# AOCS Short Course Includes Diverse Topics on Theme of Quantitative GLC

## Course Open to All Interested

Gerald Feldman

Gerald Feldman, Chairman, announced the completion of the program for the AOCS Short Course on "Quantitative Gas-Liquid Chromatography" to be held at Rice University, Houston, Texas, July 30–Aug. 4, 1967. The fee for the course is $138 and is payable in advance to the American Oil Chemists' Society offices at 35 E. Wacker Drive, Chicago, Illinois 60601. The registration fee includes room, buffet dinner on Sunday evening and all meals through lunch on Friday, August 4. Membership in the AOCS is not a prerequisite for attending the course.

Special provisions have been made for undergraduate or graduate students who wish to attend the course. The registration fee for these people is $50 including room and meals. For those who wish to attend for only a single day, the fee of $50 has been set.

The lecture topics are highly diverse in keeping with the underlying theme of quantitative GLC and the considerations that must be made to achieve quantitative data. Special topics have been included to cover such new developments as automation and application to structural analysis as described in previous information on the course.

## Outstanding Speakers Scheduled

An outstanding group of speakers has been assembled for what promises to be a very interesting course for all disciplines represented by the AOCS. Some of the highlights of the course include a lecture by Charles Sweeley, University of Pittsburgh, one of the pioneer gas chromatographers in this country. He will present the latest developments in his work on the structural determination of glycolipids. Sweeley's procedure involves the hydrolysis of the glycolipid and the subsequent GLC analysis of all of its structural moieties. With this technique he is able to obtain quantitative data from very small samples as well as evidence for the structure of the compound. The glycolipids are emerging as compounds of increasing interest to the biochemist and Sweeley's work provides us with a very useful tool for their study. David Firestone of the Food and Drug Administration will lecture on the analysis of contaminants in edible fats and oils. His topic is one that is of interest to industrial chemists as well as those involved in academic studies of lipids. Dick Kruppa of Applied Science Laboratories will discuss the preparation of column packings and will compare the various methods of coating the support together with the presentation of a newly developed fluidized drying technique that enables one to prepare improved packings for GLC.

The importance of liquid phases is a major consideration for GLC analyses. William VandenHeuvel whose work in this area is familiar to all gas chromatographers, will discuss the relationship between the solute's structure and its retention behavior in various liquid phases. Walter Supina of Supelco, Inc. will give a general discussion on liquid phases. Some of the liquid phases in common use today were developed by Dr. Supina.

These are only a few of the many outstanding lectures that are scheduled. Plenty of time has been set aside for impromptu round table discussions. The program is arranged as follows:

## AOCS Short Course Program 1967

## QUANTITATIVE GAS-LIQUID CHROMATOGRAPHY

**Rice University, Houston, Texas**

**Sunday, July 30**

Registration
Buffet Supper, Social Evening

**Monday, July 31**

Morning Session: Chairman—Gerald Feldman, Baylor University College of Medicine

*Liquid Phases*—Walter Supina, Supelco, Inc.

*Ionization Detectors*—Hal Hartmann, Varian-Aerograph Co.

*Potentiometric Recorders*—C. D. Newman, Texas Instruments

Afternoon Session: Chairman—Walter Supina, Supelco, Inc.

*Triglyceride Analysis*—Carter Litchfield, Texas A & M University

*Analysis of Bile Acids*—Arnis Kuksis, University of Toronto

*Gas Chromatography of Fat-Soluble Vitamins*— P. P. Nair, Sinai Hospital of Baltimore

Evening Session: Open for General Discussion

**Tuesday, August 1**

Morning Session: Chairman—P. P. Nair, Sinai Hospital of Baltimore

*Instrument Trouble-Shooting*—George Chittwood, Barber-Colman Co.

*Preparation of Column Packings*—Dick Kruppa, Applied Science Laboratories

*Temperature Programming*—J. A. Schmit, Hewlett-Packard Co.

