500.5 | 102.7 | 291.9 | 39.3 | 227.2 | 28.97 | 6.99 | 28.98 |
| *I16-54A-3* | 510 | 1734 | 0.17 | 4.77 | 26.1 | 7.85 | 88.1 | 86.3 | 25.6 | 192.1 | 35.2 | 246.3 | 50.7 | 144.3 | 20.8 | 125.9 | 16.3 | 1.225 | 13.7 |
| *I16-54A-4* | 542.4 | 1910 | 0.105 | 10.81 | 103.3 | 34.25 | 320.4 | 205.1 | 118.5 | 309.4 | 48.8 | 300.7 | 57.6 | 158 | 22.05 | 134.2 | 18.6 | 0.665 | 25.29 |
| *I16-54A-5* | 458.4 | 3920 | 0.094 | 38.69 | 240.1 | 70.92 | 658 | 413.3 | 57 | 614 | 99.2 | 626 | 120.1 | 333.1 | 45.8 | 267.1 | 34.2 | 0.965 | 36 |
| *I16-54A-6* | 532 | 1210 | 0 | 5.3 | 40.6 | 11.29 | 108.1 | 79.9 | 23.29 | 151.2 | 26.5 | 178.6 | 35.6 | 100.5 | 14.21 | 84.8 | 11.5 | 0.153 | 10.7 |
| *I16-54A-7* | 531.9 | 2430 | 0.101 | 37.1 | 198.5 | 49.7 | 409 | 252 | 56.6 | 385 | 63.5 | 391 | 74.4 | 205 | 27.7 | 167 | 21.9 | 0.91 | 30.6 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-54A-8* | 452.4 | 901 | 0 | 2.74 | 17.34 | 5.2 | 56 | 52.4 | 9.61 | 127.3 | 21.55 | 143.4 | 28.73 | 74.1 | 8.44 | 42.8 | 5.7 | 0.109 | 1.121 |
| *I16-54A-9* | 498.6 | 5089 | 0.49 | 14.56 | 107.8 | 35.48 | 376.4 | 309.5 | 56.7 | 607 | 106.5 | 723 | 147 | 432.9 | 61.8 | 377.7 | 49.7 | 16.22 | 99 |
| *I16-54A-10* | 522.4 | 1341 | 0.095 | 20.39 | 131.7 | 33.92 | 281.3 | 156.1 | 66 | 229.6 | 35.96 | 220.2 | 41.6 | 112.8 | 15.05 | 88.9 | 11.62 | 0.684 | 13.8 |
| *I16-54A-12* | 566 | 1206 | 0 | 29.4 | 176 | 43.1 | 327 | 165.6 | 39.8 | 214.6 | 32.2 | 191.7 | 36.2 | 95.6 | 12.87 | 75.6 | 9.97 | 0.061 | 11.2 |
| *I16-54A-13* | 463.6 | 1545 | 0 | 5.72 | 46.9 | 17.02 | 195.6 | 144.7 | 13.23 | 247.4 | 40.2 | 252.9 | 49.1 | 130.6 | 17.2 | 95.6 | 11.63 | 0.291 | 3.42 |
| *I16-54A-14* | 497.5 | 1104 | 3.9 | 2.63 | 14.57 | 3.99 | 40.5 | 43.1 | 20.29 | 114.9 | 22.1 | 156.8 | 33.17 | 96 | 13.47 | 79.5 | 10.46 | 0.022 | 3.9 |
| *I16-54A-15* | 520.1 | 2644 | 0.104 | 20.28 | 162.8 | 54.15 | 506.3 | 324.8 | 93.8 | 459.9 | 71.7 | 437 | 82.2 | 223.4 | 30.27 | 176 | 23.16 | 0.195 | 35.2 |
| *I16-54A-16* | 514 | 1986 | 0.14 | 7.01 | 46.5 | 16.34 | 180.2 | 142.6 | 44.9 | 267 | 45.4 | 294.2 | 58.8 | 158.6 | 20.9 | 120.6 | 15.68 | 1.89 | 14.43 |
| *I16-54A-17* | 475.3 | 2595 | 0.071 | 1.68 | 10.74 | 3.91 | 54.7 | 86.1 | 17.94 | 278.3 | 55.54 | 396.8 | 83.7 | 234.8 | 29.99 | 165.3 | 20.45 | 0.347 | 6.82 |
| *I16-54A-18* | 518.8 | 2856 | 0.051 | 15.52 | 63.9 | 14.9 | 147.1 | 138.7 | 36.72 | 317.9 | 59.3 | 416 | 85.3 | 244.1 | 34 | 199.7 | 26.1 | 1.55 | 20.41 |
| *I16-54A-19* | 443 | 1869 | 0.039 | 4.8 | 35.8 | 12.39 | 142 | 132.5 | 18.7 | 283 | 44.1 | 269.3 | 53.6 | 143.4 | 17.76 | 104.3 | 15.94 | 1.194 | 5.38 |
| *I16-54A-20* | 498.2 | 3362 | 0.14 | 7.01 | 43.3 | 13.87 | 166.1 | 176.2 | 46 | 403 | 73 | 496.6 | 100.4 | 274.7 | 37.76 | 210.9 | 27.02 | 0.83 | 15.63 |
| *I16-54A-23* | 481 | 7.00E +03 | 2.09 | 6.68 | 42.3 | 15 | 196 | 214 | 34.9 | 586 | 116 | 870 | 186 | 550 | 74 | 430 | 57 | 3.69 | 24.3 |
| *I16-54A-24* | 520.8 | 2105 | 0 | 27.56 | 176.2 | 50.38 | 446 | 271.9 | 57.6 | 378.7 | 58.3 | 349.6 | 64.4 | 173.8 | 23.05 | 135.6 | 17.57 | 0.303 | 17.88 |
| *I16-54A-25* | 548 | 2247 | 0.056 | 45.9 | 231.2 | 56.96 | 478.7 | 259.2 | 43.5 | 388.9 | 59.5 | 356.1 | 67.5 | 188.9 | 26.54 | 157 | 20.62 | 1.376 | 12.14 |
| *I16-54A-26* | 585 | 1739 | 0 | 42.1 | 191 | 45.6 | 371.8 | 215.7 | 48.6 | 301.3 | 47 | 283.7 | 52.3 | 145.1 | 19.12 | 115.1 | 15.06 | 0.227 | 11.61 |
| *I16-54A-28* | 550 | 2872 | 0.122 | 30.06 | 223.5 | 64.6 | 560 | 325.5 | 64.4 | 473 | 75.3 | 464 | 88.1 | 245.5 | 33.1 | 200 | 25.96 | 3.32 | 44 |
| *I16-54A-30* | 458.5 | 2310 | 0.062 | 4.02 | 18.17 | 5.25 | 59.5 | 72.4 | 16.93 | 224.3 | 43.2 | 316 | 66.6 | 193.5 | 26.9 | 157.2 | 20.4 | 1.047 | 11.16 |
| *I16-54A-31* | 566.7 | 1800 | 0.085 | 76.7 | 361.5 | 78.4 | 551.6 | 248.2 | 37.36 | 339.2 | 50.3 | 299.5 | 55.5 | 147.5 | 18.93 | 106.6 | 12.9 | 1.99 | 13.04 |
