Summarize Papers on Soaps and Detergents

ON MONDAY morning, July 7th, 1952, 121 earnest students gathered in a lecture room at Rutgers University in New Brunswick, N. J., to hear the first lecture of the week-long Fourth Short Course of the American Oil Chemists' Society. The students had come from such widely separated points as Massachusetts and California, Florida and Minnesota, even Spain, to hear a group of true experts discuss soaps and synthetic detergents. These lectures will be published in an early issue of the Journal so only brief mention will be made of each here.

A. J. Stirton opened the session with a discussion of saturated and unsaturated fats in which he pointed out that lauric, myristic, stearic, palmitic, and oleic acids are those most generally useful in soaps. Tallow however is still the glyceride source most commonly used. E. M. James, president of the Society, followed this with an interesting lecture on the pretreatment of fats in which he emphasized the importance of proper fat preparation to obtain a high grade soap. The processes used, he said, are refining, bleaching, solvent separation, and hydrogenation. A fine summary of the present status of fat splitting and distillation was given by V. J. Muckerheide, who brought out the fact that, where large volumes of fats are to be handled, the most efficient process for producing high grade fatty acids is hydrolysis under high pressure and temperature, followed by distillation under good vacuum. The tremendous variety of uses of fatty acids was clearly shown by the many interesting examples related by N. A. Ruston in his talk on commercial uses of fatty acids. That evening F. J. Schlink discussed evaluation of soaps at the consumer level. He pleaded for a more thorough investigation of the toxicity of all chemicals added to any product which is sold directly to the public.

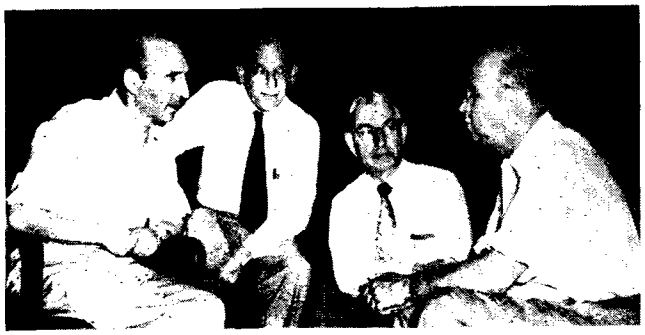
Soap processing was the general subject on Tuesday, and J. W. McCutcheon discussed soaps by saponification in the first lecture. He pointed out the need for care in soap manufacture in order to get good separation between neat soap and niger. One of the chief advantages of making soaps from fatty acids, according to M. D. Reinish, is that soap of uniformly good quality can be made continuously. W. A. Peterson then discussed glycerol production and refining and revealed that concentrates having high salt content are generally best processed by distillation whereas, in purifying low-salt content glycerine concentrates, the ion exchange system is generally preferred. Soap finishing was the subject discussed by J. W. Bodman, who discussed the variety of ways in which soap is finished to give a product of the desired appearance and properties. That evening W. A. McConlogue discussed evaluation of detergents at the industrial level, in which he emphasized with many examples the tremendous number and variety of industrial uses for soaps and detergents.

IN THE discussion of builders for detergents M. G. Kramer indicated that the present trend is toward the utilization of complex builder formulations in order to obtain both good whiteness retention and soil removal. A. E. King then talked on Performance Desiderata and showed that while all soaps have common characteristics, the relative importance of any one of these characteristics can be varied according to the use for which the product was made. Speaking on soap packaging, E. H. Balkema commented that 65-75% of the soap manufacturers' total direct labor cost is charged to packaging. In a lecture on specialty soaps E. L. Boley told of the vast number of soaps made in comparatively small quantities to meet unusual requirements. On Wednesday evening F. D. Snell, in discussing the competition of soaps and syndets, pointed out the rapid rise in volume of the production of syndets and their impact on the whole chemical industry.

Surfactants and syndets were the subject discussed on Thursday morning. H. E. Bramston-Cook led off with a paper on raw materials, in which he showed that alkylbenzene sulfonates are by far the most important synthetic detergents and that, barring unusual demands, there should be no material shortages within the next five years. Sulfation and sulfonation were described by M. H. Paulson, who indicated that light colored detergents could be produced only under carefully controlled sulfonation conditions. In talking on performance characteristics, L. H. Flett presented data which showed the effectiveness of detergents in removing bacteria from hard surfaces. D. R.

