F. E. Middleton, Texas Vegetable Oil Company, San Antonio, indicates interest in Globe Company's equipment as demonstrated by V. W. Hill.

The H. Reeve Angel booth serves as a conference corner for F. R. Barlow and R. Schnier on Penn-Top during the A. O. C. S. fall meeting in November.

R. F. Hainee and F. D. Berkley demonstrate Graham equipment to J. K. Gunther, Central Soya Company, Decatur, Ind. *(right)*.

Technical Papers Summarized for Convenient Reference

At the 22nd Fall Meeting of the American Oil Chemists' Society held in New York, November 15-17, 1948, a total of 59 scientific papers was presented. These will be, for the greater part, published in coming issues of the *Journal of the American Oil Chemists' Society*. By holding two sessions simultaneously, the papers were all presented within the usual three days.

In this brief review the papers are discussed in the following order:

a) Nutrition of Fats
b) Preservation of Fats
   1. Reversion
   2. Antioxidants
   3. Oxidation Phenomena
c) Detergents—Soap and Synthetics
d) Drying Oils
e) Industrial
f) Analytical

A. Nutrition of Fats

Swift and Black studied the efficiency of the utilization by rats of diets containing amounts of fat varying from 2 to 30% on an equicaloric diet with the same amounts of protein, vitamins, and minerals. It was found that the energy expense of utilization (heat increment) for the 2 to 30% fat diet varied from 36 to 16%, respectively, of the gross energy of the diet. The fat conferred economy of utilization of food energy. The fat content had little effect on nitrogen utilization. In experiments in which the nitrogen level was reduced from 22 to 7%, no change was observed from previous results and again better utilization of high fat diet was indicated. The lower energy expense of utilization varied reciprocally with the energy produced due to normal voluntary activity. Stare presented the challenging problem of the intravenous feeding of fat emulsions, particularly to sick infants and children and those emaciated due to carcinoma. Results of successful feeding of dogs and man to a limited extent were reported. Harris, Sherman, Campling, and Emery observed that the presence of vitamins reduced the symptoms observed in rats which are associated with pyridoxine deficiency and which shows up more rapidly on a fat-free diet—namely, scaly tails and paws and loss of weight. On feeding separately and together seven vitamins it was found that four of these—biotin, folic acid, inositol and ascorbic acid, either separately or together—decrease the arachidonic acid content of the carcass while the addition of methionine, aminobenzoic acid, and alpha tocopherol caused an increase in arachidonic acid. The net effect on suppression of symptoms when all seven were present was greater than when absent. Daubert reviewed the purported nutritional role of fatty acid structure, particularly linoleic, vaccenic, and hydroxy fatty acids, in microorganisms and animals. The evidence of their role in human nutrition is very meager.

Although it is obvious that carbohydrates are converted to fats in both plants and animals, any theory of mechanism is poorly substantiated by experiments. Stotz, in a review of the literature, stated that there is evidence that possibly acetyl-phosphate is the immediate condensing agent in building up the chain; that the new pantothenic acid containing coenzyme A is required for fat synthesis; and that the hormone, insulin, is concerned with carbohydrate to fat conversion. King, in his review, emphasized the great need of extensive research in man, in farm animals, and in standard laboratory animals on the nutritional properties of fatty acid glycerides. He said: "Experimental approaches should include the mechanisms and limitations of biological synthesis, the mechanisms by which they are utilized physiologically, and long-time appraisal of their relation to health and efficiency. Only within the last few years has significant progress been made toward solution of many of these elementary problems."

Gilbert critically reviewed food standardization as it has been in operation for 10 years under the new Food and Drug Law. He pointed out that the standardization of a food severely restricts the manufacturer's freedom of choice even for ingredients highly beneficial due to present practical difficulties of getting a standard amended. This has a detrimental effect upon improving standardized foods and even upon getting new foods in the same field as a standardized one. It is suggested "that rigidity of food standards be continued with respect to ingredients—standards which give the food its basic character. However, latitude should be given for optional ingredients—beneficial optional ingredients which will (apparently) be used in the near future should be permitted in a standard even though such ingredients may not be in current use."

