

were obtained with very impure CoA, but the CoA assay in terms of units is in this case much less reliable.

Other acetylating agents, such as acetic anhydride and isopropenyl acetate, also acetylate

CoA, but the yields were markedly lower.

DEPARTMENT OF NEUROLOGY
COLLEGE OF PHYSICIANS AND SURGEONS
COLUMBIA UNIVERSITY
NEW YORK, N. Y. IRWIN B. WILSON

RECEIVED APRIL 9, 1952

BOOK REVIEWS

Absorptions-Spektralanalyse. By FRANZ X. MAYER, Dr.-Ing., Priv.-Doz. für gerichtliche Chemie am Institut für Gerichtliche Medizin der Universität Wien and ALFRED LUSZCAK, Dr.-Ing., Mitglied des österr. Patentamtes und titl. a. o. Professor an der Technischen Hochschule Wien. Walter de Gruyter and Co., Berlin W 35, Genthiner Strasse 13, Germany. 1951. xiv + 238 pp. 14.5 × 19 cm. Price, DM 14,—.

According to the authors, this book was intended primarily for students. The main part of the text is devoted to a description of apparatus and methods for spectrophotometric analyses in the ultraviolet and visible regions of the spectrum. The authors rely only on their twenty years experience with analyses of materials bordering on chemistry and medicine, and hence do not describe recent developments in chemical spectrometry which make use of photoelectric cells and thermoelements. Eighty-five per cent. of the references are to German and French literature. Only three English texts, by Lothian, Snell and Mellon, are among the thirty-seven titles listed.

The book is divided into three divisions. In the theoretical part (60 pages) there are three chapters devoted to: A. Fundamentals of light absorption, B. Light absorption as a basis for quantitative analyses, and C. as a basis for quantitative analyses. The second division (123 pages) covers a description of: A. Condensed spark units, B. Prism spectrographs of Steinheil, Zeiss-Jena, Hilger and König-Martens, C. Cuvettes, D. Solvents, and E. Elementary photographic theory. F. Methods of measurement are described with titles such as: Hartley-Baly, Henri, Winther, Judd Lewis Hilger, Scheibe and Pool. The three visual photometer, described in this section are the Pulfrich, Leifo and Zeiss-Ikon.

In the third division (40 pages) twelve examples of actual analyses are given with experimental details of concentrations, wave length at which absorbancies were determined and a sample calculation. Typical examples described are the determination of (1) the solubility of benzene in water, (2) benzene in ethanol, (3) strychnine and brucine in mixtures, (4) the concentration of carbon monoxide in blood, and (5) benzenes in aromatics.

There are amongst the 74 figures a few typical absorption curves in which the ordinate is given in absorbancy and the abscissa in ångströms, frequencies and wave numbers.

Within the space limitations of the book, the subjects are thoroughly covered and give an excellent view of European equipment and methods. The text is free from typographical errors, it is well printed on a good quality paper. The binding conforms to the standards of good German bookbinding.

DEPARTMENT OF CHEMISTRY
PURDUE UNIVERSITY
LAFAYETTE, INDIANA

THOS. DE VRIES

Vitamins and Hormones—Advances in Research and Applications. Volume IX. By ROBERT S. HARRIS, Professor of Biochemistry of Nutrition, Massachusetts Institute of Technology, Cambridge, Mass., and KENNETH V. THIMANN, Professor of Plant Physiology, Harvard University, Cambridge, Mass. (Editors). Academic Press Inc., 125 East 23rd Street, New York 10, N. Y. 1951. xi + 395 pp. 16 × 23.5 cm. Price, \$8.00.

This volume contains nine reviews; four of these are concerned with vitamins, four with hormone action, and one with vitamins and hormones.

T. H. Jukes and E. L. R. Stokstad deal in an expert fashion with the recent studies on the action of B₁₂ vitamins and the folic acids. Their discussion of the effects of these vitamins on microorganisms is particularly enlightening. There is a very interesting discussion by Wm. Shive relative to the function of B vitamins in the biosynthesis of purines and pyrimidines. The author interprets many of the older results in the literature on the interrelationship of purines and pyrimidines with vitamin B₁₂ and the folic acids in the light of recent discoveries linking the function of these growth factors with the metabolism of one carbon compound. The relationship between the metabolic effect of certain B vitamins, e.g., folic acid and biotin, and the purines is also apparent from studies on the antimetabolites of nucleic acid metabolism which are reviewed by L. D. Wright.

The functions of biotin in enzyme systems are discussed by H. C. Lichstein. Unfortunately, up to the present date, there are very few studies with isolated enzyme systems in which a direct effect of biotin has been demonstrated. Most of the experiments reported were done with whole cells. The author suggests that the lack of correlation in biotin content and activity in the case of certain isolated enzyme systems, e.g., oxalacetate decarboxylase and the malic enzyme, can be ascribed to inadequate liberation of bound biotin from the protein prior to assay. A new theory of biotin action is presented in which it is assumed that biotin exerts its effect by acting as an electron carrier.

The relationship between certain vitamins and adrenal hormones is very thoroughly reviewed by Agnes Fay Morgan. W. H. Fishman discusses the effect of estrogens on enzyme activity. A detailed account of the influence of various sex hormones on the β -glucuronidase of different tissues is given.

A brief summary of methods available for the synthesis of isotope labeled steroids is presented by G. H. Twombly. The remainder of this chapter deals with experiments on the distribution in the tissues and pathways of excretion of administered isotopically labeled steroids.

Clinical and physiological observations of the effects of cortisone and ACTH are reviewed by R. G. Sprague. The purification of urogastrone and the depression of gastric secretion by this material are discussed by M. H. F. Friedman.

INSTITUTE FOR ENZYME RESEARCH
UNIVERSITY OF WISCONSIN
MADISON 5, WISCONSIN

G. W. E. PLAUT