be taken from the main pump line or lines. The pump line or lines shall be maintained in a vertical position at the point tapped, and the bleeder line or lines shall not be less than ⅜ inch diameter inside measurement at any point. The bleeder line or lines shall be kept continuously clear, and any visible change in color or quality of the oil during the course of pumping shall be duly noted. If more than one pump line is used to discharge the oil, the respective bleeder samples shall be thoroughly agitated and composited in the proportion each represents to the total quantity discharged.

F. Description of apparatus to be used in sampling oils or fats in ships' tanks or shore tanks.

a. Bomb-type sampler — A tightly closed cylindrical compartment fitted with a valve automatically opening on striking the bottom of the tank and capable of taking a sample within 0.5″ of the bottom of the tank. In addition, the sampler shall be so constructed that the valve can be opened by hand, by means of a loaded line or cord, and the cylinder completely filled at any specified level in the tank or compartment, after which the valve can be closed and the sampler withdrawn without loss of any part of its contents. The device is to be readily cleanable and shall be kept clean and maintained in good working order during the use thereof.

b. Core type sampler — A hollow tube, sectional or otherwise, open at the end and capable of being lowered through the oil to the bottom of the tank, then closed tightly at the lower end and withdrawn without the loss of any part of its contents, or so fitted as to allow of being lowered through the oil to the bottom of the tank or compartment while tightly closed whereupon it can be opened along its entire length, allowed to completely fill, thereafter being tightly closed and withdrawn without loss of any part of its contents. The design shall be such that a sample can be taken within 0.5″ of the bottom of the tank. The device shall be kept clean and maintained in good working order while in use. Sampling by means of such shall be through the oil to the lowest possible point in the tank or compartment in such manner to allow of procuring a fair representative longitudinal section of the oil.

Respectfully submitted,
SAMPLING COMMITTEE,
R. A. Duncan, Chairman.

Report of the Committee on The Determination of Stability of Edible Fats and Oils

IN THE first report of this committee after it was organized two years ago we stated that a thorough search through the literature was made for all methods that have been used or even suggested as a possible procedure to follow in estimating the stability of edible fats and oils. Our literature findings were supplemented by methods that have been tried in laboratories interested in testing the stability of fats and oils.

From this study the majority of the committee believed then and believes now that the two most useful accelerated tests for judging the relative keeping quality of edible fats and oils are the oxygen absorption test in its various forms and the active oxygen or peroxide test as developed by Lea; Taffel and Revis; Kilgore and Wheeler; and King, Roschen and Irwin.

A consideration of these two methods indicated that the active oxygen test could be adapted to routine laboratory operation more easily than an oxygen absorption method so all the work this committee has done has had to do with the active oxygen or peroxide method.

Since the committee reported a year ago the only new development that has come to our attention which improves the test is the use of dichromate in the place of permanganate in the air washing bottle. Other than this the test is used as described in our Journal.

As far as this committee is aware the active oxygen method for judging the stability of edible fats and oils is being used more and more all the time. Companies which have branch laboratories have equipped them with stability equipment and data on samples sent out by the parent laboratory to the branches furnish results that are in very close agreement and demonstrate that the active oxygen test for judging the relative keeping quality of fats and oils is dependable if the laboratories using it are properly supervised.

Results on co-operative samples submitted in our last year's report indicated very good agreement between 4 laboratories which regularly used the peroxide method for testing stability and not such good agreement between 2 other laboratories which had only recently installed the apparatus for making the test. Data on co-operative samples sent to 9 laboratories since our last report agree in about the way as did the results reported last year. The laboratories which were in agreement last year are, with the exception of a test on one sample, in agreement on these samples. The 2

*Presented at 26th Annual Meeting American Oil Chemists' Society, Memphis, May 23-24, 1935.