B. Preservation of Fats

1. *Reversion.* There were a relatively large number of papers dealing directly or indirectly with problems of fat preservation. Taylor, in studying the heat-flavor reversion of hydrogenated soybean oil, found it to be associated with the fatty acid fraction and not with the unsaponifiable. Dutton, Schwab, Moser, and Cowan reported that on a commercial scale citric acid and sorbitol improved the oxidative and flavor stability of soybean oil during storage due to their role of metal scavengers. Phosphatides perform a similar function. The advantage of the second degumming step of the German process is considered dubious.

2. *Antioxidants.* Kraybill, Dugan, Vibrans, Schwartz, Rezabek, and Beadle reported results with butylated hydroxy anisole, the best of known antioxidants for carry-through in baked goods, such as crackers, pastry, and potato chips. It is most effectively used in combination with other phenolic antioxidants, such as hydroquinone and propyl gallate, along with the addition of a synergist such as citric acid. Morris and Riemenschneider studied antioxidant properties by the active oxygen method (AOM) and by baked cracker incubation of a number of polyhydroxy acids and their higher alkyl esters, also of acyl and alkyl substituted phenols. The alkyl catechol showed the highest activity of catechol derivatives by the AOM and the cracker test while gallic acid esters and esters of the isomer 2,3,4-trihydroxybenzoic acid showed a small amount of carry-over into crackers with the free phenol, acyl phenols, and dihydroxy benzoic acid esters showing little or no carry-over.

3. *Oxidation Phenomena.* Swain and Brice showed the formation of traces of conjugated tetraenoic (as much as 5%) and trienoic constituents in oxidized linolenic, linoleic acid, and vegetable oils during alkali isomerization. Moreover, an equal or slightly higher quantity could be produced by heating under similar conditions in ethyldene glycol, but without the alkali.

Tall oil exhibits form a large display at convention, which is being admired by H. D. Fincher *(right)*, Anderson, Clayton, Houston, as he chats with G. J. Thomas, representative for National Southern Products Corporation. The famous Penn-Top of the Hotel Pennsylvania served as exhibit hall for 40 firms.

In a mellow mood as the 22nd annual fall meeting climbs to a record attendance are the following members of the Governing Board: *(seated)* J. R. Mays, Jr., Barrow-Agee Laboratories, Memphis; V. C. Mehlenbacher, Swift and Company, Chicago; C. P. Long, Procter and Gamble, Cincinnati, president; L. B. Parsons, Lever Bros., Cambridge, Mass.; *(standing)* G. A. Crapple, Wilson and Company, Chicago; R. T. Milner, Northern Regional Research Laboratory, Peoria; S. O. Sorensen, Archer-Daniels-Midland Company, Minneapolis; and K. S. Markley, Southern Regional Research Laboratory, New Orleans. (Other members of the board, absent at the time, are R. R. King, H. L. Roschen, and J. J. Vollertsen.)

This was interpreted as meaning that in oxidizing the oil no additional ethylene bond is produced but an additional one is formed on heating. Nichols, Reimenschneider, and Herb presented a theory of alkali isomerization of polyunsaturates using linoleic, linolenic, and arachidonic acids as examples. Mathematical expressions for the amount of conjugated diene, triene, and tetraene, as a function of time and concentration, were given for these three acids. Correlation of the limited experimental data available was attempted. Dugan, Beadle, and Henick studied the infrared absorption spectra of autoxidized oleate in a series having a peroxide value of 1 to 940 me/kg. Principal changes occur in the frequency range of 3400-3550 cm.$^{-1}$ where bonded OH groups absorb, and at 1650-1775 cm.$^{-1}$ where the C = O group absorbs. Two maxima were obtained in the oxidized sample. One was sharp and distinct at 3467-70 cm.$^{-1}$ and increased with peroxide value until it resolved into a true maximum at 3430 cm.$^{-1}$. The latter was attributed to state of association due to hydrogen bridging between —OOH groups in hydroperoxides. Reduction of typical oxidized samples with KI reagent resulted in the disappearance of the 3430 cm.$^{-1}$ bond and appearance of a new bond about 3500 cm.$^{-1}$. Lundberg, Chipault, and Hendrickson have attempted to elucidate a number of apparently contradictory observations by various workers on the oxidation of esters of linolenic acid. A specific case is that the unexpectedly low spectral absorption of oxidized methyl oleate in the region of 2300 Å has never been reconciled with the data obtained by Bergstrom and others. Lundberg showed that methyl linoleate peroxides could be reduced by potassium iodide without change in spectral absorption in the region of 2300 Å. The chemical analysis of the reduced peroxide clarifies the autoxidation of methyl linoleate.