| *I16-54A-32* | 446.2 | 2051 | 0.027 | 63.3 | 264.1 | 55.6 | 409.9 | 221.8 | 35.1 | 350.8 | 55.9 | 346.4 | 65 | 172.2 | 21.94 | 117.1 | 13.72 | 0.76 | 4.9 |
| *I16-54A-33* | 461 | 1403 | 0 | 1.43 | 8.25 | 2.86 | 36 | 47.5 | 8.64 | 144.9 | 28.05 | 208.5 | 43.1 | 121.4 | 15.64 | 84.8 | 10.61 | 0.054 | 2.65 |
| | | | | | | | | | | | | | | | | | | | |
| *I16-46A-1* | 260.6 | 469 | 0 | 4.45 | 14 | 2.57 | 17.46 | 11.75 | 3.3 | 30.2 | 7.13 | 63.7 | 16.66 | 57 | 8.53 | 59.3 | 9.07 | 0.104 | 0.455 |
| *I16-46A-2* | 279.5 | 671 | 0 | 8.41 | 29.2 | 5.36 | 34.5 | 18.84 | 7.11 | 43.8 | 10.51 | 95.4 | 24.53 | 74.5 | 8.82 | 46.4 | 6.11 | 0.567 | 1.976 |
| *I16-46A-3* | 35.6 | 1660 | 42.7 | 30.6 | 165.3 | 37.6 | 230 | 118.4 | 148.5 | 185 | 37.7 | 280 | 57.5 | 163 | 23.2 | 152.5 | 20.3 | 2.09 | 12.78 |
| *I16-46A-4* | 303.2 | 340.6 | 0 | 2.91 | 11.15 | 2.23 | 16.1 | 10.39 | 3.81 | 27.8 | 6.11 | 52.7 | 13.05 | 38 | 4.54 | 23.64 | 3.34 | 0.111 | 0.842 |
| *I16-46A-5* | 270.7 | 2425 | 0.051 | 28.48 | 101.4 | 17.62 | 113 | 62.9 | 33.91 | 167 | 39.55 | 353.5 | 88.8 | 269.5 | 35.05 | 205.7 | 28.18 | 0.23 | 6.13 |
| *I16-46A-6* | 258.5 | 1549 | 19 | 18.18 | 67.3 | 12.77 | 83.3 | 48.4 | 18.59 | 112.8 | 24.91 | 214.5 | 55.3 | 182.4 | 27.62 | 182.9 | 26.99 | 0.554 | 4.01 |
| *I16-46A-7* | 327.1 | 1373 | 0.051 | 7.62 | 26.21 | 4.75 | 32.1 | 22.4 | 26.05 | 64.1 | 17.82 | 179.4 | 50.15 | 162.4 | 21.07 | 109.5 | 13.35 | 0.0307 | 2.05 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-46A-8* | 294.9 | 1367 | 0 | 14.2 | 51.5 | 9.25 | 62.2 | 39.3 | 15.36 | 99.1 | 24.19 | 215.9 | 51.9 | 146.2 | 16.45 | 80.7 | 9.86 | 0.321 | 3.27 |
| *I16-46A-9* | 255.6 | 2529 | 0.125 | 25.71 | 91.6 | 16.43 | 109.7 | 66 | 26.98 | 169.9 | 39.6 | 350.9 | 91.2 | 297.8 | 44 | 290 | 42 | 0.542 | 7.77 |
| *I16-46A-10* | 268.5 | 2631 | 0.297 | 55.7 | 188.9 | 32.25 | 192.8 | 94.3 | 44.5 | 197.6 | 44.59 | 386.1 | 95.2 | 277.6 | 33.73 | 182.8 | 24.77 | 0.81 | 9.14 |
| *I16-46A-11* | 276 | 1793 | 29 | 28.03 | 102.4 | 18.36 | 117.9 | 64.2 | 26.18 | 139.8 | 32.16 | 273.3 | 66 | 190.8 | 23.3 | 125 | 16.3 | 0.726 | 5.66 |
| *I16-46A-13* | 283 | 1857 | 3.64 | 19.8 | 76.1 | 14.25 | 98.7 | 60.5 | 25.8 | 153.2 | 35.63 | 299.9 | 70.5 | 200.2 | 23.81 | 125.8 | 16.67 | 1.179 | 6.94 |
| *I16-46A-14* | 273.2 | 2882 | 0.3 | 61.1 | 213 | 37.03 | 221.6 | 108.3 | 46.6 | 218.9 | 49.86 | 424.1 | 103.2 | 301.7 | 37.41 | 201.4 | 27.65 | 0.375 | 9.37 |
| *I16-46A-15* | 282.9 | 510 | 0 | 1.61 | 5.68 | 1.096 | 8.76 | 8.67 | 3.39 | 32.8 | 8.32 | 74.3 | 18.65 | 54.1 | 6.14 | 29 | 3.45 | 0.051 | 0.726 |
| *I16-46A-16* | 265.9 | 1604 | 0 | 24.76 | 89.5 | 16.3 | 101.7 | 54.3 | 26.39 | 118.8 | 24.96 | 216.6 | 56.4 | 185.6 | 26.96 | 172.3 | 23.8 | 0.912 | 4.51 |
| *I16-46A-17* | 297.4 | 939 | 0 | 15.99 | 50.4 | 8.29 | 52.9 | 31 | 30.1 | 73.2 | 17.54 | 152 | 35.28 | 98.9 | 11.4 | 54.4 | 6.04 | 0.042 | 1.28 |
| *I16-46A-18* | 255.4 | 1334 | 0 | 10.78 | 41.82 | 8.45 | 60.8 | 40.7 | 13.6 | 104.5 | 22.93 | 192.7 | 48.65 | 157.4 | 23.23 | 152.9 | 22.53 | 0.424 | 2.85 |
| *I16-46A-19* | 291.2 | 359.4 | 0 | 2.62 | 10.26 | 1.97 | 13.29 | 8.82 | 3.06 | 23 | 5.48 | 48.7 | 12.85 | 40.2 | 5.15 | 32.1 | 4.95 | 0.119 | 0.562 |
| *I16-46A-20* | 267.5 | 816 | 0.037 | 3.6 | 14.07 | 2.83 | 20.3 | 14.8 | 4.99 | 43.7 | 11.32 | 103.8 | 29.12 | 103 | 15.66 | 110.3 | 18.4 | 0.398 | 1.92 |
| *I16-46A-21* | 266.2 | 1554 | 0.066 | 25.23 | 79.3 | 12.94 | 79.4 | 43.8 | 44.38 | 106.7 | 25.71 | 231.5 | 58.69 | 178 | 22.37 | 124 | 16.09 | 0.131 | 3.13 |
| *I16-46A-22* | 271.1 | 379 | 0 | 4.67 | 18.16 | 3.3 | 23.1 | 13.51 | 4.65 | 32.8 | 7.2 | 59.3 | 14 | 37.7 | 4.17 | 21.63 | 3.23 | 0.196 | 0.841 |
| *I16-46A-23* | 260.7 | 974 | 0.2 | 9.47 | 33.7 | 6.04 | 40.7 | 24.6 | 9.01 | 61.4 | 14.54 | 128.9 | 34.6 | 117.4 | 17.43 | 114.7 | 16.85 | 0.18 | 0.943 |
| *I16-46A-24* | 259.8 | 382.4 | 0 | 1.8 | 6.46 | 1.25 | 8.67 | 6.02 | 2.21 | 19.1 | 4.88 | 46 | 13.04 | 48.6 | 8.25 | 59.1 | 9.26 | 0.068 | 0.57 |
