

The volume is in three sections, dealing respectively with Mexico, the United States and Alaska. Each of the three sections ends with a series of tables, giving for a large selection of stations monthly and annual means of temperature, pressure, wind directions, relative humidity, days with snow, hail, thunderstorms, strong wind, or fog, to name but a selection of the contents. The text discusses these observations, charts and diagrams being freely used where desirable. Most of the charts cover the whole of the continent, including Canada, though the climatology of Canada is to form the subject of the next volume, which is due to appear shortly. The authors have carried out their difficult task with care and good judgment. Of particular interest are the chapters in the section on Mexico dealing with climate and

vegetation, and climate and population, and in the section on the United States dealing with climate and health and climate and crops. The volume will be valuable to all who are interested in the meteorology, climatology, or economics of the North American continent.

The general editors of this monumental climatology, Köppen and Geiger, are to be congratulated on the way in which the work not only progresses, but also maintains the high standard which marked its early stages. One cannot help a feeling of envy of the American colleagues, who will have an excellent and up-to-date climatology of their country at their elbows, while wondering why no one has yet seen fit to produce an equally complete modern climatology of the British Isles.

D. B.

Analytical Chemistry

Textbook of Quantitative Inorganic Analysis
By Prof. I. M. Kolthoff and Dr. E. B. Sandell.
Pp. xv + 749. (New York: The Macmillan Co., 1936.) 20s. net.

IN this work, the production of well-known teachers and investigators of analytical subjects, we have one of the best productions on the subject of quantitative inorganic analysis available to students. It sets out from the position that analytical chemistry is a fundamental branch of the science, a statement which the reviewer accepts fully.

The presentation of the subject is such that many who have passed beyond the stage of the advanced student and have reached the heights of research will find it profitable to read the volume. The theory of *pH* values, solubility product and the electroanalytical process is given sufficiently fully for practical purposes. A chapter on errors in analysis will repay careful study, and we may recommend in particular that part of the chapter dealing with significant figures obtained in the course of an analysis. The section on volumetric analysis is introduced by a very useful discussion of the theory of the various branches of this class of analytical operations. It includes a fairly full account of potentiometric titrations, and of various types of indicators, many of which, for example, eriochrome *A* and phenanthroline, are here given the attention they deserve.

A short section of the book is devoted to physico-chemical methods, and that part which deals with colorimetry and spectrophotometry should prove valuable to all who have to use colorimeters in

their work. The use of so-called unspecific properties (density, refractive index, etc.) for the analysis of mixtures is dealt with rather too briefly, as is indeed the rest of the chapter, which gives an outline of some other physico-chemical properties useful in investigation. While the methods here described for the analysis of brass and steel are useful and practical, it is a matter of opinion whether the space devoted to these matters might not possibly have been better utilized for fuller discussion of some of the physico-chemical methods. We agree that the description of the analysis of silicate rocks is valuable to the student because of its wide and general application, but the description of the examination of these two alloys seems to the reviewer somewhat restricted for a work which is so philosophic in its general outlook.

The subject matter is well arranged and has adequate references to original papers and special works on analysis, while the descriptions of the more important gravimetric and volumetric processes are sufficient. For teaching purposes, three different sizes of type have been employed, and this, together with the problems set at the end of the chapters, will be found particularly advantageous in using the book.

This work can be recommended with confidence as providing the foundations of a sound training in theoretical and practical quantitative analytical chemistry. We have not discovered any errors, and misprints, if any, must be very few indeed. We agree heartily with the views on the scope and purpose of the study of analytical chemistry propounded in the preface.

J. J. F.