Knight and Swern described techniques for the accurate determination of conventional groups, such as those resulting from oxidation of fatty materials with oxygen, when peroxide and oxirane groups are present. Previous available methods do not permit this. Data by conventional analytical procedures for a series of pure compounds, synthetic mixtures, and methyl oleate hydroperoxides of 70% purity were presented. A modified procedure for determination of carbonyl oxide was reported. Swift, O'Connor, Brown, and Dollear submitted spectrophotometric evidence that delta 2:3 and delta 2:3;4:5 unsaturated aldehydes are produced during autoxidation of cottonseed oil. The semi-carbazones and the 2-4 dinitrophenylhydrazones which were prepared from the carbonyl products of oxidation indicate 2-octenal, hexenal, and probably 2,4-decadienal were produced. It is speculated these are formed by the decomposition of the isomeric hydroperoxide of linoleic acid.

C. Detergents—Soap and Synthetics

Snell reviewed the present situation and made predictions for the future. One pound of synthetics will be used for each five pounds of soap in 1948. The trend in synthetics has shown no signs of slackening. The synthetics of largest production

Merck and Company's J. T. Owen *(center)* cracks a joke with F. A. Collatz of General Mills, Minneapolis, and A. E. Bailey of Girdler Corporation, Louisville.

Open house at the Sharples Corporation booth shows J. F. Bourner of Capital City Products, Columbus, in the corner, flanked on the left by W. H. Craig, Cleveland, Leo D. Jones, Philadelphia, and on the right by H. H. LaMent, Philadelphia, and W. R. Prosch, Chicago.

are the alkyl aryl sulfonates. Alkyl sulfonates and sulfated monoglycerides of triglyceride sources are the second largest group of synthetic detergents. There is increased interest in non-ionic detergents such as produced by ethylene oxide condensation products. It was predicted that soaps will not decrease in production but that increased production of synthetics will take up increased demand. Borghetty critically analyzed the relative advantages and special uses of the various types of soaps and synthetic detergents in the textile industry. For many uses soap still remains the favorite although in certain uses it is not suitable as has been known for many years by the textile industry. Barker reported the effect of the addition of a polyoxyalkylene derivative of mixed fatty and resin acids to alkyl aryl sulfonates in the washing of cotton cloth using CMC, salts, and alkalies as builders. Griesinger, Nevison, and Gallagher described non-ionic detergents obtained from petroleum wax through oxidation followed by coupling with ethylene oxide. Detergency data were also shown. Schwartz gave a review article on the principles of detergency and their application to textile processing. Gruntfest gave a similar review on the more general subject of the chemistry of detergency. Lambert and Busse showed that solubilization of a dye can be used as a measure of surface-active agents. Although the test does not measure detergency property, it is of value at times in predicting the optimum conditions under which the material should be tested.

F. E. Lacey, Swift and Company representative, smiles at the comment of his visitor, A. E. Wells, S. F. Lawrason and Company, London, Ontario, as G. A. O'Hare, Congoleum Nairn, Kearny, N. J. *(left)* and H. B. Larner, M. W. Kellogg Company, New York City *(right)*, also listen.

