T = Titration of fatty acids with N/1 NaOH
S = Weight of sample used

RECOMMENDATIONS

The Committee recommends (1) that the tentative dry extraction and wet extraction methods for total fatty acids of all soap stock and acidulated soap stock, except from copra and palm kernel oils be adopted as official; (2) that the revised method for total fatty acids of soap stock or acidulated soap stock from copra and palm kernel oil be adopted as tentative; (3) that during the following year a survey be made of the various methods for determining neutral oil in soap stock with a view to working out a method suitable for adoption by the Society.

Table II. Results Using Proposed Method for Total Fatty Acids of Soap Stock or Acidulated Soap Stock from Copra and Palm Kernel Oil.

	Barrow	Lappen	Long	Reese	Rich	Watkins
Sample 6. Cocoanut S.S.			44.80		46.27	45.49
Sample 7. Cocoanut S.S.	58.77	58.61		58.97		58.48
Sample 8. Acid. Cocoanut S.S.	95.68	96.74	96.05	96.34	96.68	96.95
Sample 9. Palm Kernel S.S.						38.32

The Committee wishes to thank the following for sample material:
Corn Products Refining Co., Argo, Illinois.
Durkee Famous Foods, Chicago,
Lookout Oil and Refining Co., Chattanooga, Tenn.
The Southern Cotton Oil Co., Ill.
Savannah, Ga.

Respectfully sumbitted,
E. R. Barrow
J. J. Lappen
C. P. Long
W. J. Reese
A. D. Rich
W. T. Watkins, Chairman

Report of the Uniform Methods and Planning Committee May 6, 1939

DURING the past year Mr. T. C. Law, who is Chairman of the Chemists' Committee of the National Cotton Products Association, was made a member of the Uniform Methods and Planning Committee. This has been very helpful, inasmuch as now the two committees can work much more closely together and we feel that in time it will eliminate any discrepancies between the methods of the American Oil Chemists' Society and those published in the Rules of the National Cotton Products Association.

We shall discuss the reports received from the various committees, particularly those which carried any recommendations and shall present the views and recommendations of the Uniform Methods and Planning Committee. We hope that members of the Society will feel perfectly free to discuss these recommendations, in order that we may all be in agreement on the final action taken by the Society.

Color Committee:

This committee has rewritten the method for determining the colors of oils and fats. You have all heard the report presented and have received copies of it. With certain changes the Uniform Methods and Planning Committee approve this report. In describing the booth or cabinet which should contain the colorimeter, we suggest the following wording in place of that suggested:

"The colorimeter should be placed in a booth or cabinet not less than 40 inches wide and 30 inches deep, and closed so that no external light can enter."

In describing the type of light to be used the committee has likewise suggested a change, the paragraph on this subject to be changed as follows:

"The booth should be illuminated by a 15 watt daylight bulb mounted 48 inches above the tintometer box in an indirect fixture so that no direct rays strike the colorimeter or the eye of the reader. The level of illumination in the booth, at the colorimeter, should not be less than 1 or more than 5 foot candles."

There are also some slight changes in the paragraph headed "(b) Determination." This should read, when corrected, as shown below:

"(b) Determination. — Fill a tube (see paragraph above) with the oil to be examined to a depth of 133 mm. Oil must be at a temperature of 20° to 24°C. and must be absolutely clear and transparent. Filter through approved filter paper, such as Eaton & Dikeman or Reeve Angel No. 230, at 20° to 24° C. if necessary to remove turbidity to permit matching the color, and in such cases note on your report that filtering was necessary. If, however, the oil or fat under examination is not completely liquid at 20° C., heat until completely liquefied, and read the color at a temperature not more than 10°C. above that at which it becomes completely liquefied. Place the tube containing the oil in the tintometer and place alongside of it such yellow and red glasses (see paragraph (a)) as are necessary for making comparison desired, observing the colors of the oil and the glasses through the eyepiece.

"Crude Oils of the Coconut Type. — Melt the oil in water at a temperature not exceeding 50°C. and filter through approved filter paper at a temperature not above 35°C. If not clear refilter once. Read the color using proper ratio of yellow to red listed below:"

With these changes the Uniform Methods and Planning Committee approve the report and move its adoption as a tentative method for the coming year. The motion was seconded and passed by the Society.

Committee on Indicators:

The recommendations of this committee are as follows:

"That thirty-five thousandths per cent alcohol soluble aniline blue in isopropol alcohol shall be designated as an alternate indicator.

"Second, that the Secretary of the Society shall be instructed to purchase a supply for sale to the membership.

"Third, that isopropol alcohol shall be a permissible substitute for formula thirty alcohol in the present test."

The Uniform Methods and Planning Committee concurs in these recommendations and suggests that they be adopted as tentative for the coming year. The motion was duly seconded and passed by the Society. A subsequent motion which was carried by the Society made this method apply only to crude cottonseed oils.

