

The present volume relates chiefly to the literature of the year 1952, but unfortunately does not include the sections dealing with Vermes and Trilobita, which did not arrive in time. It is hoped, however, that the literature for both 1952 and 1953 of these two groups will be included in Vol. 90.

The other sixteen sections give a rough indication of the work going on in different groups of the animal kingdom, and, as would be expected, Insecta heads the list with a total of 3,332 titles. The next largest section is Aves with 1,696 titles, and other large groups include Mammalia, 1,282; Protozoa, 1,194; Pisces, 1,115; Amphibia and Reptilia, 1,090; and Mollusca, 968. Finally, there is a section giving a list of 1,883 new generic and subgeneric names recorded during 1952, which is made up as follows: Protozoa, 94; Porifera, 12; Coelenterata, 86; Echinoderma, 26; Brachiopoda, 22; Bryozoa, 51; Mollusca, 140; Crustacea, 50; Arachnida, 139; Insecta, 1,107; Protochordata, 1; Pisces, 75; Amphibia, 7; Reptilia, 29; Aves, 2; Mammalia, 42.

It may be recalled that in 1954 the Zoological Society of London authorized a reprinting of Vols. 1-20 of the "Zoological Record", which had been out of print for many years. The success of this venture has been such that the reprinting of further volumes which have become out of print is now under consideration, and any such issues would be welcomed by all zoological libraries and departments with incomplete sets of this invaluable publication.

EDWARD HINDLE

COLORIMETRIC METHODS IN CHEMICAL ANALYSIS

Colorimetric Methods of Analysis, including Some Turbidimetric and Nephelometric Methods

By Dr. Foster Dee Snell and Dr. Cornelia T. Snell. Vol. 3, Organic—1; pp. viii+606; Vol. 4, Organic—2; pp. vii+676. Third edition. (New York: D. Van Nostrand Company, Inc.; London: Macmillan and Co., Ltd., 1953-54.) 93s. 6d. net each vol.

THE authors of this well-known treatise on colorimetry have set themselves an almost herculean task in producing a third edition. The organic and biological material covers such a wide field that it has necessitated two volumes instead of the single volume originally contemplated. Vol. 3 comprises nineteen chapters commencing with a very brief but important introductory one, which explains that "every possible method of condensation has been applied" in order to include such a large number of individual substances. The division of this wide variety into logical sequence and chapters has been difficult. Whereas all the hormones are dealt with in a single chapter, it has been found necessary to spread the vitamins between the two volumes in six chapters. This difficulty also applies to pigments, weed-killers, insecticides and plant growth-regulating substances. In order to make easy reference to a given compound, each substance in the subject index is listed as far as possible both under its systematic name and also its trade or recognized trivial name.

Several methods are sometimes described for one substance, depending on the need to determine milligram or microgram quantities. The authors have

described, as far as possible, the substances known to interfere with a particular determination and have included methods for their removal. The nineteen chapters include hydrocarbons, alcohols, esters, phenols, the sugar and glucoside family, aldehydes and ketones, the acid family (except amino-acids), sulphur and halogen compounds. Where such a wide field has been covered it seems unjust to want more; but I, and no doubt others too, regret that a little space could not be found for some important subjects. In the chapter on alcohols and their esters, it is disappointing that more space has not been found for the determination of alcohol in blood and urine, as this subject has assumed much medico-legal significance in recent years.

Glycerol, in view of its commercial importance, seems worthy of fuller treatment. On the other hand, sixteen pages have been devoted to thiamine (vitamin B₁), since the vitamin may occur in so many materials, including pharmaceutical products, foods and biological specimens. There are no less than fifty-eight references to the literature for this one substance. Similarly, sulphonamides, which have assumed such prominence in medicine, have been allocated thirteen pages and seventy-three references. For the sake of completeness, methods which are scarcely colorimetric have been included; for example, in the section on fats and oils, the conjugated and non-conjugated constituents of fats and oils are determined by an isomerization method, and readings taken by spectrophotometer in the ultra-violet region. Included in the chapter on halogen compounds are some of the more important insecticides and their determination in foods, milk, biological tissue and spray residues. While the specialist in this subject will need more information than can be given in such a general treatment, the authors are to be congratulated in collecting such a wide range of references.

Vol. 4 deals almost entirely with naturally occurring substances in its sixteen chapters. These range from amines and amino-acids to sterols, hormones, alkaloids, enzymes, antibiotics and pigments. Methods for the determination of quaternary ammonium compounds and domestic and textile detergents in effluents and sewage would have been welcomed by water consultants, since the presence of these substances constitutes an increasing difficulty in water purification. The final chapter describes methods for the measurement of the colour of liquids. The authors have confined themselves almost entirely to methods adopted by the Association of Official Agricultural Chemists, the American Public Health Association, and the American Oil Chemists Society. This is logical for American readers, but others may require more general methods. As stated in Vol. 1, the authors considered the use of the C.I.E. system of colour measurement outside the scope of their treatise, but it is hoped that a wider use of the system will merit its inclusion in a future edition.

In the four volumes of the complete work a surprising variety of materials and methods has been dealt with, and very few which reach the consultant omitted. This greatly enlarged edition should find a place in all laboratories using colorimetric methods of estimation. Although the specialist in each subject is unlikely to find methods which are new to him, the four volumes contain the most complete collection of colorimetric determinations I have yet encountered. The volumes are well printed and illustrated and are reasonably free from misprints, and the index to each volume is full and carefully prepared. J. KING