A development of major interest was the description of the Sharples centrifugal soap process by Jones and Sender. The principles are similar to the full boiling kettle process except that centrifugal rather than gravitational force is used. As a result, the soap can be processed in a two-hour period with an economy of steam, improved color, high sweet water concentration (15 to 20%) plus decreased consumption of salt. The nigre could be taken off the fourth, or fitting stage, and may be cycled back into the process and good colors obtained on each soap without bleaching. Govan reported the glycerol distribution in a typical plant scale kettle boiling operation. Hoffman and McBain studied the effect of temperature upon the X-ray long spacing of the system of potassium laurate-water-n-heptane. A new experiment was reported using equipment developed at Stanford University with the view of clarifying the problem of the location of the oil in a soap-water-oil system. Gardiner and Smith showed that cotton absorbs up to .7% of its weight of acid sodium oleate from an aqueous solution of the neutral soap. The formula of the acid soap was: NaOl:1 HOl. The percentage of acid soap on the cloth reached a maximum at solution concentrations of about .15% and fell off at higher concentrations. Addition of sodium hydroxide replaced hydrolysis and reduced absorption of acid soap. The absorbed material could be removed by repeated rinses with boiling distilled water but, on rinsing with hard water, lime soap was formed and the absorptive capacity of the cotton was restored.

D. Drying Oils

Lewis, Cowan, and Schieltz described a method of improving paints having a 100% soybean oil vehicle by utilizing from 5 to 10% of calcium oxide as one of the pigment components. Numerous advantages were reported, particularly as related to those defects which make repainting difficult. O'Hare, Hess, and Kopecki described the use of molecular weight, dielectric constant, and power factor tests to study the oxidation and

New Orleans members from the Southern Regional Research Laboratory who attended the New York City meeting include *(seated)* K. S. Markley, H. L. Vix, and F. G. Dollear; *(standing)* P. B. V. Reddi, W. S. Singleton, and S. A. Hussain.

polymerization of linseed oil. The dielectric constant is mainly a function of the oxygenated structure of the oil and is independent of viscosity while the power factor is dependent on both.

Witteoff presented useful physical, chemical, and technological data on drying oils from linseed fatty acids and 2,2,6,6-tetramethylolcyclohexanol (TMC) which is a new polyhydroxy alcohol for the protective coating field.

Gloyer described a new commercial liquid-liquid fractionation process for degummed soybean oil using furfural. The essential features are the relatively low solvent ratios, 5:1, 4:1, 3:1, so as to reduce steam and water in solvent recovery even though the proportion of the food component was increased somewhat at the expense of the drying oil fraction. Both fractions were evaluated for their respective uses — both are commercially acceptable.

Kronstein presented a preliminary report of work at New York University for the United States Signal Corps Engineering Laboratory on paint research using X-rays to follow gelation in drying oils. Differences between partially gelled-oil and raw oil were in the 17-21° region. On further curing or baking, additional changes appeared in the 6-10° region. The work covered natural oils, synthetics, and alkyds.

A new class of coating materials has developed from copolymerizing styrene in emulsions, in solvents, and by mass methods with various unsaturated triglycerides.

Schroeder and Terrill presented data on a series of styrenated oils prepared from alpha methylstyrene in accordance with their previously published method. Three basic methods are involved, depending on whether the drying oil phase is conjugated, non-conjugated, or oxidized.

Paschke and Wheeler in their study of thermopolymerization of unsaturated fatty acids reported kinetic data on the polymerization at 290-300°C. for debrominated methyl linoleate. Analyses for dimer, trimer, cyclic, normal, and conjugated linoleate were given.

