Schwarzbach (sponges, corals, brachiopods); H. Sieverts-Doreck (echinoderms); H. Schmidt (palaeoammonoids); F. von Huene (fossil vertebrates).

As is almost inevitable in such an undertaking, the reviews differ greatly in degree of detail. In part this is a valid reflection of the times; the section on salt domes (nine pages plus a map), while disproportionately long at first glance, is an obvious result of the wartime search for oil. Stress on practical applications of soil science and upon soil-mapping techniques is in part a result of the war; in addition, there is great interest in detailed investigations of soil genesis.

Work in petrofabrics and tectonics has occupied its usual conspicuous position in German geology, as evinced by extended treatment of the subject in general and its application to various regions. Paleontology has not fared so well.

Each section of the volume is accompanied by a bibliography. These are extensive and will be most useful.

The contributors and subjects are listed here because the present edition is a limited one, for government distribution (inquiry should be made to Office of Military Government for Germany [U.S.], Economics Division, Research Control Branch, U. S. Army, APO 742, Berlin). The manuscript for the volume has been turned over to a committee of German scientists for reprinting and perhaps wider distribution. It is hoped that this will be possible. The Office of Military Government is to be congratulated for sponsoring such a valuable synthesis.

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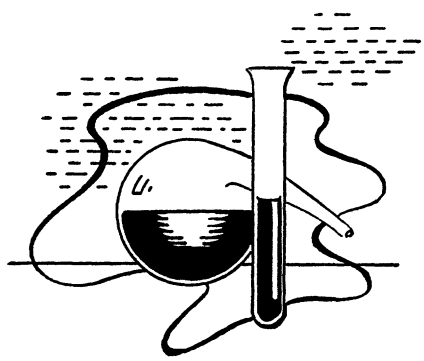

Aquametry: application of the Karl Fischer reagent to quantitative analyses involving water. John Mitchell, Jr., and Donald Milton Smith. New York: Interscience, 1948. Pp. xi + 444. (Illustrated.) $8.00.

This book, Volume 5 of a series of monographs on analytical chemistry and its applications, brings together for the first time everything that has been published on the theory and use of the Karl Fischer reagent. Written by the two outstanding investigators in this field of chemical analysis, it will serve those who are already experienced in the use of the Karl Fischer reagent as well as those who are beginning to use it for the first time. It is well organized and clearly written.

The book was not intended to be a comprehensive treatise on all the methods for the determination of water. But the authors have given a brief and thorough review in the first chapter of the various techniques already published.

Part I deals with the specific quantitative determination of water by Karl Fischer reagent, and an early chapter presents an orderly summary of the directions for preparing and standardizing the reagents. All of the procedures which make use of the reagent are given here and this part of the book will serve as a convenient laboratory manual.

The nature of the chemical reactions involved are thoroughly discussed, with much quantitative data never before published. A chapter is devoted to the various titrimetric procedures, both macro and micro, that have been found useful. The determination of water in various organic compounds, in commercial organic materials, and in inorganic compounds is then considered. The final chapter of Part I is concerned with the spurious reactions of Karl Fischer reagent with inorganic compounds which must be guarded against.

Part II presents various applications of Karl Fischer reagent to those types of organic reactions where water is liberated or consumed. Methods are given for the quantitative determination of the following organic functional groups: alcoholic hydroxyl, carboxylic acids, acid anhydrides, carbonyl compounds, amines and nitriles, peroxides, and a few miscellaneous organic compounds.

The final chapter discusses some proposed further studies involving Karl Fischer reagent, such as possible modified reagents, applications to organic reactions which interfere with the present reagent, and quantitative determination of inorganic compounds.

GRANT WERNIMONT

Eastman Kodak Company,
Rochester, New York

Principles of high-polymer theory and practice. Alois X. Schmidt and Charles A. Marlies. New York-London: McGraw-Hill, 1948. Pp. xii + 743. (Illustrated.) $7.50.

Most books on this subject are too specialized to give the uninitiate a broad, clear picture of the nature and behavior of high polymers. Again, most authors are so preoccupied with describing the characteristics of specific materials that they too frequently overlook the fundamental principles underlying all high polymers. As a result such books are of interest primarily to those engaged in special fields of high-polymer chemistry, physics, or engineering, and are not particularly suitable for use as textbooks.

The authors' aims in writing this textbook on the *principles* of high-polymer theory and practice have been to avoid shortcomings such as these, "to present a broad, coordinated treatment of a field in which about one-third of all American chemists and chemical engineers are currently employed," and to demonstrate "how fundamentals of physics, chemistry, and engineering may be applied universally to the materials in question." As