SCIENTIFIC BOOKS

INDUSTRIAL POISONS

Analytical Chemistry of Industrial Poisons, Hazards, and Solvents. By M. B. JACOBS. New York: Interscience Publishers, Incorporated, 1941. Price, $7.00.

THE tremendous increase in defense production, which includes all types of industrial work, makes the appearance of this type of book a timely one. Few works to date have compiled such chemical studies. Its completeness makes it of great value for the increasing number of medical men, toxicologists, industrial hygienists and chemists coming into contact with these problems.

The contents of the book are quite thoroughly covered by references, some 1,200 in all. The table of contents and subject and author indexes make it possible to locate subject matter quickly.

The appendix, giving a tabular estimation of parts per million and milligrams per liter from molecular weights, is of special value. It also lists limits of inflammability and explosive ranges of industrial compounds; acute physiological responses to gases and vapors; probable safe concentration limits of exposure for vapors, gases, dusts, fumes and smokes according to various codes; minimum lethal doses for a number of lacrymators, lung irritants, vesicants, other war gases, etc.

Analytical methods or reference to methods for the various known compounds used or produced in industry are outlined. In addition to giving chemical methods, sampling equipment and procedures, and gas volume and velocity measurements are described.

The book gives a brief, but very helpful, pharmacological and toxicological consideration of the various compounds.

The book is well written and has a minimum of typographical errors. It is the reviewer's opinion that the price of the book, unfortunately, makes it somewhat prohibitive for the body of individuals who could reap most benefit from its use.

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ALGEBRA

Algebra. By W. L. FERRAR. vi + 202 pp. Oxford: Clarendon Press. 1941.

THIS book was written to provide a text, principally for university undergraduates, on determinants, matrices and algebraic forms. The only prerequisite training required is that provided by the usual course in college algebra, and thus the author's Part I consists of a 59-page presentation of the classical theory of determinants. Part II, on the theory of matrices of complex numbers, presents in 52 pages the elementary matrix concepts, the notions of characteristic function and latent root, the definitions of elementary transformations over a number field F, and the theory of equivalence of rectangular matrices over F. The final part consists of 49 pages on real quadratic forms and 30 pages on invariants and covariants. The omission of the theory of similarity of square matrices is rather curious in a text presenting the theory of equivalence of *pairs* of real quadratic forms.

The author's sources include no modern treatment of his subject, and this probably accounts for his use of so much obsolete terminology. He states that his omission of any hint of abstract algebra is deliberate, but misses the point that even an elementary exposition of the theory of matrices with complex elements could profit by the adoption of the streamlining of the modern versions.

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SOCIETIES AND MEETINGS

THE INDIANA ACADEMY OF SCIENCE

THE fifty-seventh annual meeting of the Indiana Academy of Science was held at DePauw University, Greencastle, Indiana, on October 30 and 31 and November 1. Over five hundred scientists from Indiana and Ohio were in attendance, including sixteen past presidents of the academy. The executive committee met on Thursday evening, after which President Paul Weatherwax, Indiana University, made a radio broadcast on "The History and Objectives of the Indiana Academy of Science." The general sessions opened on Friday morning with an address of welcome by President Clyde E. Wildman, of DePauw University, which was followed by a response by President Weatherwax. After a short business session a brief memorial service was held for the eleven members of the academy who had died since the last meeting. Among these eleven were William Albert Noyes, Frank M. Andrews, Charles B. Jordan, Arthur E. Haas, Clinton A. Ludwig and James Troop. The principal addresses of the general session were given by Arthur L. Foley, Indiana University, on "Why? What? Whither?" and Arthur T. Evans, Miami University, on "Some Thoughts on Origin and Evolution."