Holman and Potts presented evidence that an unsaturated ketonic acid, which was previously unreported, was present in stillingia oil. Nicholson and Formo described a laboratory procedure of the segregation of fatty acids by preferential neutralization. Through use of a mixture of 40% sodium hydroxide and 60% barium hydroxide on an equivalent basis they secured a 35% yield of fatty acids of 165 iodine number from soybean fatty acids of 139 iodine number. By reversing the ratio of these bases on fish fatty acids, they secured a 51% yield of the fatty acids having an iodine number of 283. Bolley, Houston, and Gallagher characterized and evaluated, for use in protective coating, 15 synthetic and modified oils. For comparison, dehydrated castor, linseed, and soybean oils were included. It was concluded that the standard drying test indicating the rate of drying and various physical tests determined the character of the dried films formed. In a second paper, a

Two Society members, Henry Odeen, Bennett-Clark Company, Nacogdoches, Tex., and H. J. Dutton, Northern Regional Research Laboratory, Peoria, hear what E. C. Bowen and E. D. Haller of National Technical Laboratories, Pasadena, Calif., have to say for one of their company's laboratory machines.

scheme was presented for scoring drying oils for protective coatings by assigning them to various groups and giving a number rating, weighing each factor as to importance within the group.

E. Industrial

A group of papers was presented on recent improvements in engineering technology. Barnebey described high temperature processing of fatty oils and acids, such as oil bodying, varnish manufacture, fat splitting, fatty acid distillation and esterification, as regards similarities and differences related to design, method of heating, material of construction and methods of control. Wingard and Shand described two laboratory methods in detail for securing the rate of extraction of various oil seeds. One was a percolation method; the second was a batch-cocurrent method. Data are given for several solvents and several types of seeds. Vix, Spadaro, Murphey, Persell, Pollard, and Gastrock presented engineering data showing that a disintegration, which reduced 70% cottonseed tissue to a size of 2-40 microns, is necessary to detach pigment glands from 92 to 95% of meal tissue using commercial hexane by differential settling.

King and Wharton described a commercial continuous vacuum bleaching process and gave data indicating its effectiveness as compared to batch atmospheric bleaching. In a separate paper laboratory data are presented relating to the fundamentals of the problem.

Bailey described a commercial semi-continuous deodorizer together with preliminary laboratory and pilot plant work carried out to test its novel features, particularly the novel system of splash baffling to procure more efficient stripping. Steam consumption of 4½ pounds per 100 pounds of oil is required as compared with 25 pounds using the conventional batch process. A temperature of 430-460°F. is used, depending upon the oil.

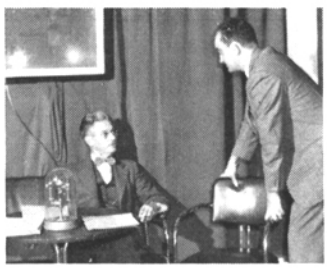
Markley reported on a survey made during the current year by the Food and Agriculture Organization of the United States Special Mission for Venezuela on oil palm resources.

During a lull in convention proceedings a conference takes place among *(seated)* M. L. Freed, Rufert Chemical Company, Seymour, Conn., R. W. Bates, Armour and Company, Chicago, T. C. Towler, Rufert Chemical Company, H. Salomon, L. A. Salomon and Bro.; and *(standing)* V. J. Van Reenen and A. A. Kramer, L. A. Salomon and Bro., New York City.

Seen at A.O.C.S. Meeting in New York

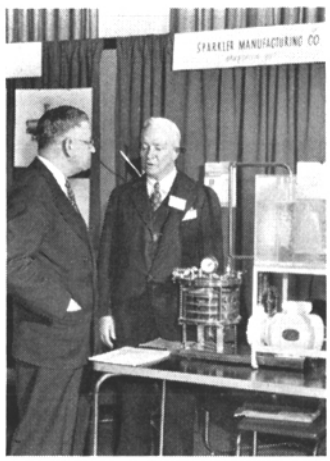
A Swift and Company table at the banquet on November 16 in the Hotel Pennsylvania shows the following already assembled: Mrs. H. L. Roschen, R. H. Rogers, Jr. and Mrs. Rogers, J. L. Hale and Mrs. Hale, and Mr. Roschen. All are from Chicago save the Hales, formerly of Omaha, now of Newark, N. J.

