cottonseed on which the grades have been disputed amounts to approximately 0.13⅓ per cent. Of the 80 cases brought before the Department, only in 16 cases were the original grades found to be erroneous and on which it was necessary to make a change from the grades originally reported. The number of cases on which the grades were changed represents only approximately 400 tons of cottonseed, or approximately 0.02⅔ per cent of the total tonnage involved which was officially sampled and officially certified.

This record speaks well of the chemists handling the analysis work on cottonseed under the supervision of the Department, all of whom are members of the A.O.C.S. The results of the supervised grading of cottonseed also speaks well of the accuracy of the present methods of sampling and analysis which are used in analyzing cottonseed and which have been developed and improved by various members of the A.O.C.S. and the Bureau of Chemistry and Soils of the United States Department of Agriculture.

Respectfully submitted,

R. T. Doughtie, Jr., Chairman,
F. R. Robertson,
C. A. Smith,
C. P. Brenner,
D. C. Picard,
L. B. Forbes.

REPORT OF THE FAT ANALYSIS COMMITTEE

The Fat Analysis Committee believes that at this time there are several methods having to do with fat and oil analysis which need study and consideration. During the past year serious thought has been given to several of these. Although the committee does not at this time have many definite recommendations to make, the following report will indicate the work which is in progress.

Several qualitative tests or so-called specific tests for various fats and oils are being investigated. These include tests for peanut oil, hydrogenated and unhydrogenated fish oil, kapok oil, sesame oil, teaseed oil, and a few others.

Iodine No.'s: A study of the technique of the Wijs method is being considered as well as a comparison of this with a few other more recently suggested procedures.

Titers: The technique of this determination is being studied especially with the view of simplifying the procedure. New specifications for the titer thermometer have been studied and practically decided upon.

Unsaponifiable Matter: This method is being studied, especially with the view of detecting denaturants and possible simplification of the method.

Alcohol for Fat and Oil Analysis: The question of the most suitable alcohol for the free fatty acid determination is being considered.

Tristearin in Lard: A study is being made of the method for the detection of foreign fats in lard. Cooperative samples have indicated that the present procedure does not yield reproducible results in all cases.

Liquid and Solid Fatty Acids: The results on cooperative samples have indicated that a considerable amount of work is still necessary on the liquid and solid fatty acid determination, especially in connection with Iso-oleic acid.

Wiley Melting Point: The committee recommends that the specifications for the beaker and test tube be changed to the following:

Beaker: Height — 200 mm. Diam. — 85 mm. (This corresponds to the common Griffins tall form — 1000 ml.)

Test Tube: Overall length — 300 mm. Inside diam.:—35 to 38 mm.

Moistures: The committee recommends that the wording of the method for the hot-plate moisture determination be changed slightly so as to avoid the possibility of misinterpretation. We suggest the method read as follows:

Hot-Plate Method—Determination: Weigh out 5 to 20-gram portions of the prepared sample into a glass beaker or casserole and heat on a heavy asbestos board over burner or hot plate, taking care that the temperature of the sample does not at any time go above 130° until the very end of the test (see below). During the heating rotate the vessel gently by hand to avoid spattering or too rapid evolution of moisture. The approach of the end point may be judged by the absence of rising bubbles of steam and by the absence of foam at the last. At this point, the heating should momentarily be carried on to incipient smoking (caution!) Cool in dessicator and weigh.

Limitations: This method is applicable to all the ordinary fats and oils, including emulsions such as butter and oleomargarine, and high acid coconut oil. It is not applicable, however, to certain abnormal samples such as naphtha extracted greases which contain, in addition to moisture, solvents of fairly high boiling point which are driven off with difficulty. In handling such samples it is possible to obtain satisfactory results by using the Kingman distillation method for actual moisture and steam distillation of the solvents. In difficult cases it may be advisable to determine the actual saponifiable matter present.

R. C. Newton, Chairman,
R. W. Bailey,
C. P. Long,
M. L. Sheeley,
H. P. Trevithick,
T. C. Law,
H. J. Morrison,
L. M. Tolman,
J. J. Vollertsen.

COMMENT

C. R. Brown of The Sharples Specialty Company, Philadelphia, has sent the following comment with reference to the paper on "Isopropyl Alcohol as a Solvent for Free Acid Titration" by G. Worthen Agee (see July issue):

"The writer has used this material for some time in the place of specially denatured alcohol for free fatty acid determinations. I have only one thing of interest to add to the article, and that is, the ease with which anhydrous isopropyl alcohol may be recovered from waste alcohol. After first making a distillation of the constant boiling mixture, the distillate is treated with sufficient solid caustic soda to combine with the water in the mixture, and a separation made in a separatory funnel of the separated caustic solution which breaks out of the constant boiling mixture. If it is then redistilled, anhydrous alcohol is recovered, providing the distillation is not carried too far. That is, an 85 or 90% recovery of the alcohol is about all that can be anticipated."