| *I16-46A-25* | 259 | 1491 | 0.009 | 19.56 | 64.6 | 11.08 | 68.2 | 36.6 | 18.3 | 86.6 | 20.55 | 191.5 | 52.48 | 180.1 | 26.8 | 173.9 | 25.3 | 0.493 | 3.32 |
| *I16-46A-26* | 281.4 | 1978 | 19 | 15.2 | 47.12 | 8.27 | 55.1 | 43.2 | 31.89 | 119.8 | 32.19 | 301.8 | 72.9 | 214.1 | 26.12 | 131.9 | 15.16 | 0.0323 | 3.68 |
| *I16-46A-27* | 253.6 | 2666 | 0.132 | 32.01 | 124.1 | 23.6 | 161.7 | 96.4 | 38.2 | 221.6 | 46.28 | 376.9 | 95 | 314.7 | 49.07 | 332.4 | 49.5 | 1.654 | 11.5 |
| *I16-46A-28* | 286.6 | 2500 | 17 | 28.6 | 102.4 | 18.82 | 121.5 | 71.6 | 31.4 | 177.5 | 43.6 | 383.8 | 93.8 | 269.2 | 31.39 | 158.7 | 19.48 | 0.44 | 5.57 |
| *I16-46A-29* | 255.7 | 3100 | 0.073 | 32.79 | 116.2 | 20.53 | 134.5 | 77.6 | 31.84 | 197 | 47.23 | 428.2 | 111.3 | 356.9 | 52.7 | 346.5 | 50.29 | 1.661 | 9.61 |
| *I16-46A-30* | 273.9 | 1898 | 0.075 | 35.6 | 120.2 | 20.74 | 129.6 | 68.2 | 31.92 | 152.9 | 35.07 | 293.2 | 69.3 | 197.8 | 23.85 | 126.2 | 16.47 | 0.303 | 6.89 |

## Appendix 5.5 Monazite U–Pb age data – Chapter 5

| Monazite Grain | $^{207}Pb/^{235}U$ | 2σ | $^{206}Pb/^{238}U$ | 2σ | Error Correlation (ρ) | Th/U | $^{207}Pb/^{235}U$ Age (Ma) | Age 2σ | $^{206}Pb/^{238}U$ Age (Ma) | Age 2σ | $^{207}Pb/^{206}Pb$ Age (Ma) | Age 2σ | Concordance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-18M - 1* | 16.5900 | 2.2000 | 0.5598 | 0.0140 | 0.8719 | 26.23 | 2911.4 | 63.5 | 2865.8 | 28.9 | 2943.1 | 90 | 97.37352 |
| *I16-18M - 2* | 17.6400 | 2.4000 | 0.5848 | 0.0130 | 0.5649 | 19.72 | 2970.3 | 65.4 | 2968.3 | 26.4 | 2972 | 101 | 99.8755 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-18M - 3* | 17.3800 | 2.4000 | 0.5768 | 0.0130 | 0.8843 | 19.14 | 2956 | 66.3 | 2935.7 | 26.6 | 2969.9 | 95.6 | 98.84845 |
| *I16-18M - 4* | 17.2400 | 2.4000 | 0.5769 | 0.0130 | 0.8606 | 37.70 | 2948.3 | 66.8 | 2936.1 | 26.6 | 2956.6 | 97.1 | 99.30664 |
| *I16-18M - 5* | 17.4600 | 5.4000 | 0.5830 | 0.0910 | 0.7966 | 33.92 | 2960 | 149 | 2961 | 185 | 2960 | 167 | 100.0338 |
| *I16-18M - 6* | 17.5800 | 2.4000 | 0.5833 | 0.0130 | 0.7389 | 17.80 | 2967 | 65.6 | 2962.2 | 26.5 | 2970.3 | 97.5 | 99.7273 |
| *I16-18M - 7* | 17.6300 | 2.4000 | 0.5859 | 0.0130 | 0.7013 | 22.46 | 2969.8 | 65.4 | 2972.8 | 26.4 | 2967.7 | 98 | 100.1719 |
| *I16-18M - 8* | 18.0000 | 2.5000 | 0.5986 | 0.0130 | 0.6847 | 17.04 | 2989.7 | 66.8 | 3024.2 | 26.2 | 2967 | 101 | 101.9279 |
| *I16-18M - 9* | 17.4300 | 2.3000 | 0.5891 | 0.0290 | 0.8983 | 19.58 | 2958.8 | 63.4 | 2985.8 | 58.8 | 2940.5 | 73 | 101.5406 |
| *I16-18M - 10* | 17.6000 | 2.4000 | 0.5832 | 0.0130 | 0.7495 | 18.16 | 2968.1 | 65.5 | 2961.8 | 26.5 | 2972.4 | 97.1 | 99.64339 |
| *I16-18M - 11* | 17.5800 | 2.4000 | 0.5820 | 0.0130 | 0.7526 | 21.43 | 2967 | 65.6 | 2956.9 | 26.5 | 2973.9 | 97.2 | 99.42836 |
| *I16-18M - 12* | 17.5200 | 2.4000 | 0.5832 | 0.0130 | 0.7802 | 22.70 | 2963.8 | 65.8 | 2961.8 | 26.5 | 2965.1 | 97.1 | 99.88871 |
| *I16-18M - 13* | 17.0500 | 2.2000 | 0.5639 | 0.0180 | 0.8764 | 37.82 | 2937.7 | 61.9 | 2882.7 | 37.1 | 2975.5 | 82.3 | 96.8812 |
| *I16-18M - 14* | 17.5000 | 2.4000 | 0.5797 | 0.0130 | 0.8051 | 23.76 | 2962.7 | 65.9 | 2947.5 | 26.5 | 2972.9 | 96.5 | 99.14562 |
| *I16-18M - 15* | 17.5800 | 2.4000 | 0.5878 | 0.0130 | 0.7693 | 21.71 | 2967 | 65.6 | 2980.5 | 26.4 | 2957.9 | 97.1 | 100.7641 |
| *I16-18M - 16* | 17.4900 | 2.4000 | 0.5829 | 0.0130 | 0.7877 | 17.79 | 2962.1 | 65.9 | 2960.6 | 26.5 | 2963.1 | 97.1 | 99.91563 |
| *I16-18M - 17* | 17.5900 | 2.5000 | 0.5859 | 0.0140 | 0.8351 | 21.35 | 2967.6 | 68.3 | 2972.8 | 28.5 | 2964.1 | 99.1 | 100.2935 |
| *I16-18M - 18* | 16.6100 | 2.1000 | 0.5553 | 0.0170 | 0.8709 | 18.46 | 2912.6 | 60.5 | 2847.2 | 35.2 | 2958.1 | 81.4 | 96.25097 |
| *I16-18M - 19* | 17.5400 | 2.4000 | 0.5868 | 0.0130 | 0.7695 | 18.15 | 2964.8 | 65.7 | 2976.4 | 26.4 | 2957 | 97.3 | 100.6561 |
| *I16-18M - 20* | 17.8800 | 2.5000 | 0.5905 | 0.0130 | 0.6733 | 18.95 | 2983.3 | 67.2 | 2991.4 | 26.3 | 2978 | 102 | 100.45 |