CO-OPERATING LABORATORIES

Sample No.	Kind of fat.	Armour & Co. (Mr. Vollertsen).	Canada Packers, Ltd. (Mr. McLeod).	Inst. of Am. Meat Packers. (Mr. Vibrans).	Lever Bros. Co. (Mr. Flynn).	Procter & Gamble Co. (Mr. Eckey).	Purdue University (Mr. Shrewsbury).	The Wm. Schluderberg-T. J. Kurdle Co. (Mr. Seidel).	Swift & Co. (Mr. Irwin).	Wilson & Co. (Mr. Robinson).
		Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.
1....	Lard	16	15	19	16	18	15	12	18	18
2....	Comp.	9	9	9	9	9	8	11	11	10
3....	Hyd. CSO	33	30**	57	31	49	*	36	58	44**
4....	CSO	12	11	10	9	10	*	12	10	11

*Couldn't get consistent results.
**Test was discontinued and never repeated.

laboratories whose data were out of line last year agree much more satisfactorily on the co-operative samples sent out this year. Of the three additional laboratories to which samples were sent, one of them submitted data which are in agreement with the data from the other co-operating laboratories. The other two laboratories reported that they were unable to get good checks on duplicate tests and the data they submitted to the committee and which are attached to this report clearly indicate this.

Again the explanation for the lack of agreement of the data furnished by these two laboratories appears to lie in the fact that in both instances the laboratories had not had the apparatus very long and the kinks were not all ironed out of them, or in other words some undiscovered factor was responsible for the low results reported.

In conclusion, the majority of this committee are of the opinion that there are sufficient data available in the literature, on co-operative samples sent out by this committee and in the hands of our members to demonstrate successfully that in the hands of an experienced operator the active oxygen or peroxide method for judging the relative stabiliity of fats and oils, which do not contain volatile antioxidants, is not only the best routine accelerated test available but it is also reliable and worthy of the support of this society and the edible fat and oil industry. The majority of this committee further agree that, although this test is not perfect, the fat and oil industry will be helped more than hindered if the terminology dealing with keeping quality can be clarified and made more consistent.

We, therefore, recommend that the active oxygen or peroxide test for judging the relative stability of edible fats and oils be made a tentative method of the society and that the committee be continued to work on the test.

A summary of the data on the co-operative samples is attached.

Respectfully submitted,

E. W. Eckey
J. W. Flynn
J. B. Geiger
A. H. Gill
W. H. Irwin
W. G. McLeod
A. A. Robinson
J. J. Vollertsen
T. L. Wheeler
F. C. Vibrans
(Chairman)

APPLICATION

Application for Referee Certificate (First Notice). Mr. G. H. Kyser, director of the Barrow-Agee Laboratory at Cairo, Ill., has applied for an A.O.C.S. referee certificate reading on cottonseed, cake and meal.

AMERICAN CHEMICAL SOCIETY

San Francisco, Calif., Meeting Program—August 19 to 23, 1935

DIVISION OF AGRICULTURAL AND FOOD CHEMISTRY

D. K. Tressler, Chairman; H. R. Kraybill, Secretary; W. V. Cruess, Local Assistant
Italian Room, St. Francis

Tuesday Morning and Afternoon

9:00—Joint Symposium on Elements Required in Small Amounts in Animal Nutrition with Divisions of Biological Chemistry and Medicinal Chemistry (see next column).

2:00—Joint Symposium on Vitamins with the Divisions of Biological Chemistry and Medicinal Chemistry (see next column).

Wednesday Morning

Symposium on the Chemistry and Technology of Wine.

Joint Symposium with the Division of Industrial and Engineering Chemistry.

9:00—1. E. M. Brown and V. deF. Henriques. Vinification as Practiced in California Wineries.

9:25—2. F. M. Champlin, H. E. Goresline, and D. K. Tressler. The Manufacture of Champagne and Sparkling Burgundy.

9:50—3. Charles S. Ash. Metals in Wineries.

10:15—Discussion.

10:25—4. C. H. McCharles and G. A. Pitman. Recent Observations on Methods of Wine Analysis.

10:40—5. L. G. Saywell. Effect of Flter Aids and Filter Material on Wine Composition.

10:55—6. G. L. Marsh and M. A. Joslyn. Effect of Temperature on Rate of Precipitation of Cream of Tartar from Wine.

11:10—7. Harry E. Goresline, Carl S. Pederson, and E. A. Beavens. Studies on the Pasteurization of New York State Wines.

11:25—8. Mark M. Morris. The Nature of the Volatile Acids of Wine.

11:40—Discussion.

12:15—Divisional Luncheon.

Wednesday Afternoon

General Papers

2:00—9. S. Palkin. Some Improvements in Frac-