Afternoon Session: Chairman—Arnis Kuksis, University of Toronto

*Ultra-Micro Gas Chromatography*—Gerald Feldman, Baylor University College of Medicine

*Gas-Liquid Chromatographic Analysis of Hydroxy Fatty Acids and Partial Glycerides*—Randall Wood, Oak Ridge Institute for Nuclear Studies

*Gas Chromatographic Analysis of Fatty Alcohols, Aldehydes and Branched Chain Fatty Acids*—Nicholas Pelick, Supelco, Inc.

Evening Session: Open for General Discussion

**Wednesday, August 2**

Morning Session: Chairman—Randall Wood, Oak Ridge Institute of Nuclear Studies

*Automatic Sample Injection*—Lars Appelqvist, Swedish Seed Association

*Automatic Integration*—Jack Gill, Varian-Aerograph Co.

*The Use of Computers in Totally Automated Gas Chromatography*—Robert Kleiman, USDA

Afternoon Session: Chairman—Carter Litchfield, Texas A & M University

*Analysis of Carbohydrates and Related Compounds in the Characterization of Glycolipids*—Charles Sweeley, University of Pittsburgh

*Analysis of Contaminants in Edible Fats and Oils*—David Firestone, Food and Drug Administration

*Application of Gas-Liquid Chromatography to the Compositional Analysis of Food Lipids*—Madhu Sahasrabuhde, Canadian Food and Drug Directorate

Evening Session: Open for General Discussion

(Continued on page 294A)

## *Treasurer's Report . . .*

(Continued from page 293A)

| | |
|---|---|
| Surplus | 120,753.22 |
| Total Liabilities and Surplus | $243,501.29 |
| Surplus January 1, 1967 | |
| American Oil Chemists' Society | $105,943.62 |
| Journal of the American Oil Chemists' Society | 23,845.53 |
| Lipids | 9,035.93 |
| Surplus December 31, 1966 | $120,753.22 |

Respectfully submitted,
A. F. Kapecki, Treasurer

## • *GLC Short Course . . .*

(Continued from page 252A)

**Thursday, August 3**

Morning Session: Chairman—Jack Gill, Varian Aerograph Co.

*Column Technology*—Robert Schwartz, United Gas Corporation

*Relationship of Solute Structure to Retention Behavior*—W. J. A. VandenHeuvel, Merck and Co.

*Tentative Identification of the Components of Complex Fatty Acid Mixtures Based on Retention Data*—Robert Ackman, Fisheries Research Board of Canada

Afternoon Session: Chairman—Robert Ackman, Fisheries Research Board of Canada

*Quantitative Gas Chromatography in the Structural Characterization of Glyceryl Phosphatides*—Arnis Kuksis, University of Toronto

*Quantitative Gas-Liquid Chromatography of the Twenty Natural Protein Amino Acids*—D. W. Stalling, University of Missouri

*Preparative Gas Chromatography*—J. A. Schmit, Hewlett-Packard Co.

Evening Session: The Use of Motion Pictures to Document Research and Analytical Procedures—Donald Macon, Baylor University College of Medicine

**Friday, August 4**

Morning Session: Chairman—Nicholas Pelick, Supelco, Inc.

*Gas Chromatography of Hydrocarbons*—Robert Schwartz, United Gas Corporation

*Mass Spectrometry Coupled to Gas Chromatography*—James McCloskey, Baylor University College of Medicine

*Determination of the Structure of Lipids by Hydrogenation, Ozonolysis and Hydrogenolysis*—Morton Beroza, USDA



(Continued from page 266A)

sifiers. They can also be used as emulsifiers for oil/water emulsions if combined with other surfactants. Creamy, stable emulsions can be prepared in which the water content is between one-third and ten times the amount of the mono/diglyceride mixture. These emulsions can be used as the basis for various cosmetic preparations having a very soft feel and good mildness to the skin. They can also be used for deodorants, lipsticks and liquid emulsions.

