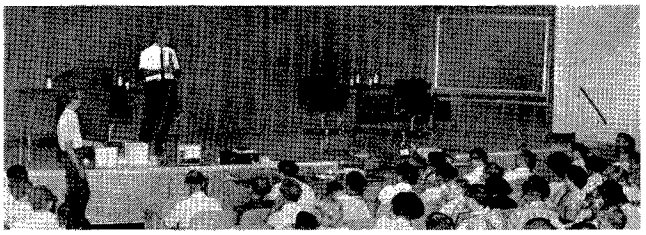
Left to right: Nicholas Pelick, Frantz Vandenheuvel, Noel Kuhrt and George Rouser.



Orville Privett addresses attentive AOCS short course group.

New TLC Methods Detailed at Penn State

THE AOCS SHORT COURSE on Thin-Layer Chromatography (TLC) in Lipid Chemistry held at The Pennsylvania State University August 25–29 was accepted with enthusiasm by participants. The Short Course, one of the 1966 functions sponsored by the Education Committee (Noel Kuhrt, Chairman), was organized by George Rouser and Frantz Vandenheuvel. Nicholas Pelick, Local Arrangements Chairman, was ably assisted by Kent Addis, University Conference Coordinator.

There were two major objectives: 1) to present detailed TLC procedures of use in lipid chemistry, and 2) to show how TLC is used with other procedures, particularly liquid-liquid and gas-liquid chromatography. These objectives were accomplished by 1) panel discussion and demonstrations of general TLC procedures, 2) detailed presentations of procedures with laboratory demonstrations of TLC applied to major groups of lipids (glycerides, phospholipids, glycolipids, sterols and steroids), and 3) shorter lectures on specialized aspects without actual laboratory demonstrations of procedures.

During the first morning of the course, the mechanics of TLC were discussed by a panel of persons with broad experience. Selection of adsorbents, plate spreading, activation, spotting, development, solvents, and detection reagents were considered in detail with those attending the course being free to question and comment. In the afternoon the mechanics of TLC were demonstrated with emphasis upon plate spreading, spotting techniques, and transmission densitometry. O. S. Privett served as Chairman of the session and demonstrations were carried out by Eugene Stearns and Richard Baldwin. The demonstrations were completed with the showing of one of Dr. Privett's excellent motion pictures showing the procedures for use of TLC in determination of the structures of unsaturated fatty acids.

Three common groups of lipids (neutral lipids, polar lipids, steroids) were considered as follows:

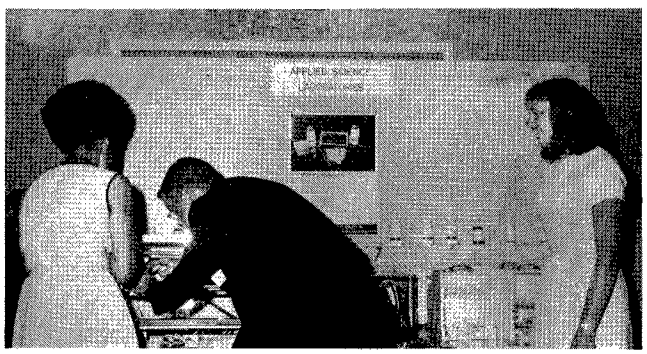
1) "TLC of Glycerides and Fatty Acids," by O. S. Privett assisted by Eugene Stearns.
2) "TLC of Phospholipids and Glycolipids," by George Rouser assisted by Richard Baldwin.
3) "TLC of Sterols and Steroids," by F. A. Vandenheuvel assisted by Robert Cochran.

O. S. Privett's lectures and demonstrations emphasized quantitative TLC by charring-transmission densitometry and structural determinations of fatty acids. George Rouser emphasized two-dimensional TLC separations of phospholipids and glycolipids and the use of TLC in conjunction with silicic acid, Sephadex, and DEAE cellulose column chromatography. Demonstrations (by Richard Baldwin) emphasized quantitative analysis by phosphorus assay of spots. F. A. Vandenheuvel demonstrated the importance of TLC in the steroid field by demonstrating the complete sequence for analysis of urinary steroids. This included extraction and hydrolysis of steroid conjugates, TLC separation into groups, and quantitative determination of individual steroids by GLC.

Lectures on more specialized areas include:

1) "Use of TLC in the Oil and Fat Industry," by M. L. Blank (National Dairy Products).
2) "TLC in the Pharmaceutical Industry," by J. E. Zarembo (Smith, Kline and French).
3) "TLC in the Food and Drug Administration," by L. Stoloff (U.S. Food and Drug Administration).
4) "TLC in Food Research," by M. R. Sahasrabudhe (Food and Drug Directorate of Canada).
5) "TLC of Plant Lipids," by Marius Lepage (Canada Department of Agriculture).
6) "TLC of Radioactive Lipids," by Fred Snyder (Oak Ridge Institute of Nuclear Studies).

Distillation Products Industries



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