| *I16-18M - 21* | 17.7100 | 2.4000 | 0.5912 | 0.0130 | 0.8359 | 28.60 | 2974.1 | 65.1 | 2994.3 | 26.3 | 2960.5 | 95 | 101.1417 |
| *I16-18M - 22* | 17.5200 | 2.4000 | 0.5839 | 0.0130 | 0.7032 | 20.87 | 2963.8 | 65.8 | 2964.6 | 26.5 | 2963.1 | 98.7 | 100.0506 |
| *I16-18M - 23* | 17.6500 | 2.4000 | 0.5880 | 0.0130 | 0.6219 | 20.45 | 2970.9 | 65.3 | 2981.3 | 26.4 | 2963.8 | 99.5 | 100.5905 |
| *I16-18M - 24* | 17.3400 | 2.3000 | 0.5784 | 0.0130 | 0.7890 | 28.74 | 2953.8 | 63.7 | 2942.2 | 26.5 | 2961.8 | 93.3 | 99.33824 |
| *I16-18M - 25* | 17.5400 | 2.4000 | 0.5883 | 0.0130 | 0.8558 | 17.49 | 2964.8 | 65.7 | 2982.5 | 26.4 | 2952.9 | 95.6 | 101.0024 |
| *I16-18M - 26* | 17.8300 | 2.5000 | 0.5958 | 0.0130 | 0.6941 | 23.07 | 2980.6 | 67.4 | 3012.9 | 26.3 | 2959 | 102 | 101.8216 |
| *I16-18M - 27* | 17.9000 | 2.5000 | 0.5978 | 0.0130 | 0.8181 | 15.99 | 2984.4 | 67.2 | 3021 | 26.2 | 2959.8 | 98.8 | 102.0677 |
| *I16-18M - 28* | 17.7000 | 2.4000 | 0.5898 | 0.0130 | 0.4313 | 21.81 | 2973.6 | 65.2 | 2988.6 | 26.4 | 2963 | 103 | 100.864 |
| *I16-18M - 29* | 17.8100 | 2.4000 | 0.5931 | 0.0130 | 0.6558 | 22.65 | 2979.5 | 64.8 | 3002 | 26.3 | 2964.4 | 98 | 101.2684 |
| *I16-18M - 30* | 17.8500 | 2.5000 | 0.5947 | 0.0130 | 0.6331 | 16.68 | 2981.7 | 67.3 | 3008.4 | 26.3 | 2964 | 103 | 101.498 |
| *I16-18M - 31* | 17.6700 | 2.4000 | 0.5947 | 0.0130 | 0.8061 | 17.30 | 2971.9 | 65.3 | 3008.4 | 26.3 | 2947.3 | 96 | 102.0731 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-58M - 1* | 20.4800 | 2.8000 | 0.6382 | 0.0150 | 0.6621 | 407.88 | 3114.3 | 66.2 | 3181.9 | 29.5 | 3071 | 97.8 | 103.6112 |
| *CO17-58M - 2* | 19.6700 | 2.7000 | 0.6220 | 0.0150 | 0.6521 | 214.78 | 3075.3 | 66.3 | 3117.9 | 29.8 | 3047.6 | 98.4 | 102.3067 |
| *CO17-58M - 3* | 19.4200 | 2.7000 | 0.6003 | 0.0140 | 0.6464 | 206.55 | 3062.9 | 67.1 | 3031 | 28.2 | 3083.9 | 99.9 | 98.28464 |
| *CO17-58M - 4* | 18.8600 | 2.6000 | 0.6008 | 0.0150 | 0.6675 | 536.49 | 3034.7 | 66.5 | 3033.1 | 30.2 | 3035.8 | 98.2 | 99.91106 |
| *CO17-58M - 5* | 19.2900 | 2.7000 | 0.6069 | 0.0140 | 0.6367 | 306.34 | 3056.4 | 67.6 | 3057.6 | 28.1 | 3056 | 101 | 100.0524 |
| *CO17-58M - 6* | 21.9800 | 3.1000 | 0.6390 | 0.0160 | 0.6271 | 551.01 | 3182.8 | 68.5 | 3185.1 | 31.5 | 3181 | 100 | 100.1289 |
| *CO17-58M - 7* | 20.9100 | 2.9000 | 0.6308 | 0.0140 | 0.5695 | 278.02 | 3134.4 | 67.2 | 3152.8 | 27.7 | 3123 | 101 | 100.9542 |
| *CO17-58M - 8* | 21.4800 | 2.9000 | 0.6495 | 0.0150 | 0.5645 | 429.13 | 3160.5 | 65.5 | 3226.3 | 29.3 | 3119 | 98.2 | 103.4402 |
| *CO17-58M - 9* | 21.9900 | 3.0000 | 0.6670 | 0.0160 | 0.5743 | 400.68 | 3183.3 | 66.2 | 3294.3 | 30.9 | 3114.1 | 98.9 | 105.7866 |
| *CO17-58M - 10* | 20.0000 | 2.8000 | 0.6227 | 0.0150 | 0.5698 | 467.20 | 3091.4 | 67.7 | 3120.7 | 29.8 | 3072 | 102 | 101.5853 |
| *CO17-58M - 11* | 20.8100 | 2.9000 | 0.6319 | 0.0160 | 0.6656 | 285.30 | 3129.8 | 67.5 | 3157.1 | 31.6 | 3112.3 | 98.7 | 101.4394 |
| *CO17-58M - 12* | 24.1000 | 3.1000 | 0.7370 | 0.0200 | 0.6683 | 407.45 | 3272.4 | 62.7 | 3559.4 | 37.1 | 3101 | 89.5 | 114.7823 |
| *CO17-58M - 13* | 20.2600 | 2.8000 | 0.6257 | 0.0150 | 0.6152 | 277.71 | 3103.9 | 66.9 | 3132.6 | 29.7 | 3085.3 | 99.7 | 101.5331 |
| *CO17-58M - 14* | 15.6900 | 2.2000 | 0.5500 | 0.0130 | 0.5273 | 242.06 | 2858.1 | 66.9 | 2825.2 | 27 | 2881 | 105 | 98.06317 |
| *CO17-58M - 15* | 20.1500 | 2.8000 | 0.6117 | 0.0160 | 0.5056 | 421.19 | 3098.6 | 67.2 | 3076.8 | 32 | 3113 | 102 | 98.83713 |
| *CO17-58M - 16* | 15.3200 | 2.0000 | 0.5506 | 0.0140 | 0.4131 | 378.96 | 2835.3 | 62.2 | 2827.7 | 29.1 | 2840.8 | 99.6 | 99.53886 |
| *CO17-58M - 17* | 21.8600 | 2.9000 | 0.6590 | 0.0160 | 0.5374 | 360.12 | 3177.5 | 64.4 | 3263.3 | 31.1 | 3123.8 | 96.5 | 104.4657 |
| *CO17-58M - 18* | 20.0900 | 2.8000 | 0.6383 | 0.0150 | 0.7210 | 321.55 | 3095.7 | 67.4 | 3182.3 | 29.5 | 3040 | 98.9 | 104.6809 |