Moisture Committee:

This committee made a recommendation that the three hour drying interval, recommended for cottonseed meal in 1938, be retained. The Uniform Methods and Planning Committee approve this recommendation and move that it be adopted as official. The motion was seconded and carried by the Society.

Oil Characteristics Committee:

This committee has brought in constants for cottonseed oils, rice bran oil, kapok, acorn and stillingia oils. These have all been studied by the Uniform Methods and Planning Committee, are approved and we move that they be adopted. The motion was seconded and passed by the Society.

It was suggested that after these are published the various members keep them in mind and see if they obtain constants on any of these oils which do not fall within the range given. If such is the case, the exception should be brought to the attention of the Oil Characteristics Committee.

Olive Oil Committee:

This Committee recommended the adoption of the Fitelson Test for the detection of teaseed oil in olive oil. The Uniform Methods and Planning Committee approve this recommendation and move its adoption as a tentative method. The motion was seconded and passed by the Society.

Refining Committee:

The Refining Committee recommends that the tentative refining methods for expeller and hydraulic soybean oils, as changed and augmented last year, and followed in this year's cooperative program, be adopted as official methods of the American Oil Chemists' Society.

The Committee recommends that the tentative method for extracted oil, as adopted last year, be studied further next year.

The Uniform Methods and Planning Committee approve these recommendations and move their adoption. The motion was seconded and passed by the Society.

Committee on Soap in Refined Oil:

The committee recommends that they be authorized to continue their work for another year. This does not require any action by the Society. We are sure that we are all interested in this particular question and that the incoming President will re-appoint the committee for another year. They have asked for suggestions and we hope that members of the Society will bear this in mind and notify the chairman of any ideas they have with reference to this work.

Soap Stock Committee:

This committee made the following recommendations:

"The Committee recommends (1) that the tentative dry and wet extraction methods for total fatty acids and all soap stock and acidulated soap stock, except from copra and palm kernel oils be adopted as official; (2) that the revised method for total fatty acids of soap stock or acidulated soap stock from copra and palm kernel oil be adopted as tentative; (3) that during the following year a survey be made of the various methods for determining neutral oil in soap stock with a view to working out a method suitable for adoption by the Society."

The Uniform Methods and Planning Committee approve these recommendations and move their adoption. The motion was seconded and passed by the Society.

In the dry extraction method given on page 18, of our methods the last paragraph contains the following sentence: "Evaporate off petroleum ether and heat in an oven at 100°C. to constant weight." It was the thought of the Uniform Methods and Planning Committee that this temperature should be designated as 105°C. in order to conform with other parts of our methods. This is also true of a statement in the second paragraph on page 19 under the wet extraction method. This statement is: "Evaporate off petroleum ether and heat in oven to 100°C. to constant weight." This should read "at 105°C."

Soybean Analysis Committee:

This committee makes the following recommendations:

"In conclusion it is recommended that collaborative work be done on (1) the influence of moisture on the yield of oil extracted; (2) the fineness of grinding which is necessary to obtain complete extraction without regrinding; and (3) the nature of the constituents removed with the oil when extractions are carried out with soybeans having a high moisture content."

Inasmuch as these are recommendations for further work no action by the society is required. These recommendations will be passed on to the next committee.

Fat Analysis Committee:

This committee, as we all know, is a joint committee of the American Oil Chemists' Society and the American Chemical Society. They have done a lot of work this past year, but they have no recommendations for changes with the exception of the method for determining titer. This report was referred to the American Chemical Society and the Supervisory Committee had certain suggestions to make with reference to it, most of which were of a more or less minor character. It was the consensus of the Uniform Methods and Planning Committee that we should adopt this method as a tentative method of our Society so that we will all be familiar with it, have it published during the coming year and by the time the next meeting rolls around we will probably have the thing straightened out with the American Chemical Society and be in a position to either revise it or make it official. The Uniform Methods and Planning Committee move that the titer test be adopted as tentative method for the coming year. The motion was seconded and passed by the Society.

Committee on Petroleum Ether Specifications:

There had been some complaints that under our old specifications some of the petroleum ether furnished was not entirely satisfactory. A committee was, therefore, appointed to revise the specifications for petroleum ether. In addition to the specifications, methods for testing have been submitted by that committee. The Uniform Methods and Planning Committee approve the report of the committee and move its adoption. The motion was seconded and passed by the Society.

Other committees of the society have been active, but such reports as have been received contained no

recommendations. Most of these committees will be continued for further work during the coming year.

Some of our methods have been tentative for at least one year and should be made official. In this connection we are asking Mr. Andrews, who looks after the revision of methods, to make the necessary recommendations. Mr. Andrews called attention to the Lefax methods on pages 1, 2, and 3 and moved that these be made official. This action was approved by the Society.

The specifications for a forced draft oven have been tentative for some considerable time. It was moved that these be made official and the society approved such action.

The specifications for olive oil, which were adopted as tentative last year, should be made official. On motion, duly seconded, this action was approved by the Society.

