

## Book Reviews

PHARMACEUTICAL BACTERIOLOGY, WITH SPECIAL REFERENCE TO DISINFECTION AND STERILIZATION. By Albert Schneider, M. D., Ph. D., (Columbia University), Professor of Pharmacognosy, Histology and Bacteriology California College of Pharmacy; Pharmacognocist U. S. Department of Agriculture; 238 pages, with 86 illustrations. Cloth. P. Blakiston's Son & Co., Philadelphia, Pa. 1912.

This text book on Bacteriology especially designed for the use of pharmacists and students of pharmacy appears at a most opportune time. Short courses in bacteriology are being introduced in nearly all schools of pharmacy, and a knowledge of certain parts of the science is now expected of pharmacists. Essential is a knowledge of the preparation and sterilization of culture media, reagents, stains and special solutions for physicians, of the sterilization of certain pharmaceutical preparations and of the standardization of disinfectants. Likewise the fundamentals of the morphology and physiology of bacteria and related organisms and their relation to the causation and cure of disease, to medicines and food, to the arts and industries.

Schneider's Pharmaceutical Bacteriology is most excellently designed to serve its purpose. The range of chapters is as follows: General Introduction; Historical Morphology and Physiology of Bacteria; Range and Distribution of Bacteria; Bacteriological Technic; Bacteria in the Industries; Immunity, Bacterial Activities and Bacterial Products; The Manufacture and Use of Sera and vaccines; Yeasts and Moulds; Protozoa in Disease; Disinfectants and Disinfection; Food Preservation; Insecticides; Sterilization and Disinfection in the Pharmacy; Communicable Diseases with Suggestions of Preventive Medicine; A Bacteriological and Microscopical Laboratory for the Pharmacist.

The discussion of bacteriological technic is especially good; the directions for the preparation of media and stains being not only full, simple and accurate, but the very latest and most improved methods are given. The author follows a rather original plan in presenting this most important subject. The chapter on The Manufacture and Use of Sera and Vaccines is very well written, and is of especial value to pharmacists many of whom are so slightly informed on this important part of their business.

The discussion of disinfectants and of the principles of disinfection and sterilization and of the practical application of these principles in the pharmacy would alone make the book well worth while to every pharmacist.

The last chapter, on the Bacteriological and Microscopical Laboratory for the Pharmacist, brings fairly before every pharmacist the question which has already entered the minds of many thinking men of our profession. Should there not be a public distinction made between professionally trained Pharmacists and medicine-selling Druggists?

The work does not intrude into medical bacteriology, but does include those

special features a pharmacist should know in regard to this most important modern science.

Criticism of a point or feature here and there may be offered as is always the case of any work done by mere man. For instance, the author says in his introduction that "Bacteriology must not be made discouragingly difficult to the pharmacist," and yet in his very first chapter on the history of the science he mentions the names of no less than 92 persons with a date and a reference to their accomplishments. If the average pharmaceutical student of bacteriology learns the names of five of the great discoverers in the realms of this science he has gone the limit.

While nearly all of the book is written in a simple yet dignified style the short chapter on the Range and Distribution of Microbes appears to be too simple, almost childish, with much repetition, and includes several statements very subject to doubt.

It would seem also as though the arrangement of chapters could have been improved.

However, on the whole the book is fine and will undoubtedly find a wide circulation in this country.

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METHODS OF ORGANIC ANALYSIS. By Henry C. Sherman, Ph. D. Professor of Food Chemistry in Columbia University. Second Edition, rewritten and enlarged. Illustrated. Cloth, 8vo. \$2.40 net. The Macmillan company, New York.

Organic Analysis may be treated as a mass of subjects arbitrarily arranged, or, following the new system of organic chemistry, it may be logically developed into system similar to the ones we have followed in our inorganic chemistry. The latter, needless to say, is the satisfactory teaching method, and Professor Sherman has followed it well in this new edition, just off the press.

Beginning with the alcohols, the book takes up in succession their oxidation products and allied substances, the aldehydes and acids, and the carbohydrates, the fatty acids and their derivatives, fuels, proteins, including grains and milk, and preservative agents. The treatment in each case is such that the book may be used not only as a manual for students, but as a practical working handbook for the commercial laboratory.

In extending the scope of the work, the new matter includes "a chapter on solid and liquid fuels, and sections on industrial alcohol, drying oils, crude petroleum, the new international methods of glycerin analysis, and quantitative methods for the testing of enzymes." The results of the latest researches have been embodied in these chapters, much of the work having been done in the Havemeyer Laboratories by Professor Sherman and his students.

The bibliography following each chapter is admirably arranged in two divisions: first, a list of available works of reference; second a chronological list of articles bearing on the subjects treated in each chapter. The bibliography contrasts vividly with a manual which the writer had occasion to examine some time since, in which frequent mention was made of well known analytical