| *CO17-58M - 19* | 22.0000 | 3.0000 | 0.6540 | 0.0160 | 0.6879 | 529.85 | 3183.7 | 66.2 | 3243.8 | 31.2 | 3146.1 | 96 | 103.1054 |
| *CO17-58M - 20* | 19.6600 | 2.6000 | 0.6120 | 0.0170 | 0.8215 | 461.78 | 3074.8 | 63.9 | 3078 | 34 | 3072.7 | 88.3 | 100.1725 |
| *CO17-58M - 21* | 20.3500 | 2.8000 | 0.6173 | 0.0150 | 0.5764 | 324.47 | 3108.1 | 66.6 | 3099.2 | 29.9 | 3113.9 | 99.7 | 99.52792 |
| *CO17-58M - 22* | 13.9900 | 5.0000 | 0.5140 | 0.0920 | 0.5926 | 91.04 | 2749 | 169 | 2674 | 196 | 2805 | 237 | 95.32977 |
| *CO17-58M - 23* | 17.6200 | 2.4000 | 0.5812 | 0.0140 | 0.6304 | 295.71 | 2969.2 | 65.4 | 2953.6 | 28.5 | 2979.8 | 98.6 | 99.12075 |
| *CO17-58M - 24* | 17.8400 | 2.4000 | 0.5810 | 0.0140 | 0.8078 | 165.78 | 2981.1 | 64.7 | 2952.8 | 28.5 | 3000.3 | 93.2 | 98.41682 |
| *CO17-58M - 25* | 16.2000 | 2.1000 | 0.5470 | 0.0150 | 0.5629 | 509.62 | 2888.7 | 62 | 2812.7 | 31.3 | 2942.1 | 94 | 95.60178 |
| *CO17-58M - 26* | 20.6600 | 2.9000 | 0.6208 | 0.0140 | 0.6379 | 207.73 | 3122.8 | 68 | 3113.1 | 27.8 | 3129 | 101 | 99.49185 |
| *CO17-58M - 27* | 17.3900 | 2.4000 | 0.5758 | 0.0140 | 0.5528 | 423.95 | 2956.6 | 66.3 | 2931.6 | 28.6 | 2974 | 102 | 98.57431 |
| *CO17-58M - 28* | 20.0600 | 2.7000 | 0.6228 | 0.0150 | 0.5332 | 376.47 | 3094.3 | 65.1 | 3121.1 | 29.8 | 3076.9 | 98.6 | 101.4365 |
| *CO17-58M - 29* | 20.9700 | 2.9000 | 0.6356 | 0.0160 | 0.4605 | 533.68 | 3137.2 | 67 | 3171.7 | 31.5 | 3115 | 102 | 101.8202 |
| *CO17-58M - 30* | 22.2700 | 3.1000 | 0.6550 | 0.0170 | 0.4456 | 903.50 | 3195.6 | 67.6 | 3247.7 | 33.1 | 3163 | 103 | 102.6778 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-58M - 31* | 18.6800 | 2.5000 | 0.5800 | 0.0150 | 0.7694 | 286.08 | 3025.4 | 64.5 | 2948.8 | 30.6 | 3076.8 | 91.9 | 95.83983 |
| | | | | | | | | | | | | | |
| *MADL - 1* | 0.6586 | 0.0910 | 0.0839 | 0.0019 | 0.3653 | 30.78 | 513.8 | 27.9 | 519.36 | 5.65 | 489 | 145 | 106.2086 |
| *MADL - 2* | 0.6547 | 0.0900 | 0.0832 | 0.0018 | 0.3627 | 29.81 | 511.4 | 27.6 | 515.19 | 5.36 | 494 | 145 | 104.2895 |
| *MADL - 3* | 0.6596 | 0.0910 | 0.0840 | 0.0018 | 0.3465 | 30.15 | 514.4 | 27.8 | 519.95 | 5.35 | 490 | 146 | 106.1122 |
| *MADL - 4* | 0.6613 | 0.0910 | 0.0841 | 0.0019 | 0.4987 | 30.36 | 515.4 | 27.8 | 520.55 | 5.65 | 493 | 141 | 105.5882 |
| *MADL - 5* | 0.6605 | 0.0910 | 0.0840 | 0.0018 | 0.4470 | 30.52 | 514.9 | 27.8 | 519.95 | 5.35 | 493 | 143 | 105.4665 |
| *MADL - 6* | 0.6600 | 0.0910 | 0.0831 | 0.0018 | 0.4097 | 30.49 | 514.6 | 27.8 | 514.6 | 5.36 | 515 | 143 | 99.92233 |
| *MADL - 7* | 0.6541 | 0.0900 | 0.0839 | 0.0018 | 0.2432 | 30.68 | 511 | 27.6 | 519.36 | 5.35 | 474 | 148 | 109.5696 |
| *MADL - 8* | 0.6593 | 0.0910 | 0.0842 | 0.0019 | 0.6568 | 30.86 | 514.2 | 27.8 | 521.14 | 5.65 | 483 | 137 | 107.8965 |
| *MADL - 9* | 0.6511 | 0.0900 | 0.0831 | 0.0018 | 0.6291 | 30.12 | 509.2 | 27.7 | 514.6 | 5.36 | 485 | 139 | 106.1031 |
| *MADL - 10* | 0.6616 | 0.0910 | 0.0838 | 0.0018 | 0.4265 | 31.06 | 515.6 | 27.8 | 518.76 | 5.35 | 502 | 143 | 103.3386 |
| *MADL - 11* | 0.6428 | 0.0890 | 0.0830 | 0.0019 | 0.5153 | 30.75 | 504 | 27.5 | 514 | 5.65 | 459 | 142 | 111.9826 |
| *MADL - 12* | 0.6590 | 0.0910 | 0.0840 | 0.0019 | 0.4823 | 30.93 | 514 | 27.8 | 519.95 | 5.65 | 488 | 142 | 106.5471 |
| *MADL - 13* | 0.8830 | 0.1500 | 0.0858 | 0.0021 | 0.7787 | 32.21 | 642.6 | 40.4 | 530.65 | 6.23 | 1059 | 153 | 50.10859 |
| *MADL - 14* | 0.6607 | 0.0910 | 0.0834 | 0.0019 | 0.5210 | 30.91 | 515 | 27.8 | 516.39 | 5.65 | 509 | 140 | 101.4519 |
| *MADL - 15* | 0.6621 | 0.0910 | 0.0835 | 0.0018 | 0.5681 | 31.26 | 515.9 | 27.8 | 516.98 | 5.35 | 511 | 139 | 101.1703 |
| | | | | | | | | | | | | | |
| *222 - 1* | 0.5587 | 0.0770 | 0.0720 | 0.0016 | 0.4614 | 16.71 | 450.7 | 25.1 | 448.19 | 4.81 | 463 | 143 | 96.8013 |
| *222 - 2* | 0.5586 | 0.0770 | 0.0720 | 0.0016 | 0.4860 | 16.49 | 450.6 | 25.1 | 448.19 | 4.81 | 463 | 142 | 96.8013 |
| *222 - 3* | 0.5623 | 0.0780 | 0.0723 | 0.0016 | 0.4822 | 15.98 | 453 | 25.3 | 450 | 4.81 | 468 | 143 | 96.15385 |