Brabender representative A. Hartkopf explains equipment to R. N. DuPuis, S. C. Johnson and Son, Racine, Wis.

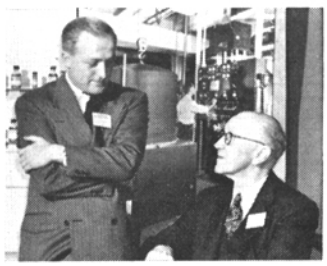


B. F. Daubert of the University of Pittsburgh drops in at the Croll-Reynolds booth for a chat with J. T. Reynolds, representative.

Chairmen of the highly successful New York fall meeting are Foster Dee Snell and his wife, Cornelia T. Snell, both of the Foster D. Snell Laboratories. Dr. Snell was general chairman, Mrs. Snell, ladies' chairman.

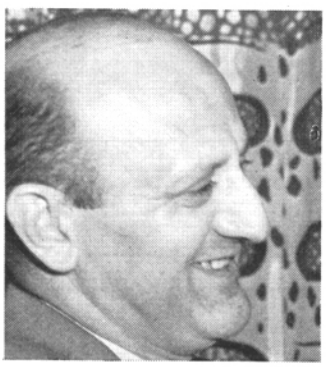


G. C. Garland of Sparkler has a serious chat with E. R. Barrow of Barrow-Agee Laboratories, Memphis, Tenn. Mr. Barrow is a charter member and former president of the A. O. C. S.



J. L. Jakobsen of General Mills, Minneapolis, visits with R. L. Edwards of Distillation Products, Rochester, N. Y., in the Distillation booth.

A. M. Gilbert of Davis and Gilbert, attorneys, New York, speaks on legal aspects of food standardization at the November 15 general session.



Atlas Powder Company men line up to receive their visitors, who are L. G. Jenness and J. H. Kirby of the Humko Company, Memphis, at the extreme left: *(left to right)* J. R. Frorer, E. W. Sann, Jr., W. C. Griffin, Franklin Pierce, G. J. King, and C. D. Pratt.

Visitors at the Central Scientific booth, with W. L. Long as host, are R. B. Muller, Glidden Company, Chicago, and E. M. James, Lever Bros., Cambridge, Mass.

A pretty girl, Miss Wilson, is an attendant for Vulcan when W. T. Coleman of Western Cottonoil Company, Abilene, Tex., stops by *(center)* for a chat with Frank Lerman.

Machlett's Mr. Schnier and A. H. Schnurr demonstrate for the edification of two Chicagoans, J. J. Vollertsen and C. E. Morris, both of Armour and Company.

The potential volume is enormous, but technico-economic problems render large-scale exploitation extremely difficult. The oil yield per acre can be 5 to 10 times more than that secured on most of the principal seed crops used in the United States.

Groggins gave a review of the importance of glyceride oil in our material economy. The dollar value of oils and fats generally represent about 10% of the total value of all our farm crops. The continued welfare of this segment of agriculture will be dependent upon a continued alert and technically progressive oil industry.

Newby and Gulino reported analyses of deodorizer catch basin sludges. Mineral soaps varied from 0.5 to 28% of the sludge oil. Calcium was found in several to be 90% of the metal while in one 27% iron was present.

Freyer reported on a method which he designated as a proportional foots method. In this procedure the depth of the foots stratum is determined, then a sample of the foots is obtained by a bomb and a separate oil sample from the rest of the car. These are combined proportionally to give the working sample.