At the meeting of the Uniform Methods and Planning Committee it was decided that new committees should be appointed to study several matters which have recently been suggested. We are, therefore, making recommendation to the incoming President that he appoint committees to study the following subjects:

1. The color reading of meals under artificial light in a closed box or room, using the General Electric Fluorescent daylight lamp, or some other lamp of similar character.
2. A method for evaluating peanuts. Sooner or later the Society will have to develop rules for peanuts and we thought that it might be well to have a committee to study this subject.
3. A committee to study the Pot Cook Method for the determination of cellulose yields of lint and hull fibre. This method has been in use by several laboratories and will be published under a heading which will show that it is neither tentative nor official, but merely a method which the society has now under consideration.

The Uniform Methods and Planning Committee also feels that the methods, as they are now written, need considerable revision, not from the standpoint of requiring many changes, but in order to have them compiled in proper sequence and eliminate possible duplications, as well as clarifying some of the wording. With that in view the committee is recommending to the incoming President and his Governing Board that sufficient funds be appropriated to employ a man to revise these methods, this work to be done under the supervision of the Uniform Methods and Planning Committee. Mr. Andrews of our committee has done a great deal of work in this direction, but it is extremely difficult to do it in spare time.

J. T. R. Andrews
E. B. Freyer
R. C. Hatter
T. C. Law
C. P. Long
H. P. Trevithick
J. J. Vollertsen, Chairman.

ABSTRACTS

Oils and Fats

Edited by
M. M. PISKUR and RUTH LINDAHL

WILHELM NORMAN'S OBITUARY. H. P. Kaufmann. *Fette u. Seifen 46,* 259-64 (1939). WALTHER SCHRAUTH'S OBITUARY. H. Bertsch. *Ibid.* 265-7 (1939). The obituaries contain good reviews and a bibliography of each of the men's life work.

CONTINUOUS EXTRACTION OF SEEDS AND APPARATUS THEREFORE. K. Hildebrandt. *Fette u. Seifen 46,* 350-2 (1939).

COMPARATIVE EXPERIMENTS ON THE EXTRACTION OF SAMPLES CONTAINING FAT. J. Jany and A. Morvay. *Z. anal. Chem. 106,* 166-9 (1939). Extn. with CCl_4, $CHCl_3$, CS_2, ether and petr. ether of egg yolk, cheese rind and chromed leather showed that in general more ext. is obtained and more real fat with CCl_4 than with any of the others. Chromed leather contg. difficulty sol. fat shows this particularly. It is true that H_3BO_3, H_3PO_4, ethers, etc., were also dissolved to some extent from egg yolk but no more relatively than by others solvents. $CHCl_3$ was nearly as good but as it is more expensive it is not practical to use it. CS_2 was very good with chromed leather but otherwise, distinctly inferior. Ether does not ext. fat as well and it dissolves more foreign material. Petr. ether dissolves much less foreign matter but it also exts. less fat. (Chem. Abs.)

ANTIMICROBE ACTION OF DISINFECTING AND PRESERVING AGENTS IN THE PRESENCE OF ANIMAL AND VEGETABLE FATS AS WELL AS MINERAL OIL. T. Sabalitchka and A. Priem. *Fette u. Seifen 46,* 277-8 (1939). A review of the literature has indicated that disinfectants are not as active in oil or water and oil solns. as they are in water. The killing time of phenol and resorcin on staphylococci in water, and oil: water mixt. are tabulated. One percent phenol solns. in vaseline and coco fat were prepd. Five g. of the former killed staphylococci in 0.1 cc. of water in 5 mins. With coco fat soln. of the phenol the staphylococci were still alive after 4 hrs.

ABSORPTION SEPARATING IN THE FAT FIELD. *I.* INVESTIGATIONS OF FAT ACID MIXTURES. H. P. Kaufmann. *Fette u. Seifen 46,* 268-73 (1939). The literature on fat acid sepn. is reviewed. A 1:1 mixt. of stearic and myristic acids disolved in benzol, was poured through a tube contg. Al_2O_3. The obsorbate was divided into 3 parts and eluted with acetone. The top portion contg. pure stearic acid, second and third portions 16:84 and 32:68 ratios of myristic:stearic acids, resp. The filtrate was pure myristic acid. With oleic and linoleic acid mxts. the more unsatd. acids are least absorbed. Erucic acid was absorbed in preference to oleic on either Al_2O_3 or $CaCO_3$. In several other expts. the satd. acids were preferentially absorbed when mixed with unsatd. acids. Results of tests with mixts. of several fat acids and the fat acids of whale were tabulated. The tabulation gives the I value of original, various parts of the absorbed and of the filtrate acids.

OXIDATION OF THE FAT OF BUTTER DURING COLD STORAGE. W. J. Wiley. *J. Dairy Res. 10,* 300-9 (1939). It was found that acidity, starter organisms, salt and low-pasturization temps. each favor the oxidation. Neither diacetyl nor acetoin influence the oxidation.