THE DETERMINATION OF THE CRYSTAL STRUCTURES

OF

POTASSIUM GLUCURONATE

AND

UREA OXALATE

BY

X-RAY AND OPTICAL DIFFRACTION

by

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General Introduction

At the outset of this work the aim was to design and construct an optical diffractometer, and to use it in the determination of one or more suitable crystal structures. However after the diffractometer was built, no compound likely to be amenable to use of the optical method was at hand, and since the glucuronates were of particular interest an investigation of their structure was undertaken. The subsequent analysis and refinement of the structure of K-glucuronate forms the greatest part of the work described herein. When the refinement of the K-glucuronate structure was almost complete, Dr. E.H. Medlin suggested that urea oxalate would prove a suitable problem for use of the optical method, and so work was commenced on that compound. It will be seen that the arrangement of material in this thesis follows this chronological sequence, even though it might seem more logical to follow the section
on optical methods with the section on their application to determination of the urea oxalate structure.
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