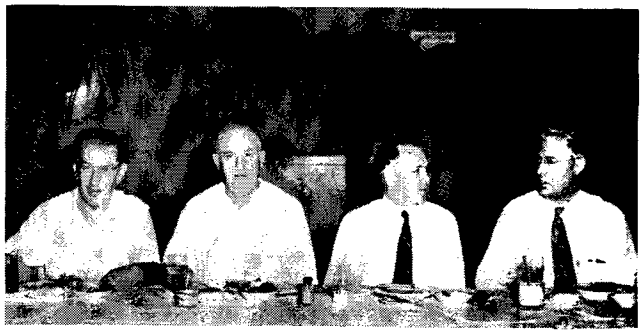
SHORT COURSE

DAILY PLANT TRIP — AOCS Short Course Students leave Rutgers for the afternoon tour to a nearby company as part of the refresher training— during the week of July 6-11, 1952



VISITOR FROM SPAIN—Lucio Lascaray of La Estrella Aravesa, Vitoria, confers with fellow students: E. A. Sigworth, Industrial Chemical Sales, Division of West Virginia Pulp and Paper Company, New York City; Morris Levine, Universal Detergents, Los Angeles; and A. J. Stirton, Eastern Regional Research Laboratory, Philadelphia

HEAD TABLE—Foster Dee Snell, chairman of the 1952 short course, Foster D. Snell Inc., New York City, has as his companions *(left to right)*: E. M. James, president of the Society, Lever Brothers Company, New York City; P. E. Ronzone, C. F. Simonin's Sons, Philadelphia; and J. L. Hale, Swift and Company, Newark, N.J.



ALSO HEAD TABLE—In the usual order are M. A. Chaffee, director, Extension division, Rutgers University; J. W. Bodman, Lever Brothers Company, New York City; A. L. Fox, Colgate-Palmolive-Peet Company, Jersey City, N. J.; and Dean A. E. Meder Jr., Rutgers University.

THREESOME—E. Scott Pattison, Fatty Acid Division, Soap and Glycerine Producers Association, New York, is shown above with two men from Emery Industries, Cincinnati: V. J. Muckerheide and N. A. Ruston.

Byerly then presented a film entitled "Leave Less to Luck," which showed how research with new and improved laboratory equipment leads to better commercial laundering practices. That evening Roy Peet addressed the group on economics of the soap industry. He gave data from a recent survey which showed correlation between the standard of living in various countries and their per capita soap consumption.

R. C. Stillman opened the discussion on Friday morning with a paper on the analysis of soaps, in which he emphasized the importance of proper sampling procedures. The most generally useful methods for the chemical analysis of syndets were described by J. A. Nevison. Then detergency evaluation was discussed by J. C. Harris, who said that reproducible results can be obtained only if the analytical procedure is followed exactly and if a properly prepared standard soiled cloth is used. In the final lecture Edward Ritchie showed that proper control of inventory is particularly important in the soap industry due to the considerable variation in the price of raw materials.

Trips were made in the afternoons to the Jersey City plant of Colgate-Palmolive-Peet Company, the Edgewater plant of Lever Brother Company, the J. Howard Smith Company plant at Port Newark, and the Kearny plant of the Woburn Chemical Company. These trips were a source of much information, due largely to the fact that the various companies supplied well-informed guides who ably answered questions during the trip through their plants.

R. A. REINERS.

Announce Smalley Check Samples of the American Oil Chemists' Society

Announcement is hereby made of the check work of the American Oil Chemists' Society for the 1952-53 season. Any member of the Society can be enrolled in the work by sending a request for the samples desired, with remittance (see schedule of charges below) to:

MRS. LUCY R. HAWKINS
The American Oil Chemists' Society
35 East Wacker Drive
Chicago 1, Illinois

Mrs. Hawkins will in turn notify the sub-committee chairmen, who are as follows:

Sub-Committee on Crude Vegetable Oils:

J. P. Hewlett, chairman, The Hum-Ko Company, Memphis, Tenn.

Sub-Committee on Oil Seeds:

R. T. Doughtie, chairman, Box 187, Memphis, Tenn.

Sub-Committee on Oil Seed Meal:

R. W. Bates, chairman, Armour and Company, Research Division, Chicago 9, Ill.

Sub-Committee on Tallow and Grease:

W. C. Ault, chairman, Eastern Regional Research Laboratory, Philadelphia 18, Pa.

Those collaborators who have taken part in the past will again be individually notified. The charges for participation in this check work will be as follows:

Crude Vegetable Oil—6 samples	$14.00
Soybeans—10 samples	9.00
Peanuts—7 samples	10.00
Cottonseed—10 samples	12.00
Oilseed Meal—15 samples	14.00
Tallow and Grease—5 samples	6.00

This charge applies to all collaborators regardless of affiliation with industrial, state, or federal agencies.

Details relative to the mailing schedules of the samples and reporting of results will be mailed to the collaborators later by the various sub-committee chairmen. The Oil Seed Meal check work will begin about September 1, 1952, and the other work will also begin at about that time.

R. W. BATES, chairman

The AMERICAN INSTRUMENT COMPANY INC., Silver Spring, Md., has designed the Aminco-Furst Meltometer, an automatic instrument for melting-point and temperature phenomena studies.