| *222 - 4* | 0.5585 | 0.0770 | 0.0722 | 0.0016 | 0.3989 | 16.42 | 450.5 | 25.1 | 449.4 | 4.81 | 456 | 145 | 98.55263 |
| *222 - 5* | 0.5664 | 0.0780 | 0.0734 | 0.0016 | 0.2822 | 18.54 | 455.7 | 25.3 | 456.61 | 4.8 | 451 | 148 | 101.2439 |
| *222 - 6* | 0.5602 | 0.0770 | 0.0728 | 0.0016 | 0.5282 | 17.19 | 451.7 | 25.1 | 453 | 4.81 | 445 | 141 | 101.7978 |
| *222 - 7* | 0.5577 | 0.0770 | 0.0729 | 0.0016 | 0.4249 | 17.00 | 450 | 25.1 | 453.6 | 4.81 | 432 | 145 | 105 |
| *222 - 8* | 0.5569 | 0.0770 | 0.0726 | 0.0016 | 0.3847 | 16.50 | 449.5 | 25.1 | 451.8 | 4.81 | 438 | 146 | 103.1507 |
| *222 - 9* | 0.5587 | 0.0770 | 0.0715 | 0.0016 | 0.6267 | 16.44 | 450.7 | 25.1 | 445.19 | 4.81 | 479 | 138 | 92.94154 |
| *222 - 10* | 0.5603 | 0.0770 | 0.0714 | 0.0016 | 0.2922 | 17.32 | 451.7 | 25.1 | 444.58 | 4.81 | 488 | 146 | 91.10246 |
| | | | | | | | | | | | | | |
| *Ambat - 1* | 0.6556 | 0.0910 | 0.0832 | 0.0018 | 0.2192 | 36.88 | 511.9 | 27.9 | 515.19 | 5.36 | 497 | 149 | 103.66 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Ambat - 2* | 1.2860 | 0.1800 | 0.0888 | 0.0020 | 0.3836 | 37.02 | 839.5 | 40 | 548.44 | 5.92 | 1715 | 122 | 31.97901 |
| *Ambat - 3* | 0.6590 | 0.0910 | 0.0837 | 0.0019 | 0.3582 | 36.97 | 514 | 27.8 | 518.17 | 5.65 | 496 | 145 | 104.4698 |
| *Ambat - 4* | 0.6557 | 0.0910 | 0.0837 | 0.0018 | 0.4017 | 36.98 | 512 | 27.9 | 518.17 | 5.35 | 484 | 145 | 107.0599 |
| *Ambat - 5* | 0.9050 | 0.1500 | 0.0872 | 0.0020 | 0.6755 | 37.90 | 654.4 | 40 | 538.96 | 5.93 | 1076 | 152 | 50.08922 |
| *Ambat - 6* | 0.6544 | 0.0900 | 0.0837 | 0.0018 | 0.1438 | 37.92 | 511.2 | 27.6 | 518.17 | 5.35 | 480 | 150 | 107.9521 |
| *Ambat - 7* | 0.6559 | 0.0910 | 0.0838 | 0.0019 | 0.5287 | 38.07 | 512.1 | 27.9 | 518.76 | 5.65 | 482 | 142 | 107.6266 |
| *Ambat - 8* | 0.6621 | 0.0920 | 0.0843 | 0.0018 | 0.3489 | 37.52 | 515.9 | 28.1 | 521.74 | 5.35 | 490 | 147 | 106.4776 |
| *Ambat - 9* | 0.6860 | 0.0950 | 0.0829 | 0.0018 | 0.2335 | 38.02 | 530.4 | 28.6 | 513.41 | 5.36 | 604 | 146 | 85.00166 |
| *Ambat - 10* | 0.6547 | 0.0900 | 0.0824 | 0.0018 | 0.3233 | 37.83 | 511.4 | 27.6 | 510.43 | 5.36 | 516 | 145 | 98.92054 |

Appendix 5.6: Monazite REE concentrations (ppm) – Chapter 5

| *Monazite Grain* | *Y* | *Zr* | *La* | *Pr* | *Nd* | *Sm* | *Eu* | *Gd* | *Tb* | *Dy* | *Ho* | *Er* | *Tm* | *Yb* | *Lu* | *Th* | *U* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-58M - 1* | 3190 | 0.36 | 164000 | 29720 | 104560 | 12240 | 139 | 5885 | 431 | 1321 | 147 | 193.5 | 13.03 | 42.9 | 3.64 | 60040 | 147 |
| *CO17-58M - 2* | 2838 | 0.26 | 177000 | 28370 | 96350 | 10360 | 142 | 4754 | 349 | 1103 | 126 | 176.4 | 12.09 | 40.7 | 3.34 | 46370 | 216 |
| *CO17-58M - 3* | 4866 | 0.61 | 170000 | 28420 | 96800 | 11380 | 157 | 5899 | 496 | 1703 | 210 | 316.0 | 22.52 | 79.4 | 6.66 | 70000 | 339 |
| *CO17-58M - 4* | 4030 | 0.30 | 179000 | 29180 | 104000 | 14090 | 193 | 7369 | 560 | 1693 | 187 | 247.8 | 16.30 | 55.2 | 4.57 | 51020 | 95 |
| *CO17-58M - 5* | 3870 | 0.27 | 179000 | 28800 | 99780 | 12400 | 193 | 6279 | 489 | 1555 | 174 | 241.5 | 16.90 | 58.3 | 4.98 | 48310 | 158 |
| *CO17-58M - 6* | 3752 | 0.34 | 178000 | 29780 | 103000 | 13190 | 189 | 6677 | 509 | 1569 | 171 | 230.4 | 15.20 | 51.7 | 4.29 | 46340 | 84 |
| *CO17-58M - 7* | 4355 | 0.37 | 179000 | 29620 | 105000 | 14410 | 213 | 7710 | 578 | 1775 | 197 | 265.2 | 18.33 | 63.1 | 5.18 | 64500 | 232 |
| *CO17-58M - 8* | 4559 | 0.42 | 176000 | 30370 | 113000 | 15280 | 227 | 8260 | 604 | 1847 | 207 | 276.1 | 18.97 | 62.6 | 5.54 | 165000 | 385 |
| *CO17-58M - 9* | 4212 | 0.43 | 175000 | 29400 | 105000 | 14270 | 197 | 7460 | 567 | 1721 | 191 | 254.8 | 17.51 | 59.0 | 5.06 | 46800 | 117 |
| *CO17-58M - 10* | 3845 | 0.23 | 172000 | 29670 | 105000 | 13940 | 184 | 7183 | 547 | 1647 | 179 | 233.1 | 15.78 | 50.4 | 4.45 | 47000 | 101 |
