

BOOK REVIEWS

METHODEN DER ORGANISCHEN CHEMIE (Houben-Weyl). Fourth Edition. Edited by Eugen Müller. Volume V, Part 3. Halogenverbindungen. Fluorverbindungen (Herstellung, Reaktivität und Umwandlung), Chlorverbindungen (Herstellung). Pp. lxx + 1217 (including 30 illustrations, 184 Tables, and Index). Georg Thieme Verlag, Stuttgart, 1962. Moleskin, DM. 262.00.

The present work (Volume 5/3), one of four books comprising volume five of the series, is the companion work to volume 5/4 which was published in 1960. Taken together, these two books provide a comprehensive survey of the chemistry of organic halogen derivatives. The need for this subdivision has arisen because of the enormous growth of fluorocarbon chemistry in the last decade, and almost half the present work is devoted to the preparation and properties of fluorine compounds. Significantly, the reactions of organic fluorine compounds are given a separate treatment from those of the other organo-halogen compounds which are discussed as a related group in the companion volume (5/4). This division reflects the atypical properties of organo-fluorine compounds which distinguish them from other organo-halogen derivatives, and which stem from the special position of fluorine in the first short period of the periodic table. In common with all the earlier volumes of this remarkable series, the treatment is extremely comprehensive and extensively referenced, though sufficient detail of preparative methods is given to enable all the more important preparations to be undertaken without reference elsewhere. Preparative methods are broadly classified into those based on the use of elementary and electrolytically-released fluorine, and inorganic fluorine compounds, on the one hand, and, on the other hand, on the use of organo-fluorine reagents. The latter group includes addition and elimination reactions, cleavage of carbon-carbon, carbon-nitrogen, nitrogen-oxygen and oxygen-oxygen bonds, isomerisation, disproportionation, and oxidation.

The remainder of the book is devoted to a similarly detailed and comprehensive review of methods for the preparation of organic chlorine compounds, the broad basis of classification being similar to that used for fluorine compounds. Despite the inconvenience of a German text to the English reader, the essential information is clearly set out, and easy to find through detailed contents pages and extensive author and subject indexes. The cost of these works almost certainly places them beyond the reach of most individual purchasers, but there can be no doubt of their value as works of reference to those engaged in preparative organic chemistry. They would make an invaluable addition to any library.

J. B. STENLAKE.

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MICROORGANISMS INDIGENOUS TO MAN. By Theodor Rosebury. Pp. xiv + 435 (including Indices). McGraw-Hill Publishing Company Limited, London, 1962. £5 16s. 6d.

Man usually regards himself as a germ-free individual except when he is a harbinger of an infection in the form of a recognisable disease. It therefore comes as a surprise—indeed as a mild shock—to learn that the literature on man's indigenous microorganisms or "biota" is so vast and scattered that Prof. Rosebury has spent almost 35 years collecting, sifting and collating the material for his book. He develops the thesis that the biota shows an element of order rather than haphazardness and is the result of continual interaction between invader and host, the balance between the biota and disease being precarious. The normally inhabited regions of the body include the skin and mucous surfaces contiguous with it, conjunctiva, respiratory tract down to and including the oropharynx, mouth, lower intestines and external urogenital passages. Other regions are normally sterile and are those for which the pharmacist would produce sterile applications. The metabolic activity of the indigenous biota must affect the host and is beneficial rather than detrimental. The intestinal flora may synthesise vitamins in excess of their requirements and which are therefore available to the host. Animals bred to be germ-free have a low leucocyte count and low antibody titre, both of which are strong defence mechanisms in normal man. One species of microorganism may have an anti-biotic effect against another species and a harmless commensal may aid the exclusion of a more potentially dangerous species.

The clinical use of antibiotics may alter the normal flora of an individual and it has become increasingly important to have a knowledge of that flora. Prof. Rosebury has arranged his material in chapters each dealing with a particular group of microorganisms. These are not just catalogues of immense value to the pathologist; the bacteriologist too will find a vast amount of information not normally available in one volume. There is, for example, an excellent discussion of the pseudomonads including methods of differentiation between species, cultivation, pigment production, biochemical reactions, typing and sensitivity to antibiotics. Of particular merit are the chapters on indigenous fungi and protozoa. They include a survey of the enhancement of the pathogenicity of the mould *Candida albicans* by certain antibiotics and of the relation between incidence of intestinal protozoa and standards of living. Contrary to the commonly held view the author finds no evidence that a high infection rate by protozoa is associated with poor hygiene or primitive living conditions.

The book is well produced and free from errors; it contains an extensive bibliography and an index running to nearly 50 pages.

H. S. BEAN.