PROGRAM OF THE TWENTY-NINTH ANNUAL MEETING OF THE AMERICAN OIL CHEMISTS' SOCIETY AT THE ROOSEVELT HOTEL, NEW ORLEANS MAY 12TH AND 13TH, 1938

ANNOUNCEMENTS

1. The twenty-ninth annual meeting of the American Oil Chemists' Society will be held in New Orleans May 12 and 13, 1938, at the Roosevelt Hotel.

2. Members and guests are cordially invited to attend.

3. The Roosevelt Hotel will be the headquarters and we urge all who will attend to make their reservations as early as possible.

4. The banquet will be held at the Southern Yacht Club on the evening of May 13, at 6:30 p. m.

The Ladies' Committee have planned some very delightful entertainment for the visiting ladies, including tours through the Vieux Carre, Fiesta tours through New Orleans' historic homes, boat trips on the Mississippi, luncheon, etc.

The golf tournament will be open to all as usual. There will be many prizes. Thursday, May 12, 1:30 p. m., at New Orleans Country Club. Transportation furnished.

Registration will take place between 9:00 and 9:30 o'clock, Thursday morning, May 12. Registration $3.00, including banquet. Extra tickets $2.00.

PROGRAM

Thursday, May 12, 1938

Meeting called to order 9:30 a. m. by J. J. Ganucheau, Chairman, Local Arrangements Committee.

Invocation.

Reading of the minutes of the Twenty-eighth Annual Meeting by J. C. P. Helm.

Address of President M. L. Sheely, Chicago, Ill.

Report of Secretary-Treasurer—Report of Governing Committee by J. C. P. Helm.

Appointment of special committees.

Report of Membership Committee—C. H. Cox, Chairman, Memphis, Tenn.

Report of Journal Committee—H. L. Roschen, Chairman, Chicago, Ill.

Report of Color Committee—W. D. Hutchins, Chairman, Savannah, Ga.

"The Oven Test as an Index of Keeping Quality," by J. E. McIntyre, Watertown, Mass.

Report of Color Glass Development Committee—L. M. Gill, Chairman, New York City.

"Some Observations on Laboratory Control of Crude Mill Operations," by A. G. Bedell, Pine Bluff, Ark.

Report of Crude Mill Operations—H. L. Thomas, Chairman, Forrest City, Ark.

"Optimum Percentages of Activated Carbon and Fuller's Earth for the Removal of Color in Vegetable Oils," by J. P. Harris, Chicago, Ill., and Ralph Hagberg, Tyrone, Pa.

Report of Fatty Acid in Soap Stock Committee—W. T. Watkins, Chairman, Chattanooga, Tenn.

"Some Recent Developments in the Manufacture of Margarine," by A. A. Robinson, Indianapolis, Ind.

Report of Indicator Committee—J. L. Mayfield, Chairman, Chickasha, Okla.

"Study of Kaufman Iodine Number Determination," by R. T. Milner, Urbana, Ill.

Report of Journal Advertising Committee—V. Conquest, Chairman, Chicago, Ill.

"Fatty Acid Development from Wood Products," by W. F. Gillespie, Bogalusa, La.

Report of Olive Oil Committee—M. F. Lauro, Chairman, New York City.

Friday, May 13, 1938

Meeting called to order 9:30 a. m.

Report of Refining Committee—H. S. Mitchell, Chairman, Chicago, Ill.

"Fatty Acid Crystallization—Some Practical Considerations in Preparation of Mixed Fatty Acids of Tallow for Pressing," by Howard M. Abbott and Alan Porter Lee, New York City.

Report of Sampling Committee—H. H. Mueller, Chairman, Boonton, N. J.

"Continuous deodorization of Vegetable Oils," by R. H. Potts and C. E. Morris, Chicago, Ill.

Report of Committee on Review of Scientific Literature on Fats and Oils, by M. M. Piskur, Chairman, Chicago, Ill.

"Invisible Losses in Milling Cottonseed in the Expeller," by R. H. Pickard, Cleveland, Ohio.

Report of Seed Analysis Committee—R. T. Doughtie, Jr., Chairman, Helena, Ark.

"Effect of Voltage and Type of Eye-Piece on Color Readings," by W. T. Watkins, Chattanooga, Tenn.

Report of Moisture Committee—H. L. Roschen, Chairman, Chicago, Ill.

"Photochemical Studies of Rancidity: The Mechanism of Rancidification," by Mayne R. Coe of Washington, D. C.

Report of the Smalley Foundation Committee—J. J. Vollertsen, Chairman, of Chicago, Ill.

Friday Afternoon, May 15th, 1938

Meeting called to order.

Report of Soya Bean Analysis Committee—R. T. Milner, Chairman, Urbana, Ill.