| *CO17-58M - 11* | 3727 | 0.29 | 178000 | 28650 | 99100 | 12360 | 188 | 6176 | 483 | 1526 | 169 | 231.2 | 15.59 | 53.6 | 4.79 | 33380 | 117 |
| *CO17-58M - 12* | 3660 | 0.35 | 170000 | 29550 | 103000 | 11990 | 160 | 5936 | 452 | 1428 | 160 | 219.0 | 14.85 | 48.0 | 4.03 | 65600 | 161 |
| *CO17-58M - 13* | 3902 | 0.40 | 179000 | 28620 | 97800 | 11620 | 188 | 5819 | 462 | 1488 | 171 | 239.7 | 16.77 | 58.3 | 4.87 | 44600 | 161 |
| *CO17-58M - 14* | 3678 | 1.03 | 185000 | 28000 | 94900 | 11430 | 188 | 5704 | 448 | 1418 | 163 | 227.1 | 15.70 | 51.6 | 4.55 | 42240 | 175 |
| *CO17-58M - 15* | 3674 | 0.22 | 174000 | 29290 | 100000 | 12570 | 185 | 6331 | 487 | 1546 | 173 | 233.1 | 15.40 | 49.9 | 4.20 | 43130 | 102 |
| *CO17-58M - 16* | 3046 | 0.96 | 173000 | 29790 | 106000 | 12820 | 209 | 6151 | 437 | 1295 | 143 | 188.4 | 12.03 | 41.2 | 3.41 | 69350 | 183 |
| *CO17-58M - 17* | 2990 | 0.28 | 162000 | 30150 | 109000 | 12840 | 158 | 6082 | 431 | 1295 | 140 | 184.4 | 11.48 | 38.9 | 3.33 | 60140 | 167 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CO17-58M - 18* | 4464 | 0.29 | 175000 | 29280 | 104000 | 13650 | 185 | 7122 | 556 | 1819 | 207 | 283.6 | 18.98 | 63.3 | 5.50 | 55500 | 173 |
| *CO17-58M - 19* | 3119 | 0.33 | 164000 | 30520 | 112000 | 14360 | 166 | 7077 | 492 | 1469 | 153 | 191.0 | 11.48 | 35.9 | 3.19 | 71000 | 134 |
| *CO17-58M - 20* | 2784 | 0.94 | 163000 | 30200 | 110000 | 13280 | 163 | 6327 | 431 | 1279 | 133 | 167.4 | 10.38 | 34.7 | 2.96 | 67050 | 145 |
| *CO17-58M - 21* | 4024 | 0.28 | 177000 | 28870 | 101000 | 12920 | 194 | 6532 | 509 | 1670 | 191 | 261.9 | 17.62 | 58.5 | 4.95 | 48800 | 150 |
| *CO17-58M - 22* | 49000 | 31.60 | 149000 | 28250 | 96000 | 17000 | 690 | 15200 | 1940 | 9500 | 1720 | 3500.0 | 410.00 | 2320.0 | 330.00 | 25400 | 279 |
| *CO17-58M - 23* | 3756 | 0.33 | 179000 | 28790 | 99200 | 12190 | 191 | 6055 | 469 | 1545 | 175 | 243.7 | 16.07 | 53.3 | 4.70 | 43410 | 147 |
| *CO17-58M - 24* | 3910 | 0.29 | 183000 | 28570 | 98720 | 11750 | 196 | 5962 | 460 | 1531 | 179 | 253.9 | 16.90 | 58.6 | 4.94 | 53250 | 321 |
| *CO17-58M - 25* | 2653 | 0.97 | 170000 | 29430 | 102000 | 11590 | 157 | 5380 | 385 | 1175 | 127 | 166.8 | 9.97 | 32.0 | 2.61 | 53000 | 104 |
| *CO17-58M - 26* | 5608 | 0.38 | 172000 | 28910 | 98400 | 11630 | 161 | 6304 | 539 | 1978 | 253 | 381.7 | 26.69 | 93.2 | 7.83 | 83300 | 401 |
| *CO17-58M - 27* | 4069 | 0.41 | 175000 | 29310 | 106000 | 13490 | 192 | 6940 | 519 | 1678 | 192 | 265.0 | 17.06 | 57.9 | 4.75 | 70800 | 167 |
| *CO17-58M - 28* | 4045 | 0.23 | 173000 | 29600 | 105000 | 13870 | 193 | 7159 | 545 | 1738 | 194 | 260.3 | 16.72 | 56.0 | 4.76 | 44160 | 117 |
| *CO17-58M - 29* | 3949 | 0.29 | 177000 | 29560 | 105000 | 14040 | 193 | 7333 | 546 | 1717 | 190 | 253.9 | 15.71 | 52.0 | 4.50 | 51820 | 97 |
| *CO17-58M - 30* | 2882 | 0.26 | 174000 | 29020 | 99900 | 11560 | 169 | 5548 | 407 | 1263 | 140 | 182.6 | 11.40 | 34.9 | 2.89 | 46530 | 52 |
| *CO17-58M - 31* | 4420 | 2000.00 | 174000 | 29200 | 102000 | 12770 | 185 | 6590 | 519 | 1743 | 205 | 297.0 | 19.44 | 68.4 | 5.99 | 55500 | 194 |
| | | | | | | | | | | | | | | | | | |
| *I16-18M - 1* | 26620 | 0.47 | 161000 | 31360 | 117000 | 24110 | 914 | 18570 | 2207 | 8937 | 1116 | 1812.0 | 163.20 | 697.0 | 60.70 | 56900 | 2169 |
| *I16-18M - 2* | 23060 | 0.60 | 164000 | 30460 | 110000 | 19550 | 821 | 14580 | 1802 | 7624 | 982 | 1609.0 | 142.30 | 605.7 | 52.41 | 32460 | 1646 |
| *I16-18M - 3* | 22200 | 7000.00 | 165000 | 29720 | 106000 | 18150 | 784 | 13100 | 1646 | 7110 | 938 | 1587.0 | 145.50 | 617.0 | 57.30 | 39700 | 2074 |
| *I16-18M - 4* | 25930 | 0.49 | 157000 | 32650 | 126000 | 28190 | 905 | 20180 | 2310 | 9020 | 1114 | 1797.0 | 161.40 | 695.0 | 61.40 | 115000 | 3050 |
| *I16-18M - 5* | 16600 | 145.00 | 165000 | 30380 | 110000 | 20930 | 832 | 14720 | 1654 | 6150 | 735 | 1160.0 | 105.00 | 449.0 | 39.20 | 52910 | 1560 |
| *I16-18M - 6* | 22860 | 0.43 | 162000 | 30140 | 107000 | 18790 | 815 | 13480 | 1709 | 7421 | 980 | 1617.0 | 143.70 | 612.3 | 53.06 | 45940 | 2581 |
