NEW BOOKS

RIEGEL'S—INDUSTRIAL CHEMISTRY, edited by James A. Kent, foreword by E. Raymond Riegel, (Reinhold Publishing Co., 963 pp., 1962, $20). The first edition of "Industrial Chemistry" appeared in 1928. The present version is the first formal revision in thirty-four years.

The aim of the editor has been to present in a single volume the many chemico-commercial activities of the complex chemical industry in a single volume.

The items covered are:

1. Economic aspects of the chemical industry
2. Industrial water supply and industrial waste disposal
3. Fuels and their utilization
4. Sulfuric acid and sulfur
5. Synthetic nitrogen products
6. Miscellaneous heavy chemicals
7. Industrial fermentation processes
8. Coal carbonization and recovery of coal chemicals
9. Rubber
10. Synthetic plastics
11. Man made textile fibers
12. Animal and vegetable oils, fats and waxes
13. Soap and synthetic detergents
14. Petroleum and its products; Petrochemicals
15. Industrial chemistry of wood
16. Sugar and starch
17. Industrial gasses
18. Phosphates, phosphorous, fertilizers, potassium salts, natural organic chemicals
19. Chemical explosives and missile propellants
20. Pharmaceutical industries
21. Insecticides, fungicides, herbicides, etc.
22. Pigments, paints, varnishes, lacquers, etc.
23. Dyes, intermediates, etc.
24. The nuclear industry
25. Synthetic organic chemicals

Certainly any volume covering twenty-five such diverse industries in 963 pages can only briefly cover any one field.

We note that items 12 and 13 are written by two well-known members of the American Oil Chemists' Society, viz. H. G. Kirschenbauer and J. C. Harris.

This book will be of great value to chief chemists, superintendents, managers, etc. who wish to quickly generally familiarize themselves with a given field and find a ready source of references covering a given industry. It will be less useful to researchers and specialists. It is the type of book that any organization will wish to have in their library but we doubt if it will be widely purchased by individual scientists and engineers.

R. W. BATES,
Armour and Company,
Oak Brook, Illinois

ANALYSE DER TENSIDE. Infrarotspektroskopische und chemische Methoden, by Priv.—Doz. Dieter Hummel. (Carl Hanser Verlag München, 1962, 156 DM). This is an attractive small monograph in a two volume pair, each 6½" × 9½": a text of 323 pages and a slightly thicker volume which is an indexed collection of infrared curves. The text has the following chapters: Structural Characteristics of Surface Active Agents, Systematic Classification of Surface Active Agents, Determination of Ionic Type, Infrared Spectroscopy of Surface Active Agents, Chemical Reactions for the Determination of Structural Characteristics. A Qualitative Chemical-Spectroscopic Analytical Procedure, and Methods for the Quantitative Analysis of Surface Active Agents. There is a bibliography, an appendix of Tables on classification of Surface active agents, trade names, identification by means of various reagents including pyrolysis with phosphoric acid, and refractive index values for nonionics. There is also a subject index and a total of 7 Figures and 20 Tables in the first volume.

Use of the readily understandable word "tenside" follows the proposal of E. Götte (Fette, Seifen, Anstrichmittel *62,* 789-90 (1960)), derives from "tensus" and is designed to replace the more cumbersome "grenzflächenaktive Stoffe." Thus, the words "Tenside," "Aniontenside," "Katrontenside" and "Amphotentenside" have been created to join such words as "saponides," "detergents," "syndets," "surfactants" and "amphipathic agents."

The Decimal System of the International Committee on Detergence (presented at the 3rd International Congress on Surface Active Agents, Cologne, 1960) and a Letter-Number system are compared, but in the appendix the Letter-Number system is used. Thus An III A 5b identifies the sulfosuccinate ester structure: An signifies anionic, recognized by precipitation with a cationic reagent; III—sulfonate, recognized by intense absorption at 8.2-8.5μ, also at 9.5μ, and a qualitative test for S; A—aliphatic, from the lack of characteristic aromatic infrared absorption; 5b—presence of more than one carboxylic acid ester group, recognized by intense absorption at 5.8μ, and after saponification by the characteristic absorption of the ionized carboxyl group at about 6.4μ.

