Book Reviews

Industrial oil and fat products. Alton E. Bailey. New York: Interscience Publishers, 1945. Pp. x + 735. (Illustrated.) $10.00.

This volume is an important addition to the literature on oil and fat technology. It brings up to date the description of commercial processes by which both edible and nonedible products of importance are manufactured from fats and oils.

Following a brief section dealing with the composition, reactions, and properties of fats there is a more extensive treatment of the raw materials commonly used commercially, the specific products such as salad oils, shortenings and margarine, soaps and other surface active materials, paints and varnishes, and a group of miscellaneous products. More than one-third of the book is given over to a detailed examination of processes used in the fat and oil industry, including extraction, refining and bleaching, deodorization, hydrogenation, soap working, and polymerization.

Throughout the book the author has used graphs, tables, and formulas to good advantage in presenting and illustrating the text. The end result is that the book is greatly superior as a reference work to any of the publications in this field. The author has gone a long way indeed toward narrowing the gap between existing but scattered knowledge and orderly, readable, and useful assembly for publication. His own long and distinguished association with the field has provided a sound background for the endeavor.

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Vitamins and hormones: advances in research and application. (Vol. III.) Robert S. Harris and Kenneth V. Thimann (Eds.). New York: Academic Press, 1945. Pp. xv + 420. (Illustrated.) $6.50.

This volume presents another valuable group of review papers on vitamins and hormones. The reviews are especially valuable because the authors of each chapter are actively engaged in research dealing with the subject concerned. The nine chapters are divided between five chapters dealing definitely with vitamins, three with hormones, and one with the antipernicious anemia substances of liver, which can probably be closely associated with the field of vitamins. Individual chapters differ greatly in length and completeness. The longest and most extensive paper, written by Knight, is on "Growth factors in microbiology," and the shortest, by Dodds, is on "Possibilities in the realm of synthetic estrogens" and deals mainly with the work which led to the recognition of three new synthetic estrogens.

The editors comment in the Preface that the subject matter in the earlier volumes was somewhat unrelated and that more effort to integrate the papers would be made in the future. This integration is already evident in this volume, since the first three chapters deal with very closely related subjects, namely, interrelation of vitamins, synthesis of B vitamins by intestinal bacteria and sulfonamides, and vitamin deficiencies. In fact, there is a little repetition in the subject matter presented in these three chapters, but footnotes are added to correlate the related material. The chapter on the chemistry of antipernicious anemia substances of liver logically follows the chapter in Volume I on the physiological and clinical aspects of pernicious anemia and covers very completely the chemical work on the pernicious anemia factor or factors which has been done during the past seventeen years.

The chapter dealing with manifestations of prenatal nutritional deficiency is especially timely and should stimulate further nutritional work with animals beyond the period of rapid growth. Although the chapter on "Growth factors in microbiology" is most extensive, it is interesting to note that little, if any, material on the newer factors, even folic acid, is included. The longer chapters on hormones deal with the action and metabolism of gonadotropic hormones and the role of acetylcholine in the mechanism of nerve activity.

It is interesting to note the interpretations which the reviewers have given to original work. Naturally, one should expect some differences of opinion, but in any review care should be taken to quote correctly from the original papers. It appears that at least one such error has been made in this volume. On page 8 the work of Griffith and Mulford is referred to, and it is stated that they claim that niacin alleviates the severity of the symptoms of choline deficiency in rats. Actually, the authors state that nicotinic acid exerts a moderate choline-opposing action.

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Advances in protein chemistry. (Vol. II.) M. L. Anson and John T. Edsall (Eds.). New York: Academic Press, 1945. Pp. xiv + 443. $6.50.

A knowledge of protein chemistry is basic to an understanding of many problems in biochemistry, immunology, and pathology, and is equally indispensable to the control and development of new techniques in certain aspects of the industrial arts. A large and diversified literature on the proteins has accumulated in journals all over the world, and presumably still more data are awaiting their turn to emerge from the archives of the late war effort. Short of turning librarian, it is nearly impossible for the active investigator to keep abreast of this ever-expanding literature. The need for competent reviews on various significant aspects of the proteins has become patent, and the present series on *Advances in protein chemistry* ministers to this need admirably. The editors have exercised a fine discrimination and have achieved a good balance among topics of fundamental and applied interest both in the earlier and in the present volume.