PRACTICAL USES OF SURFACTANTS. F. Püschel (German Acad. of Science, Berlin, Germany). *Tenside* **4**, 1–8 (1967). An extensive survey is made of the nature, properties and uses of surface active agents, with special reference to their most important fields of application: in detergent and scouring agents, in the textile, leather and paper industries, mining (flotation), in the chemical industries (as wetting, dispersing and emulsifying agents), in the plastics, paint and varnish and petroleum industries, in the preparation of lubricants and for metal working, in building, in the pharmaceutical industry, medicine and cosmetics and in the foodstuffs industry.

ENZYMATIC DETERGENTS. A. Suter (Milan, Italy). *Riv. Ital. Sostanze Grasse* **43**, 581–4 (1966). A review is given of the enzyme-containing detergent products which have recently appeared and gained acceptance in the European markets. The development of proteolytic enzymes which are relatively stable to moderately high temperatures and pH has enabled detergent manufacturers to formulate washing products with greatly improved detergency.

BIODEGRADABLE SURFACTANTS FOR THE TEXTILE INDUSTRY. K. A. Booman, J. Dupre and E. S. Lashen (Rohm and Haas Co.). *Am. Dyestuff Rept.* **56**, 30–6 (1967). Laboratory tests indicate that secondary alcohol ethoxylates and alkylphenol ethoxylates are biodegradable. A field study on secondary alcohol ethoxylates showed that the acclimation required for optimum degradability in laboratory tests actually occurs in the field. The use of acclimated microorganisms is very important in order to obtain meaningful laboratory biodegradation results. The most reliable test methods are those which are most closely related to actual waste treatment conditions, such as the river water die-away test or the semi-continuous activated sludge test. Where sewage treatment facilities are adequate, neither LAS, secondary alcohol ethoxylates or alkylphenol ethoxylates should cause foaming in waterways.

AQUEOUS DISPERSION OF MODIFIED DRYING AND SEMI-DRYING OILS CONTAINING WATER-SOLUBLE DRIER. F. H. W. Wachholtz and C. Korf (Rijswijk, Netherlands). *U.S. 3298,848.* An aqueous dispersion is claimed, consisting of: (a) a water dispersible, organic coating vehicle selected from the group consisting of modified drying and semi-drying oils containing carboxyl groups at least partially neutralized with a nitrogen containing base, the vehicle being highly dispersed in water and capable of oxidative polymerization, and (b) a water soluble drier, consisting of a compound of a heavy metal such as iron, cobalt, nickel, vanadium, chromium, manganese, copper, zirconium and molybdenum. The amount of the water soluble metal compound in the dispersion is such that the metal constitutes from 0.01 to 3% by wt. of the coating vehicle.

DETERGENT COMPOSITIONS. L. I. Osipow, F. J. Brashear and W. Rosenblatt (State of Nebraska). *U.S. 3,305,488.* A detergent composition is claimed, consisting essentially of 4–50% organic detergents, 0–96% inorganic alkaline builders and carboxymethylcellulose and 0–96% water. The organic detergent consists of 25–75% of a 10-hydroxy-stearate soap, the remainder being either an anionic or a nonionic organic non-soap detergent.

PRODUCTION OF ALKALI METAL ALKYL SULFONATES. R. T. Adams and E. E. Johnson (Chevron Res. Co.). *U.S. 3,306,931.* A process for preparing alkali metal sulfonates comprises continuously feeding terminal olefins with 10 to 20 C atoms, aqueous alkali metal bisulfite and a 2-propanol-water solvent to a reaction zone. The preferred composition ratios in the feed are: bisulfite to olefin, 4:5 to 2:1 (molar); 2-propanol-water solvent to olefin, 4:1 to 5:3 (wt.); 2-propanol to water, 1:4 to 9:4 (wt.). The reaction is conducted at 80–200F and a pH of 5 to 8, while passing an oxygen-containing gas through the reacting mixture and mixing to provide a homogeneous reaction system, and while continuously withdrawing alkali metal alkyl sulfonate from the reaction zone.