

# Analytical Methods in Summary

## Report of Uniform Methods Committee American Oil Chemists' Society, 1929-1930

By J. J. VOLLERTSEN, *Chairman*

### *Sampling Committee*

**W**E APPROVE the report of the Sampling Committee and recommend that the proposed official sampler be adopted as a tentative alternative sampler for the present official sampling device for a period of one year, with the understanding that the matter will be brought up for definite adoption next year.

We would also urge that as many companies as possible purchase one each of these samplers and advise the Sampling Committee to that effect so that the committee can keep in touch with those using the sampler and thus prepare its recommendations for next year.

### *Lint on Seed Committee*

**N**O REPORT from the Lint on Seed Committee was submitted to the Uniform Methods Committee.

### *Detergent Committee*

**T**HERE were no recommendations to make with reference to the work of the Detergent Committee inasmuch as they had a change of chairman during the year, which interfered with proper functioning. Their work indicates, however, that they are making progress.

### *Soap Committee*

**T**HE Soap Committee did some very interesting work on the standardizing of normal sulphuric and hydrochloric acid for use in glycerine analysis. Inasmuch as the methods for the determination of glycerine, except in soaps, have not been adopted by the Society the Uniform Methods Committee concurs in the recommendation of the Soap Committee that the international acetin method be adopted for the analysis of glycerine.

### *Kreis Test Committee*

**T**HE Uniform Methods Committee is of the opinion that the comparative analytical work of the Kreis Test Committee was in fair agreement considering the fact that no definite color is specified as the limit between a positive and negative reaction. We would recommend that this Committee be continued and

that they attempt to decide upon a limit as determined by color reading, dilution, or some other method, which will indicate definitely when the reaction is positive or negative.

### *Olive Oil Committee*

**W**E recommend that the report be accepted. Some question has arisen as to the high cost of the necessary instrument for making this test and we recommend that this matter be investigated by the new Committee. We do not recommend the adoption of this method at this time.

### *Refining Committee*

**W**E recommend the following:

(a) Adoption of tentative refining method for peanut oil, further work to be done by new Committee.

(b) Adoption of tentative refining method for coconut oil, further work to be done by new Committee.

(c) No change in the present F. F. A. test for crude oil.

(d) That further work be done on the color of refined oil as affected by filtering conditions, and in the meantime that changes be made in the refining method, specifying first, that the filter paper used for filtering refined oil must be a high grade white paper; second, that the first 50 cc. of oil through the filter paper must be returned to the filter before collecting the sample for color reading.

(e) Period of agitation in hot bath on oils designated as "slow breaking" oils to be extended to 20 minutes in all cases, with suitable changes in the National Cottonseed Products Association rules to cover this.

### *Color Committee*

**T**HE Color Committee failed to agree on a standard type tintometer, as requested last year, but submitted a report with general

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### Oil Chemists' Golf Tournament

THE Annual Golf Tournament of the American Oil Chemists' Society, which has become a permanent feature of the Society's Annual Meeting, was held on the course of the Metairie Country Club at New Orleans, Louisiana, on Friday, May 9th. The tournament brought out the best efforts of the golfing chemists in competition for the Nuchar Challenge Cup and for the several other useful prizes which were donated by friends of the Society. The Challenge Cup, which has been donated by the Industrial Chemical Sales Company, is put into competition annually, and is to become the permanent property of any member who succeeds in winning it three times, but not necessarily in successive years. In 1929, the first year it was offered, the cup was won by E. R. Barrow, of Barrow-Agee Laboratories, Memphis, Tennessee. In this year's tournament Mr. Barrow was forced to yield the palm only to his partner, G. Worthen Agee, of the same laboratory. Some of the other members would better polish up their games and break up *that* combination. In addition to the Challenge Cup, the winner of low gross was awarded the Tournament Gold Medal for the year. The medal was donated also by Industrial Chemical Sales Company. The several winners of prizes and their scores were as follows:

**LOW GROSS**

- 1st—G. Worthen Agee, Memphis, Tenn.  
Cup and Medal
- 2nd—J. Wrench, New York  
Driver and Brassie

**LOW NET**

- 1st—C. B. Cluff, Cincinnati, Ohio  
Zipper Sports Bag
- 2nd—W. H. Irwin, Chicago, Illinois  
1 doz. Golf Balls

**BLIND BOGIE—74**

- 1st—L. B. Forbes, Little Rock, Arkansas..... 73
- 2nd—E. R. Barrow, Memphis, Tennessee..... 77

The blind bogie was determined by drawing a number between 70 and 79 and the prizes awarded to those contestants with the nearest net scores, employing their handicaps as submitted before the play.

The prizes, other than the Challenge Cup and Medal, were donated by the following:

- Driver Darco Sales Corporation
- Brassie Filtrol Company
- Golf Bag Peerless Clay Products Co.
- Zipper Bag Standard Fullers' Earth Co.
- 2 doz. Golf Balls Laboratory Construction Co.