F. Analytical

An outstanding contribution is that of Swain, Brice, Nichols, and Riemenschneider in which pure linoleic and linolenic acids secured by crystallization and adsorption were isomerized under various conditions. The constants secured differ from those secured using bromination and debromination standards and account for discrepancies previously encountered between spectrophotometric and iodometric results on oils of high linoleic and linolenic acid content. There is still some discrepancy observed on hydrogenated oils of high linoleic and/or linolenic acid content. Equations have been revised with the new constants with the view of simplifying the calculations for polyunsaturates from spectrophotometric data. Riemenschneider, Herb, and Nichols prepared methyl linoleate in 35% yield within 1% of the theoretical iodine number, from the methyl esters of linseed oil by chromatographic adsorption. Singleton made a valuable contribution to the scientific literature in presenting phase diagrams for oleic acid-palmitic acid-acetone and oleic acid-palmitic acid-commercial hexane at 0°C. to —40°C. Barnitz described a modified low-pressure still with several novel features which gave it improved efficiency and made it more flexible for multiple purposes. Some of the features are wide range of control of the vapor or gas (through variation of the wire size and length inserted in a capillary inlet), a minimum of liquid entrainment, a wide range of pressure, and latitude in the amount of the charge.

Marcel, Ciesielski, and Jackson reported the solubility of water in caprylic, capric, lauric, and myristic acids between 100 and 160°C. In addition, they reported the integral heat of solution of water at 50 to 80°C. for capric, lauric, myristic, palmitic, oleic, commercial tallow, and coconut oil acids. For water in lauric acid at 80°C. the integral heat of solution was a positive 146 calories per gram of water.

Miller and Andrews described a modified method of determining potassium as the periodate in soap and lye. Johnson and Bauer presented results of 150 refining tests using a 200-

George S. Jamieson of Washington, D. C., honorary member of the American Oil Chemists' Society, and H. A. Schuette of the University of Wisconsin relax in the A. H. Thomas booth with A. E. Allgrun, its representative.

Above in the American Lecithin booth are R. Bergland, its representative, and *(center)* Pao-Tung Huang, Brooklyn Polytechnic Institute, Brooklyn, and *(right)* W. L. Kubie, Armour Research Foundation, Chicago. Mr. Huang read a technical paper on the program.

DeLaval representatives, D. W. Dron and G. W. Wheelwright, Jr. of New York City, explain new soapstock separator to R. A. Marmor, Pillsbury Mills, Minneapolis.

Soap Chemists attending the 22nd annual fall meeting of the American Oil Chemists' Society at the Hotel Pennsylvania, New York City, are *(floor)* E. L. Boley, Armour and Company, Chicago; J. T. R. Andrews, R. J. Grabenstetter, F. L. Diehl, and R. C. Stillman, Procter and Gamble, Cincinnati; *(center)* L. K. Whyte, Colgate-Palmolive-Peet, Kansas City, Kan.; W. A. Peterson, Colgate, Jersey City; E. Handschumaker and E. M. James, Lever Brothers, Cambridge, Mass.; N. D. Fulton, Jr. and H. K. Hawley, Procter and Gamble, Cincinnati; *(standing)* H. C. Bennett, Los Angeles Soap Company; W. C. Wood, Par Soap Company, Oakland, Calif.; C. P. Long, P & G, Cincinnati; C. J. Lohman, Andrew Jergens Company, Cincinnati; L. B. Parsons, Lever Brothers, Cambridge; Procter Thomson, P & G, Cincinnati; C. P. Morrison, P & G, Staten Island, N. Y., and L. B. Smith, Lever Brothers, Cambridge.

New York convention personnel hold a short conference: *(seated)* E. A. Sigworth, Industrial Chemical Sales, and T. M. Rinehart, Darco Corporation; *(standing)* W. M. Sperry, New York State Psychiatric Institute; R. H. Rogers, Jr., Swift and Company, Chicago; M. H. Gwynn, consultant, Mountain Lakes, N. J.; A. L. Sawyer, Lever Brothers, Edgewater, N. J.; and A. A. Kramer, L. A. Salomon and Bro.

Gathered in the Alan Porter Lee booth are more of the New York committee:: J. B. Calkin, consultant; H. B. Larner, M. W. Kellogg Company; A. W. Thomas, Columbia University; H. W. Vahlteich, Best Foods, Bayonne, N. J.; M. L. Anson, Continental Foods, Hoboken, N. J.; and W. A. Peterson, Colgate-Palmolive-Peet, Jersey City.

