



SHORT COURSE STUDENTS—Assembled for a group shot on the University of Illinois campus in late July are the nearly 100 who attended because of an interest in edible fats. L. R. Dugan Jr., of the American Meat Institute Foundation, Chicago, was program chairman.

Short Course Attracts 94

THE 11TH American Oil Chemists' Society Short Course on Edible Fats and Oils was held at the University of Illinois, Urbana, on July 25 to July 27, 1960. The course aimed at presentation, to scientists, engineers, and administrators interested in fats and oils problems, of the advances in knowledge and current problems facing the fats and oils industry. The subject matter was broad in scope and covered topics in nutrition, processing, characteristics and properties of fats and oils and shortenings, food laws, and economics.

The arrangement and subject matter of the course were widely acclaimed by attending students. Ninety-four were enrolled in the course, and 21 speakers and section chairmen brought the total attendance to 116. This did not account for some students and faculty members at the University of Illinois who attended on an unregistered basis.

The University of Illinois Extension Division, and R. K. Newton, director of engineering extension, provided excellent support. R. T. Milner, head of the department of Food Technology at Illinois, acted as coordinator for the Society and the university. Housing in new dormitory facilities was luxurious and convenient. Food was served in a building adjacent to that in which classes were held, and an air-conditioned classroom prevented distractions because of the heat and the humid weather which prevailed for part of the time.

On Tuesday afternoon the group saw the crop development program of the university. Then they visited the Allerton Park Conference Center and enjoyed a Fish Fry at the nearby 4-H Club Pavilion.

L. R. DUGAN JR.

• *New Books*

HEATSEALING AND HIGH FREQUENCY WELDING OF PLASTICS, by Hans Peter Zade (Interscience Publishers Inc., New York, 211 pp., 1959, \$5.75). This book is an excellent source of reference for plastic manufacturers and fabricators. It contains many tables on the physical, thermal, and electrical properties of thermoplastic materials which can be welded or heatsealed. The theoretical aspects and equipment needed for heatsealing and high frequency welding of these materials is covered, giving a good cross-section of United States as well as foreign technology. A later section discusses the various areas in which high frequency welding can be used in industry and the versatility of the processes and machinery.

The bibliographies, indexes, and glossary are outstanding, containing extensive lists of foreign and domestic patents and trade names. The index is arranged in both name and subject sequence.

DONALD J. WAYTHOMAS, Spencer
Kellogg and Sons Inc., Buffalo, N.Y.

PYRIDINE AND ITS DERIVATIVES (Part I of four parts, with Arnold Weissberger as consulting editor), edited by Erwin Klingsberg (Interscience Publishers Inc., New York, 1960, 613 pp., \$49 [\$42 by subscription]). This is the latest publication, the fourteenth, in a very useful series on the Chemistry of Heterocyclic Compounds. Although pyridine is a comparatively simple heterocycle in structure, it is the prototype for nitrogen heterocycles in general, it is found in many natural products, and, like benzene, it is the nucleus for a great many synthetic derivatives.

The present book, which is one part of a four-part volume, contains Chapter I, Properties and Reactions of Pyridine and Its Hydrogenated Derivatives, by R. A. Barn; and Chapter II, Synthetic and Natural Sources of the Pyridine Ring, by Frederick Brody and Philip Ruby.

The first chapter is intended to lay the groundwork for the entire volume. It covers such physical properties as dipoles, absorption spectra, etc., a theoretical treatment of substitution reactions, and a discussion of various other reactions, such as addition to the ring, basic action, oxidation, reduction, etc. The remainder of the chapter is given over to the effect of the pyridine ring on substituent atoms and groups and finally to a discussion of partly hydrogenated pyridines. Modern reaction mechanisms are used throughout. This appears to cover well the general chemistry of pyridine and hydrogenated pyridines.

Chapter II, which occupies about three-fourths of the book, deals with sources of the pyridine ring. The material is divided into two main topics, pyridines from natural sources and those from synthesis. Natural products and sources include various alkaloids, enzymes, coal, petroleum, etc. Numerous syntheses from nonpyridinoid starting materials are then discussed. A large part of the pyridine and picolines used today comes from industrial synthesis. A surprising variety of condensation and cyclization reactions have been run, and much of this information is presented in the form of tables. A measure of the volume of literature covered by this chapter is given by the number of references cited, about 1850 to 1956.

Since a decision to purchase Part I of this volume will depend on the content of the remaining three parts, the chapters on which 14 authors are working are briefly listed:

PART II

- III. Quaternary Pyridinium Compounds
- IV. Pyridine N-Oxides
- V. Alkyl- and Arylpyridines
- VI. Halopyridines
- VII. Organo-Metallic Derivatives
- VIII. Nitropyridines and Their Reduction Products

PART III

- IX. Aminopyridines
- X. Pyridinecarboxylic Acids
- XI. Pyridine Side-Chain Carboxylic Acids
- XII. Pyridinols and Pyridones

PART IV

- XIII. Pyridine Alcohols
- XIV. Pyridine Aldehydes and Ketones