### Shortening and Oil Prices

Prices of shortening and salad and cooking oils on Thursday, May 29, 1930, based on sales made by member companies of the Shortening and Oil Division of the National Cottonseed Products Association, were as follows:

Shortening		Per lb.
North and Northeast:		
Carlots, 26,000 lbs. ....		@ 11
3,500 lbs. and up .....		@ 11¼
Less than 3,500 lbs. ....		@ 11¾
Southeast:		
3,500 lbs. ....		@ 10¾
Less than 3,500 lbs. ....		@ 11¼
Southwest:		
Carlots, 26,000 lbs. ....		@ 10¾
10,000 lbs. and up .....		@ 10¾
Less than 10,000 lbs. ....		@ 11¼
Pacific Coast: .....		@ 11¼
Salad Oil		
North and Northeast:		
Carlots, 26,000 lbs. ....		@ 10¾
5 bbls. and up .....		@ 11¼
1 to 4 bbls. ....		@ 11¾
South:		
Carlots, 26,000 lbs. ....		@ 10½
Less than carlots .....		@ 11¼
Pacific Coast: .....		@ 10¾
Cooking Oil—White		
½c per lb. less than saald oil.		
Cooking Oil—Yellow		
¼c per lb. less than salad oil.		

A report that Unilever, Ltd., was to purchase a controlling interest in the food products division of the Glidden Co. has not been affirmed or denied by Adrian D. Joyce, head of the Glidden Co. A group of Unilever officials have recently completed a survey of all the food and vegetable oil plants of Durkee-Famous Foods, Inc., a subsidiary of Glidden Co. The margarin business of E. F. Drew & Co., New York, was recently absorbed by the Glidden subsidiary.

National Oil Products Co., Harrison, N. J., reported for 1929 a net income of \$134,748, or \$3.32 a common share after preferred dividends. Comparison with 1928 is not available, but \$124,495 was earned in 1927 and \$79,747 in 1926.

A. E. Starkie was elected president of Acme Oil Corp., Chicago, at a meeting of the stockholders held April 30. H. Schlosstein was elected vice-president in charge of production.

The whaler, *C. A. Larsen*, which brought back several members of the Byrd Antarctic Expedition to New York, last month, also carried a full cargo of whale oil which it landed at Pier 11, Staten Island. The oil will be delivered to Procter & Gamble Co.

### Kreis Test Committee

SIX cooperative samples of corn oil have been distributed and subjected to Kreis Test with results as follows:

Sample No.	3	4	1	5	2
A	Pos.	Pos.	Pos.	Pos.	Pos.
F	*	Pos.	Pos.	Pos.	Neg.(?)
E	Pos.	Pos.	Pos.	Pos.	Neg.
D	Pos.	Pos.	Pos.	Neg.	Neg.
B	Pos.	Pos.(?)	Neg.	Neg.	Neg.
C	Neg.	*	Neg.	Neg.	Neg.

\*Not tested—container broken.

The disagreement is marked, although not quite as extreme as the disagreement on the samples of cottonseed oil described in the previous report (*Oil & Fat Industries*, July 1929, pp. 28-9). It seems probable that the principal difficulty is a difference of opinion as to what constitutes a negative or a positive Kreis Test.

Kerr (*Ind. Eng. Chem.* 10, 471-5, [1918]) has already standardized the Kreis Test to the point that reproducible results can be obtained at the same time in any one laboratory but different laboratories do not obtain consistent results.

The above conclusion is reported without recommendation. The committee was appointed to investigate the value of the Kreis Test as an index of rancidity; to accomplish this task by cooperative effort, it would first be necessary to standardize the Kreis Test in such a manner that scattered observers would report consistent results on the same oil sample. It is left for the Society to determine whether it wishes to undertake such standardization of the Kreis Test and, if so, whether a special committee or one of the standing committees should assume responsibility for carrying on the work. Without such standardization, the positive or negative character of a Kreis Test will depend to a considerable extent upon the laboratory in which the test is made.

A. S. RICHARDSON, *Chairman*

Liverpool. The book is characterized by its use of actual examples from modern industry to illustrate the practical use of catalysts. A clear account of each chemical process involving catalysis accompanies the study of the catalyst and of the reaction itself.

A great number of organic reactions which involve the addition of soluble catalysts to form homogeneous phases with the reaction mixture are described. In this class are included organic oxidations, reductions, polymerizations, hydrations, hydrolyses and condensations. Catalysis at the surfaces of colloidal organic compounds (fermentation processes) is also fully discussed. The theoretical aspects of the various kinds of catalysis are examined judiciously.

In summary, we recommend this work without hesitation to all those among our readers who are directly interested in any production operation involving catalysis and to all chemical libraries.

A. P. L.

In separating fats from materials such as whale blubber, fish liver or tallow, the materials are intimately mixed with water-absorbing substances such as burnt gypsum or desiccated alum and the oil extracted from the mixture by solvents or by pressure or centrifugal treatment. The residue may be further extracted with steam. Brit. Pat. No. 314,586.

### Methods Committee

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recommendations for guidance of the new committee to be appointed. The Uniform Methods Committee think that all of the suggestions should be given careful consideration by the new committee.

### Moisture Committee

WE recommend that the Moisture Committee be instructed for the season 1930-31 to collect further data covering moisture determinations on the Smalley Foundation Check Meal samples. We urge the Referee Board require all referee chemists to equip themselves with the official moisture oven.

### Fat Analysis Committee

NO report was received from this Committee up to the time of the Annual Meeting.

### Cottonseed Analysis Committee

WE approve the report of this committee and recommend that it be adopted as a tentative method for the coming year.

## New Books

### CATALYTIC PROCESSES IN APPLIED CHEMISTRY

by T. P. HILDITCH

D. Van Nostrand Company, New York, 1929.

A comprehensive survey of the most recent work on catalysis, which describes clearly the processes involving catalytic activity, is this latest work from the prolific pen of Dr. Hilditch, who is Campbell Brown, Professor of Industrial Chemistry in the University of