| *I16-18M - 7* | 26910 | 0.53 | 160000 | 31630 | 117000 | 23780 | 927 | 18240 | 2220 | 9127 | 1144 | 1859.0 | 165.50 | 694.2 | 60.20 | 60300 | 2685 |
| *I16-18M - 8* | 19740 | 0.30 | 168000 | 29640 | 103000 | 16490 | 722 | 11430 | 1411 | 6190 | 839 | 1403.0 | 127.70 | 546.3 | 47.60 | 32890 | 1930 |
| *I16-18M - 9* | 19640 | 4.00 | 167000 | 29470 | 103000 | 15800 | 690 | 10600 | 1306 | 5890 | 828 | 1447.0 | 136.10 | 592.0 | 53.60 | 41900 | 2140 |
| *I16-18M - 10* | 23630 | 0.28 | 164000 | 30360 | 110000 | 19040 | 822 | 14090 | 1773 | 7622 | 1004 | 1672.0 | 153.60 | 659.6 | 58.49 | 30890 | 1701 |
| *I16-18M - 11* | 26070 | 1.54 | 160000 | 31210 | 115000 | 22100 | 890 | 16910 | 2093 | 8670 | 1113 | 1814.0 | 162.70 | 684.6 | 60.10 | 57600 | 2688 |
| *I16-18M - 12* | 21680 | 0.36 | 165000 | 30350 | 108000 | 19220 | 795 | 14080 | 1742 | 7200 | 918 | 1477.0 | 130.70 | 538.0 | 45.80 | 43700 | 1925 |
| *I16-18M - 13* | 22030 | 273.00 | 175000 | 31900 | 117000 | 23160 | 804 | 16230 | 1838 | 7240 | 912 | 1567.0 | 151.90 | 712.0 | 74.50 | 105000 | 2776 |
| *I16-18M - 14* | 25030 | 0.97 | 160000 | 31320 | 114000 | 22650 | 879 | 16930 | 2063 | 8310 | 1047 | 1699.0 | 150.50 | 634.0 | 54.60 | 59100 | 2487 |
| *I16-18M - 15* | 20710 | 0.61 | 163000 | 30040 | 106000 | 18540 | 777 | 13400 | 1652 | 6831 | 872 | 1409.0 | 123.90 | 507.6 | 43.59 | 41320 | 1903 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *I16-18M - 16* | 24470 | 0.48 | 159000 | 30650 | 109000 | 19130 | 837 | 14160 | 1805 | 7872 | 1012 | 1705.0 | 153.60 | 650.3 | 56.36 | 48820 | 2745 |
| *I16-18M - 17* | 19700 | 20.00 | 165000 | 30270 | 108000 | 18200 | 798 | 12920 | 1573 | 6480 | 813 | 1349.0 | 121.90 | 521.0 | 44.90 | 33410 | 1565 |
| *I16-18M - 18* | 22590 | 0.45 | 163000 | 30250 | 109000 | 18280 | 806 | 13170 | 1674 | 7300 | 943 | 1579.0 | 141.70 | 601.0 | 51.90 | 45420 | 2460 |
| *I16-18M - 19* | 22600 | 13.90 | 164000 | 30260 | 106000 | 17550 | 771 | 12440 | 1598 | 7067 | 936 | 1615.0 | 149.50 | 643.7 | 56.89 | 37000 | 2039 |
| *I16-18M - 20* | 22300 | 0.40 | 164000 | 30080 | 107000 | 17970 | 773 | 13260 | 1660 | 7180 | 928 | 1564.0 | 142.40 | 612.0 | 53.90 | 35150 | 1855 |
| *I16-18M - 21* | 27560 | 1.02 | 157000 | 32120 | 121000 | 25180 | 933 | 19100 | 2314 | 9400 | 1153 | 1891.0 | 169.50 | 722.0 | 62.20 | 85500 | 2990 |
| *I16-18M - 22* | 19470 | 0.68 | 166000 | 29870 | 104000 | 16900 | 734 | 11870 | 1464 | 6309 | 823 | 1371.0 | 123.30 | 515.4 | 44.73 | 38750 | 1857 |
| *I16-18M - 23* | 22160 | 0.42 | 164000 | 29970 | 106000 | 18160 | 775 | 13080 | 1642 | 7143 | 923 | 1561.0 | 140.60 | 594.8 | 53.11 | 41590 | 2034 |
| *I16-18M - 24* | 20390 | 3.80 | 169000 | 30460 | 110000 | 21010 | 760 | 15230 | 1774 | 7004 | 846 | 1381.0 | 121.80 | 514.2 | 44.44 | 74300 | 2585 |
| *I16-18M - 25* | 23030 | 0.55 | 162000 | 30400 | 108000 | 18370 | 805 | 13190 | 1682 | 7350 | 967 | 1639.0 | 148.00 | 633.0 | 55.10 | 47380 | 2709 |
| *I16-18M - 26* | 27090 | 1.53 | 162000 | 31320 | 114000 | 22030 | 875 | 16820 | 2087 | 8750 | 1112 | 1877.0 | 171.00 | 742.3 | 66.10 | 45880 | 1989 |
| *I16-18M - 27* | 25520 | 0.53 | 162000 | 29970 | 107000 | 18350 | 825 | 13330 | 1742 | 7880 | 1054 | 1816.0 | 166.70 | 716.00 | 63.40 | 48340 | 3023 |
| *I16-18M - 28* | 21770 | 0.60 | 161000 | 30090 | 108170 | 19010 | 792 | 13840 | 1716 | 7202 | 913 | 1512.0 | 131.20 | 548.50 | 47.18 | 47200 | 2164 |
| *I16-18M - 29* | 23070 | 0.39 | 163000 | 30370 | 109000 | 20150 | 809 | 14970 | 1846 | 7652 | 959 | 1582.0 | 139.90 | 587.40 | 51.48 | 45300 | 2000 |
| *I16-18M - 30* | 20180 | 0.35 | 166000 | 29730 | 103490 | 16470 | 736 | 11210 | 1391 | 6214 | 836 | 1434.0 | 130.00 | 551.80 | 47.20 | 39350 | 2359 |
| *I16-18M - 31* | 21770 | 0.45 | 165000 | 30060 | 106000 | 16830 | 749 | 11680 | 1477 | 6640 | 892 | 1540.0 | 144.00 | 610.70 | 53.70 | 43950 | 2541 |