"The Rapid Determination of Moisture Content with Especial Reference to Oil Seeds and Their Products," by E. B. Freyer, Buffalo, N. Y.

Report of Standards Committee—M. F. Lauro, Chairman, New York City.

"Ouricury Palm Kernel Oil," by G. S. Jamieson, Washington, D. C., and R. S. McKinney, Washington, D. C.

Report of Stability Committee—L. B. Kilgore, Washington, D. C.

"Pressing Cottonseed Meats in the Expeller which have been cooked under Pressure," by R. H. Pickard, Cleveland, Ohio.

Report of Fat Analysis Committee—R. C. Newton, Chairman, Chicago, Ill.

"Absorption Spectra of the FAC Color Standards," by W. M. Urbain and H. L. Roschen, Chicago, Ill.

Report of Referee Board—A. S. Richardson, Chairman, Ivorydale, Ohio.

"Composition of a Soybean Oil of Abnormally Low Iodine Value," by F. G. Dollear, P. Krauczunas and K. S. Markley, Urbana, Ill.

Report of Sulphonated Oil Committee—R. Hart, Chairman, New York City, N. Y.

Report of Soap in Oil Committee—E. H. Harvey, Chicago, Ill.

Report of and Joint Meeting with Chemists' Committee of the National Cottonseed Products Association, by T. C. Law, Atlanta, Ga.

Report of Uniform Methods and Planning Committee—J. J. Vollertsen, Chairman, Chicago, Ill.

Special Committee Reports.

Miscellaneous Business.

Report of Nominating Committee—E. C. Ainslie, Atlanta, Ga.

Election of Officers.

Announcements.

Adjournment of Technical Meeting.

Banquet and Dance—Southern Yacht Club.

Saturday, May 14th, 1938

Trip. Port Sulphur Mines, fee $1.00.

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NOTES

President Sheely has named Messrs. E. C. Ainslie, W. D. Hutchins, and A. A. Robinson as members of the Nominating Committee. Mr. Ainslie will act as Chairman.

The banquet and dance at the Southern Yacht Club on Friday evening promises to be more delightful than ever. Music will be supplied by Leslie George's Orchestra, well-known New Orleans musicians.

THE INFLUENCE OF BLEACHING ADSORBENTS ON THE STABILITY OF EDIBLE OILS

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(This paper was presented at the Symposium on the Chemistry & Metabolism of Fats, held at the Rochester meeting of the American Chemical Society. It is published here by special arrangement with the Division of Agricultural & Food Chemistry.)

Abstract

In order to provide oils light in color and free of objectionable odor, it is generally necessary to process them with various adsorbents such as fuller's earth, activated clay, and activated carbon. While this treatment furnishes a more desirable product in keeping with the taste of the American public, unfortunately, it sometimes results in leaving the oil more susceptible to the development of rancidity later on. This work is a study of the effect of various adsorbents, and while it does not provide any final conclusions, it does indicate that the resulting rancidity can be controlled to a large extent by the selection of the proper adsorbent.

Edible oils to be palatable and salable must be light in color and of good flavor and odor. Three processes, refining, bleaching, and deodorization are employed to meet these requirements. These processes are frequently believed to lower the resistance of the oil to deteriorative oxidation and subsequent rancidity. It is generally accepted that a crude vegetable oil is more stable than the corresponding refined oil.[1] During caustic refining, natural anti-oxidants existing in the crude oil (such as phosphatides) are removed, thus lowering the resistance of the oil to oxidation. During the bleaching operation, the pigments, e.g., carotene, chlorphyll, xanthophyll, are removed; it is generally believed that these too have definite anti-oxidant properties,[2] although conflicting data has been found on this.[3]

There are essentially three classes of adsorbents used in bleaching vegetable oils; namely, natural earths, activated earths, and activated carbons. For economic maximum bleach a carbon-earth mixture is generally employed, the ratio of carbon to earth depending on the type of oil. The chief factors influencing the oil refiner in choosing the type of adsorbent have been a maximum bleach and a minimum oil retention. It is only in recent years that attention has been given to stabilizing vegetable and especially animal oils. Although refined bleached vegetable oils do not oxidize readily to the rancid point, they do oxidize quite readily to a point of color reversion. The oil refiner must be careful that his choice of adsorbent does not accelerate this, for an oil loses its salability when it darkens.

The scope of our work was to bleach cottonseed oil with various concentrations of different adsorbents and then chart the quality of the oil by chemical and physical tests through an induction period. We have not been able to find a limiting definition of induction period, but we understand it to be the period of time under which an oil is maintained under controlled conditions up through the point of definite rancidity. The first step was the selection of one of the methods that have been devised for accelerated oxidation of edible oils. For our purposes the incubation oven method similar to that of