

### Attempted Asymmetric Syntheses Employing Choleic Acids

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In view of the fact that molecular complexes have been found useful in accomplishing the resolution<sup>2</sup> of racemic mixtures, it appeared of interest to investigate the possibility of accomplishing asymmetric syntheses employing molecular compounds. Because of the reported stability of the choleic acids<sup>3</sup> (complexes with desoxycholic acid), preliminary experiments were performed with several of these substances, with negative results. Circumstances have necessitated an indefinite postponement of a more thorough investigation of the problem.

Crotonic acid-choleic acid (neutralization

(1) Abstracted from a part of the dissertation submitted by Colin C. Reid to Yale University in partial fulfillment of the requirements for the Ph.D. degree, June, 1941.

(2) Windaus, Klänhardt and Weinhold, *Z. physiol. Chem.*, **126**, 299 (1923); Sobotka and Goldberg, *Biochem. J.*, **26**, 906 (1932); Weiss and Abeles, *Monatsh.*, **59**, 238 (1932); Eisenlohr and Meier, *Ber.*, **71B**, 1005 (1938).

(3) "The Chemistry of the Sterids," by H. Sobotka, The Williams and Wilkins Company, Baltimore, Md., 1938.

equivalent: 292 after drying for two hours at 80° and 20 mm., 319 after prolonged drying at 80° and 20 mm.; calculated for coordination numbers 1, 2, 3: 239, 290, 316, respectively) was brominated in aqueous suspension under various conditions. No optically active product was obtained.

Acetophenone-choleic acid (m. p. 167-8° (cor.); neutralization equivalent, 431; calculated for coordination numbers 2, 3, 4: 452, 432, 422, respectively) was prepared. Attempts at catalytic reduction were unsuccessful, as was also reduction by aluminum isopropylate in benzene suspension. Catalytic reduction of an emulsion of acetophenone in aqueous sodium desoxycholate gave inactive methylphenylcarbinol. We were unable to obtain methylphenylcarbinol by the action of methylmagnesium bromide on benzaldehyde-choleic acid (m. p. 164-165°; neutralization equivalent, 441; calculated for coordination numbers 1, 2, 3: 498, 445, 428, respectively).

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## NEW BOOKS

**Organic Chemistry.** By REYNOLD C. FUSON, Professor of Organic Chemistry in the University of Illinois, and H. R. SNYDER, Assistant Professor of Chemistry in the University of Illinois. John Wiley and Sons, Inc., 440 Fourth Avenue, New York, N. Y., 1942. viii + 506 pp. 15.5 × 23.5 cm. Price, \$3.50.

In this book the first year's work in organic chemistry is divided into a first part in which the student familiarizes himself rapidly with the important classes of organic compounds, and a second part in which a more advanced treatment is given to a selected group of topics. The selection and arrangement of material in the two parts are the following: Part I—Introduction, The Structure of Molecules, Saturated Hydrocarbons, Unsaturated Hydrocarbons, Petroleum, Aromatic Hydrocarbons, Alcohols, Aldehydes and Ketones, Carboxylic Acids, Amines, Polyfunctional Acids, Phenols, Optical Isomerism, Amino Acids and Proteins, Carbohydrates, Valence, Isomerism, Industrial Alcohols; Part II—Organic Halogen Compounds, Organometallic Compounds, The Synthesis of Carbonyl Compounds, Reactions of the Carbonyl Group, Substitution and Condensation Reactions of Carbonyl Compounds, Unsaturated Carbonyl Compounds, Compounds which Contain Two or More Carbonyl Groups, Ring Formation, Polymerization and Polymers, Nitro Compounds, The Preparation and Properties of Amines, Organic Sulfur Compounds, Aromatic Compounds, Polynuclear Aromatic Hydrocarbons, Aromatic Heterocyclic

Compounds, Synthetic Dyes from Coal Tar, Appendix A—Notes on Nomenclature and Pronunciation, Appendix B—Problems and Questions for Review.

The arrangement of the work of the first year in organic chemistry as given in this text is not new; it is an arrangement which has been used successfully for many years. The text by Fuson and Snyder is, however, the first one written specifically for such a course, and it does exceedingly well the task it sets for itself. The presentation is clear and completely modern. The chapters on dyes, polymers, and fats and oils are especially good. The book is attractively printed and has been carefully edited.

With the appearance of this text, the instructor who has been considering the desirability of the survey and review type of first year course in organic chemistry now has available an excellent text for such a course.

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**Archives of Biochemistry.** Volume I, Number 1, October, 1942. Editors: M. L. CROSSLEY, F. C. KOCH, C. M. McCAY, F. F. NORD, F. W. WENT AND C. H. WERKMAN. Academic Press, Inc., Publishers, 125 E. 23rd Street, New York, N. Y. 163 pp. 15 × 23 cm. The Publishers plan to issue two volumes yearly at \$5.50 per volume.

This latest addition to the periodical literature of biochemistry signalizes the great increase in research activity in this field. The publishers state that they plan to publish two volumes annually, at a cost of \$5.50 per