

Book Reviews

ATOMIC ABSORPTION SPECTROSCOPY, by James W. Robinson, Marcel Dekker, Inc., New York, N. Y. 1966. 204 pages, illustrated and indexed. Price \$9.75.

Atomic absorption spectroscopy is a relatively new analytical tool but its importance is growing steadily. Despite the difficulties of interferences by extraneous elements, the rising popularity of this technique is due to its speed and relatively low cost. Atomic absorption spectroscopy is, in effect, the reverse of emission spectroscopy. The major difficulty is the problem of generating the element (usually metallic) from its compounds before atomic absorption spectroscopy can be carried out. Thus, a large portion of this book is devoted to descriptions of atomizers, i.e., equipment which generates neutral atoms.

This book is concerned primarily with practical problems. Accordingly, the theory of spectroscopy is deemphasized; instead, much space is devoted to equipment and to methods for the determination of about 50 elements. This includes most of the metallic elements which are present in cosmetics either deliberately or as im-

purities. It is likely that this technique, for which relatively inexpensive commercial equipment is available, will soon receive wider application in the cosmetic and other industries. This book should prove to be a worthwhile introduction to these newer methods and a practical guide for the analyst.—M. M. RIEGER—Warner-Lambert Research Institute.

AGING, edited by William Montagna, Pergamon Press, Oxford, England. 1966. 237 pages, illustrated and indexed. Price \$15.

"Aging" is the report of the May, 1964, "Oregon Symposium"; it contains contributions from some of the foremost authorities in their respective fields. Thus, this reader looked forward eagerly to the task of reviewing this, the sixth volume in Montagna's *Advances of the Biology of Skin*. Unfortunately, his anticipation was not fulfilled by this book.

Publication more than two years later of the papers delivered at a meeting is a delay which materially reduces interest. In the meantime, several of the papers, especially those presenting new findings, have ap-

peared in various scientific journals; repetition now can be justified only by the attempt to publish the complete proceedings of the symposium.

Aging of the skin and of its appendages is an important social problem for older members of a youth-oriented society. It is surprising, therefore, that this book includes only one chapter on attempts to improve or rejuvenate aging skin by clinical methods. On the other hand, about 15 of the 17 chapters of this book deal with comparisons between young and old skin. Unfortunately, the reader is not alerted to the fact that horizontal aging studies—and this book is concerned only with comparisons between skin of different individuals of different ages—are not as definitive as longitudinal studies.

The reader of a scientific book is entitled to expect the author to delineate new problems, point out unusual findings, and if possible give some scientifically sound explanation. Thus, it is disturbing that one author neglected to mention that amino acid analyses of dermal tissue suggest that the total collagen content of elastotic skin is closer to that of skin from premature infants than that of normal (?) adults.

This reviewer is not qualified to judge the histological and morphological observations of aging skin which account for several major chapters in the book. On the other hand, some of the gross observations of the graying of hair appear to be not quite justified. One of the authors states that "graying appears first on the temples. . . . In a recent examina-

tion of eight octogenarians, virtually no hypomelanotic hairs were found in the axillae, presternum and pubis." From personal observation, this reviewer knows that graying in males frequently occurs first in the presternum area. In the same section it is noted that "before the hair becomes completely white, the pigmentation of the individual hairs that together with others look gray, may cover the entire range of color dilution." This statement implies that fibers gradually change color until they finally turn completely white and is, therefore, contrary to observed facts.

Despite the above-voiced objections to the book, this volume is important reading for those of us who are interested in the aging of skin and related phenomena. The book presents some significant new data, on one hand, and, at times, is an excellent and comprehensive review. The reader is, however, advised to analyze and examine observations and statements with considerable care before accepting all the conclusions made by the contributors.—M. M. RIEGER—Warner-Lambert Research Institute.

ENCYCLOPEDIA OF CHEMISTRY, 2nd Edition, edited by G. L. Clark and G. G. Hawley. Reinhold Publishing Corp., New York, N. Y. 1966. 1114 pages, illustrated and indexed. Price \$25.

The reviewing of an encyclopedia is not an easy task: Sometimes the value of an encyclopedia lies in the number of entries, and sometimes it is to be found in the completeness of

coverage of the subject. Neither of these criteria can be applied to this particular volume. Instead, the original meaning of the Greek word, encyclopedia, i.e., instruction in a broad area of knowledge, describes this volume more precisely. In fact, this encyclopedia is an alphabetically arranged textbook of chemistry and chemical technology. The number of entries is limited, but each of them is detailed enough to provide broad coverage of the subject under scrutiny. This book is not for the novice but requires some background in chemistry. Each entry is carefully explained, and some derivation of equations is given; it serves as an introduction to the subject and at the same time is an excellent review for those who are already familiar with it. What is particularly noteworthy is the fact that each entry is truly a brief and readable discussion of an important subject. Typical is the three-page entry on foam. There are no separate entries for the Gibbs ad-

sorption theorem, the Laplace and Marangoni effects, and antifoams; instead, these points are presented in a logical manner and in a clear and concise style, which makes for pleasurable reading.

This reviewer was impressed by the large list of contributors, many of whom are well-known experts in their respective fields. Although it may be presumptuous to recommend reading of an encyclopedia from cover to cover, such an activity would be an excellent refresher course in chemistry. Even occasional browsing through this volume will be rewarding; and finally, this book will serve well as a desk reference. The emphasis of this encyclopedia is not on details (which can be found readily in the various handbooks of chemistry) but on the broad principles and theoretical aspects. Therein lies the main value of this book, which can be recommended to all unequivocally.—M. M. RIEGER—Warner-Lambert Research Institute.