J. Wallace of the Scientific Glass Apparatus Company inc., Bloomfield, N. J., chats with R. Jenkins of Precision Scientific Company at the Nov. 15-17, 1948 meeting.

Some of the Chicago contingent at the New York fall meeting are *(seated)* A. A. Kiess and A. D. Van de Erve, Armour and Company; Mrs. Lucy R. Hawkins, executive secretary; R. W Bates, Armour; S. B. Radlove, Glidden Company; *(standing)* H. C. Dormitzer, Wilson and Company; M. J. Sheely, Armour Soap Works, R. B. Muller and H. T. Iveson, Glidden Company.

E. J. Schweizer of Magnus, Mabee & Reynard, New York City, demonstrates a product to K. S. Markley, Southern Regional Research Laboratory, New Orleans.

gram sample by the modified Northern Regional Laboratory centrifugal method on degummed and undegummed soybean oils. Schuette and Del Nogare described a method for determining the saturated acids in methyl esters through permanganate oxidation followed by adsorption of the oxidation products on alumina. Recovery is practically quantitative provided acids lower than lauric are not present. Because only very small

M. R. Wingard, J. F. McAnulty, and H. B. Coats of the Blaw-Knox Company, Pittsburgh, act as hosts to Mrs. Foster Dee Snell, ladies' chairman.

samples are required, the method is applicable to analysis of distillation fractions. Miner and Weil described a spectrophotometric method of reading the color of glycerine at 440 and 520 millimicrons. Data were presented for 55 samples from which a linear relation was shown to exist for both Lovibond yellow and red.

MacGee compared a number of commercially available light extraction naphthas of the hexane type as to chemical composition, vapor pressure, distillation range, bromine absorption, and evaporation residues. Data were given to show that butanes and other very volatile compounds had been essentially removed.

H. T. SPANNUTH AND T. H. MCGUINE.

SHORT COURSE TRANSCRIPTS

ACKNOWLEDGMENT is hereby made of the large number of orders received at the Chicago office of the Society for the mimeographed copies of the lectures given at the short course on oil technology under the auspices of the American Oil Chemists' Society at the University of Illinois on August 16-21, 1948. The reason for the delay is that the university is still waiting for a few manuscripts to complete the transcripts. It is hoped that the transcripts will be available in the near future.

A paper on "Solubility of Dyes for the Paper Trade" by C. L. Zimmerman and H. R. McCleary has been reprinted by the AMERICAN CYANAMID COMPANY, Calco Chemical division, Bound Brook, N. J., as a technical bulletin. A copy of Calco Technical Bulletin No. 805 may be obtained by writing to the advertising manager.

Frank C. Haas and O. Graziani of the chemical products department of the WERNER G. SMITH COMPANY (Division of Archer-Daniels-Midland Company) flew, on August 1, 1948, to Frankfurt-on-Main, Germany. They will visit industrial plants in Germany, Holland, and France, and will be gone for a period of four to six weeks.

To Send Tallow Samples

THE Smalley Foundation Committee has found that there is considerable interest in a check sample program on inedible tallows and greases. The determinations to be made are Free Fatty Acid, Color (FAC), Titer, Moisture Insoluble Impurities, and Unsaponifiable Material. Collaborators will be identified by number.

The over-all plan is the distribution of six (6) samples per year (July to April); however, in order to synchronize this work with that of the other subcommittees only two samples will be distributed prior to the Spring Meeting. One sample will be mailed about February 1, and one on March 1. The charge for participation in this work (2 samples) will be $1.50.

W. C. Ault of the Eastern Regional Research Laboratory, Philadelphia 18, Pa., has consented to be chairman of the Sub-Committee on Tallow and Grease.

Please write

Mrs. Lucy Hawkins
American Oil Chemists' Society
35 East Wacker Drive
Chicago 1, Illinois

enclosing your remittance ($1.50) if you wish to participate. The requests should be mailed as soon as possible.

R. W. BATES, Chairman,
Smalley Foundation Commitee