

Report of the AOCS Industrial Oils and Derivatives Committee

The Industrial Oils & Derivatives Committee and four of its Subcommittees met during the AOCS meetings in Minneapolis, Sept. 30–October 1. The following highlights some of the work being done, as submitted by K. E. Holt, Chairman.

Consolidation of Methods

The Industrial Oils & Derivatives Committee has been given tentative approval to consolidate the methods coming under their jurisdiction, thereby eliminating duplication. The consolidation will cover Sections K, L and M currently published in the AOCS Official Methods and provides for the inclusion of methods on epoxidized oils, polymerized acids, hydrogenated oils and alkyd resins without creating additional sections. Each product or derivative will be covered by an introductory or "recommended practices for testing" method. It will describe the derivative, designate the test methods that should be used and assist the analyst in interpretation of results. The analytical methods will be grouped together, thus eliminating duplications where the same method is used for several oils or derivatives.

The first phase of this program has been completed. Each Subcommittee Chairman has prepared a "recommended practices for testing" and all existing methods have been edited and combined to eliminate duplications. The "recommended practices," together with the consolidated methods, were submitted to members of Industrial Oils & Derivatives Committee and the Uniform Methods Committee and were discussed at the Subcommittee meetings in Minneapolis. It was requested that all suggestions and corrections be put in writing and submitted to Subcommittee Chairmen by November 15. We plan to have the completed revision ready for consideration by the Uniform Methods Committee at the 1964 AOCS Spring Meeting.

New Subcommittees

In addition to the existing Subcommittees, it was recommended that Subcommittees be established to write recommended practices and develop standard methods on alkyd resins, hydrogenated oils and dibasic acids. Temporary Chairmen were appointed to determine general interest among industry members in establishing methods for these products and, if interest exists, to organize Subcommittees. Temporary Chairmen are: Alkyd Resins, Francis Seofield, National Paint, Varnish & Lacquer Assoc.; Hydrogenated Oils, Roscoe Walker, Archer-Daniels-Midland Co., and Dibasic Acids, Donald F. Roblin, Harchem Div. of Wallace and Tiernan Inc. We urge that all AOCS members having interest in methodology of these products contact the Subcommittee Chairmen regarding Subcommittee membership.

Subcommittee Reports

Fatty Nitrogen Product Subcommittee, G. G. Wilson, Chairman

The Subcommittee is attempting to write a GLC Method for fatty nitrogen products. A variety of instruments and columns are available that are suitable for running this analysis, making it difficult to write a method encompassing all possibilities, and yet specific enough to give precise and accurate results. It was agreed that the method will include: 1) an example procedure listing instrument, column and conditions; 2) provisions for a standard sample with an official analysis that can be purchased through AOCS; and 3) provision that any instrument and procedure giving comparable results on the standard sample will be acceptable.

There are four active task groups: Task Group 1 on Fatty Amido Amines is working on methods for primary, secondary and tertiary amine values, amidazoline values, hydroxyl values and percent nonamine. Task Group 2

on Dimethyl Fatty Amines has completed work on color, percent water, iodine value, (I.V.) total and primary amine value and a report will be issued on this study. It is continuing to work on a method for secondary amine values. Task Group 3 on Fatty Diamines has approved the present N Section methods on I.V., total primary and secondary amine value and percent nonamine as applicable to fatty diamines. Work is continuing on tertiary amine value, color, percent water and gas chromatography. Task Group 4 on Fatty Amines has approved a percent nonamine and a composition method and is working on a gas chromatography method.

The Fatty Nitrogen Subcommittee extends an invitation to anyone interested in these analyses to become a member and participate in the work.

Polymerized Acids, G. G. Wilson, Chairman

The Subcommittee is continuing to search for a suitable method for determining unsaturation, and also a method for determining composition by gas chromatography. Any suggestions along this line will be welcomed by the Chairman.

Epoxidized Oils Subcommittee, Dave Barlow, Chairman

The Subcommittee is looking for a suitable analysis for hydroxyl content of epoxidized oils. Two methods were proposed. One is a chemical method based on the reaction of phenylisocyanate with alcohols, and the other is an instrumental analysis by means of IR which measures the ratio of hydroxyl to epoxide. This method does not give total content but is being used by one processor as a control in the manufacture of epoxidized oils. The Subcommittee will carry out scouting trials with the two hydroxyl methods to determine the technical feasibility of these procedures on epoxidized oils.

Drying Oils Subcommittee, Don Bolley, Chairman

A method such as the ASTM Cold and Hot Foots Test, for measuring phosphatides and other extraneous materials in raw linseed oil, has never been included in the AOCS Methods book. The primary reason for excluding the method is lack of accuracy of the ASTM Foots Method and the inability of our analysts to devise a more suitable method.

The International Assoc. of Seed Crushers is proposing a new method for determining "footy" material in linseed oils. The Drying Oils Subcommittee, working in liaison with the ASTM Group on Linseed Foots, have checked the IASC method and report that it shows much promise as a replacement for the ASTM Foots Test. Additional collaborative work is planned and if the preliminary work is substantiated, it will be considered for adoption as an AOCS Method.

• *New Literature*

A. GROSS & Co. has just issued the 8th edition of "Fatty Acids in Modern Industry." The 25-page booklet presents a convenient listing of normal specifications for over 30 basic fatty acids for industry, with convenient chart showing percentage of each in Groco products. (295 Madison Ave., New York, N. Y. 10017.)

BECKMAN INSTRUMENTS, INC. has just released a brochure (7024) describing a new Research pH Meter, designed for use where pH, millivolt potential and specific ion determinations accurate to the 3rd and 4th decimal place can provide significant correlations. (Tech. Information Dept., 2500 Harbour Blvd., Fullerton, Calif.)

JARRELL-ASH has released a 4-page brochure describing their X-ray diffraction laboratory equipment. It contains technical and applications data relating to their X-ray Generator, Microfocus X-ray Tube with interchangeable targets, Diffractometer, and associated Electronics for read-out versatility. (Marketing Ser. Dept. 26, Farwell St., Newtonville, Mass.)