

Spot Tests in Organic Analysis

By Prof. Fritz Feigl. Sixth, enlarged and revised English edition. Translated by Prof. Ralph E. Oesper. Pp. xx+675. (Amsterdam: Elsevier Publishing Company; London: D. Van Nostrand Company, Ltd., 1960.) 65s.

THIS book is a revised and extended edition of Prof. Feigl's celebrated work on the application of the spot-test identification techniques to organic compounds of many different types. Translated by Prof. R. E. Oesper, of the University of Cincinnati, Ohio, the text of this sixth edition is lucidly presented in a most readable manner, with large legible print on good paper.

The individual items in the sections dealing with tests for functional groups, tests for individual groups, practical applications, etc. have been almost doubled in number when compared with the fifth edition. Extensive detail is given in addition relating to the identification of polymeric materials, synthetic rubbers and fibres, vitamins, antibiotics, and various pharmaceutical preparations. Each chapter carries an extensive bibliography of references, and the volume ends with a tabular summary of the limits of identification attained with macro-drop (0.05 ml.) investigations involving the application of specific spot-tests to solutions of those elements, groups and compounds which have been given detailed treatment in the text.

The working laboratory methods for spot-test analyses are illustrated by clear, diagrammatic representations of the apparatus employed, and the actual test procedures for individual cases are described with much attention to experimental detail.

This volume will be as welcome to students and to professional analytical chemists as its predecessors have been, and is yet another attempt to keep abreast of the ever-growing research, development and interest in this absorbing field.

D. T. LEWIS

Ciba Foundation Symposium on Hæmopoiesis

Cell Production and its Regulation. Edited by G. E. W. Wolstenholme and Mæve O'Connor. Pp. xii+490. (London: J. and A. Churchill, Ltd., 1960.) 60s. net.

IN recent years important advances in experimental hæmatology have been made, particularly by the use of radioisotopes and cell-transfusion techniques. These advances are amply reflected in the sixteen papers presented at the Ciba Foundation symposium on hæmopoiesis. The stimulating discussions which followed each paper are also recorded.

The dynamics of hæmopoiesis is a conspicuous feature of this book. Attention is focused on the problem of the primitive stem-cell, the production and fate of lymphocytes, and the inter-relationship of lymphoid and myeloid tissues. Factors which regulate the production and release of blood cells are also discussed. The subjects considered include: (1) granulocytogenesis in human and animal bone marrows studied by radioisotopes; (2) hæmopoiesis following cell transfusions into irradiated animals; (3) the construction, from experimental data, of models illustrating the kinetics of erythrocyte production, lymphocyte formation in the thymus, and plasma cell production in lymph nodes; (4)

humoral factors in hæmopoiesis, including erythropoietin, a leucocytosis-inducing factor and batyl alcohol; methods are described for the assay of erythropoietin, including the use of transfusion-induced polycythaemia to study erythropoiesis; and the mobilization of vitamin B₁₂ reserves is described following acute blood loss; (5) observations on the patho-physiology of human leukæmic cells, certain findings contrasting with conventional views of the leukæmic process.

The Ciba Foundation is to be congratulated on its latest publication. The papers and their clinical implications will be of considerable interest to clinical and research hæmatologists. The book contains much that is topical in hæmatological research, including observations upon human material.

P. F. HARRIS

Unity and Diversity in Biochemistry

An Introduction to Chemical Biology. By Marcel Florin. Translated from the French by T. Wood. (International Series of Monographs on Pure and Applied Biology. Division: Modern Trends in Physiological Sciences, Vol. 1.) Pp. xiii+397. (London and New York: Pergamon Press, 1960.) 70s. net.

THIS monograph is presented as a collection of essays in which Prof. Florin first reviews "the biochemical facts common to living beings", and then discusses biochemical differences between species. The treatment of unity in metabolic processes (Parts 1-4) is concise, yet complete enough to be of value to the general reader who wants an introduction to the present state of biochemical knowledge. Part 1 is a lavishly illustrated catalogue of the more widely distributed constituents of plants and animals. This collection is perhaps too detailed for an introduction to chemical biology (the structures of thirty-one carotenoids are shown), and most readers would welcome more comments on the relationship between structure and biological function. Part 2 includes a thoughtful discussion of thermodynamic aspects of biochemistry and a classification of enzymic reactions. Chemists and biologists will probably find Parts 3 and 4 the most rewarding in this book. These describe many of the reaction sequences which provide materials and energy for growth and survival of plants and animals.

In restricting a discussion of biochemical diversity to fifty-seven pages (Part 5) the author has been able to illustrate his arguments with only a few of the possible examples; comparative aspects of oxygen transport are considered in great detail. There is a welcome attention to biochemical differences between tissues of a single organism. Biochemical aspects of taxonomy and evolution are discussed briefly. Part 6 deals with the interaction of plants and animals with each other and with their inorganic environment, and concludes with the suggestion that loss of phosphorus to the sea may make life on the continents "a mere episode between two eras of marine existence".

Not everyone will agree with the author's choice of examples and references, but no other book deals with this wide range of topics so concisely, and the reader without biochemical training should find this a useful introduction to chemical aspects of biology.

M. R. ATKINSON