

New Books . . .

Industrial Fermentations. Vol. II

LELAND A. UNDERKOFER AND RICHARD J. HICKEY. Chemical Publishing Co., 212 Fifth Ave., New York, N. Y. 1954. \$12. Reviewed by A. F. LANGLYKKE, Squibb Institute for Medical Research, New Brunswick, N. J.

In the second volume of "Industrial Fermentations" the high standard established in the first is maintained. In this important work the expert may find background material, the student an authoritative introduction to the field, and the general reader an accurate evaluation of a technique of rapidly growing industrial importance.

Included in Volume II are chapters devoted to the production of materials of high unit value and relatively low bulk (such as the antibiotics, enzymes, and vitamins); chapters given over to the production or modification of foods by fermentation, and chapters devoted to processes of minor or of potential importance. With the contents of the first volume in the series, this publication summarizes well and thoroughly what is known of applied fermentations.

In such a rapidly developing field, a high rate of obsolescence must be expected, and in certain limited areas the reviewer can hardly hope to offer a full and complete picture. In some of its pages this volume shows the effects of technological advancement so rapid as to handicap the reviewer in his attempt to offer accurate and critical coverage. Of less importance are the occasional inaccuracies and errors which have been anticipated by the editors and authors and which must be expected in any review for which current coverage is claimed.

The editors of "Industrial Fermentations," and the authors with whom they have associated, must be complimented for an excellent treatment of the field. Most of the material presented shows the evidence of laborious combing of the literature and its careful and critical evaluation. The magnitude of the job of preparing such a volume is evident in the weight of the bibliography cited. This and its companion volume should find wide distribution and should support continued application of the fermentation tool in industry.

Modern Methods of Plant Analysis. Vol. II.

Edited by K. PEACH AND M. V. TRACEY. Springer-Verlag, Heidelberg, Germany. 1955. 110 D.M. Reviewed by E. M. BICKOFF, Western Utilization Research Branch, USDA, Albany, Calif.

This book is the second in a series of four volumes dealing with modern techniques for analysis of plant constituents. It is the authors' intention that the four volumes, together, shall constitute a handbook of up-to-date methods for plant analysis to replace the outdated *Handbuch der Pflanzen-analyse* by G. Klein. Physiological considerations such as the problems of biogenesis and metabolism of the substances are not discussed.

Volume II contains 16 chapters, each of which discusses a different plant constituent or related group of constituents. Some of the plant materials discussed in the present volume include mono- and oligosaccharides, acyclic sugar alcohols, inositol, phosphorylated sugars, starch, glycogen, cellulose, pectin, chitin, gums, fats and waxes, carboxylic acids, and volatile alcohols, aldehydes and ketones. Each chapter is written by a different author who has made important contributions in the field he discusses. Although the various chapters are not uniform in either style or approach, they are all well organized and concisely presented.

The methods set forth in the present work have been critically selected and some of them have reached the status of standard methods for the substances concerned. The wide experience of the contributors has permitted them to place proper emphasis on the limitations of the techniques described and to make references where possible to pitfalls likely to be met in the application to unknown plant material. The detailed techniques of analysis are discussed and critically evaluated in such a manner as to assist the user of this volume to select the method most suitable for his particular problem. This volume will be of value as a reference to the specialist and particularly helpful to the beginner in the field who doesn't know where to look for the best available methods.

Film

Pollination of Alfalfa

Sound and color, 16 mm film. 25 minutes. Available free from HERCULES POWDER CO., Wilmington, Del.

This film highlights unusual closeup views of bees visiting blossoms, showing the pollination process essential to high yields of plant seed.

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