The use of punched cards relating structure, chemical composition, any other selected data and infrared spectra is illustrated, as well as the preparation of specimens for infrared examination (Leitz spectrograph). The synthesis, structure, and identification of keryl and tetramer types of alkylbenzenesulfonates is discussed as well as that of many other and quite recent types, including P, F and sucrose derivatives, all in a thorough fashion but primarily in relation to gas chromatography and infrared spectra.

The second volume is thumb indexed for rapid reference: anionic, cationic, nonionic, ampholytic, oxyethyl type, F compounds, fatty acids, alcohols, phenols, hydrocarbons, N compounds, S compounds, and inorganic compounds. There is a total of 466 infrared curves, % transmittance vs. wave length in the range 2–15 microns. These give the source and the preparation technique of the specimen, chemical classification and structure, and field of application.

The two volumes are essentially one and they are recommended to all those who are concerned in the identification of surface active agents, for use as text or reference.

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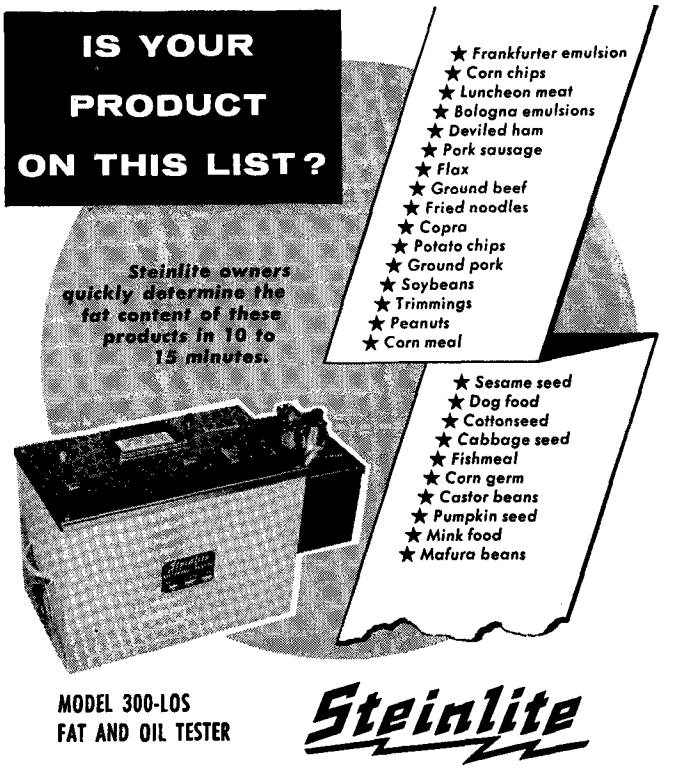
(Continued on page 36)



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New Books . . .

(Continued from page 35)

A MANUAL OF COSMETIC ANALYSIS, by Sylvan H. Newberger (Assoc. of Official Agricultural Chemists, Inc., P. O. Box 540, Benjamin Franklin Station, Washington 4, D. C., 84 + Vi, 1962, $4.00 domestic and $4.25 foreign). The book is well printed with a cardboard binding. It is adequately indexed. It is designed primarily as a laboratory manual. Extensive use is made of cross-referencing to previous sections in the interest of brevity. This makes it essential that the manual be close at hand during cosmetic analysis.

Dr. Newberger has been with the Food & Drug Administration for many years. He has been responsible for development of many of the analytical methods used by the FDA on cosmetics. He is eminently qualified to be the author of such a manual.

Persons who are involved in analysis of any of the common cosmetic preparations will find this manual a great help. A particularly useful feature is the inclusion of typical infra-red spectra of 56 commonly met cosmetic ingredients.

G. F. DASHER,
Clairol Inc.,
Stamford, Connecticut