

Report of the Uniform Methods Committee

May, 1946

SINCE our last meeting considerable work has been carried on by various committees of the American Oil Chemists' Society and several new committees have been appointed and organized. We have had reports from practically all of the committees, but most of them have been reports of progress or a presentation of a plan for future work. In this category are the reports from the following committees: Color Committee, Refining Committee, Gossypol Committee, Soybean Analysis Committee, Spectroscopy Committee, Vitamin Committee, and the Oil Characteristics Committee.

The Committee on Bleaching Methods made the following recommendations in which the numbers refer to the appearance of these methods in our new method book which is now being printed:

1. That in Dc 8a-28 (A-6), where now occurs "E. & D. 192," there shall be substituted the following: "E. & D. 192, R-a 871, Whatman No. 12, S. & S. 596."

2. That the Society endorse the stock of activated clay which has been standardized and packed in sealed cans especially for use in grading the bleachability of soybean oil, and it is further recommended that this lot be designated Official A.O.C.S. Activated Clay, and a label to that effect be applied to the containers, assuming that suitable arrangement to permit this can be made with the present sponsors of that stock of clay.

3. Combine Methods Dc 8A-28 and Dc Sb-44, particularly with respect to (a) under Procedure in the latter, which will constitute the wording of the unified method. The statement of scope will therefore be broadened to read "Applicable to refined cottonseed and soybean oils." The line B (b) Dc Sb-44 *For Green Oils—High Chlorophyll Content*, will have added to it: "intended only to apply to soybean oils." This recommendation proposes that in the bleach test procedure for cottonseed oil, the 6% official earth be added to the cold oil before heating to 120°C. with agitation for not over 5 minutes.

The Uniform Methods Committee approved Recommendations No. 1 and No. 2 as written. With reference to Recommendation No. 3, the Uniform Methods Committee approved the change in the method of bleaching cottonseed oil to coincide with the one now used for soybean oil. In other words, the 6% of Official Earth is to be added to the cold oil before heating to 120°C. with agitation for not over 5 minutes.

With reference to the use of activated clay *For Green Oils—High Chlorophyll Content*, the Committee felt that there should be some method of determining when an oil falls into the class which requires the use of activated clay in bleaching. This question is referred back to the committee for solution.

The Subcommittee for Cottonseed and Cottonseed Meal Analysis made the following recommendations:

1. Drying whole cottonseed 12-16 hours (overnight) at 101°C. is justified as the official method for moistures.

2. The procedure of drying crimped seed 5 hours at 101°C. should be removed from the official methods

as low results were obtained even when the drying period was extended to 8 hours.

3. There is need for a quicker method than (1) above for emergencies. Drying whole seed 2½ hours at 130° appears to give results in close agreement with (1). Further work should be done toward justifying this procedure as an optional official method for moisture in cottonseed.

4. No change in the 2-hour drying period for fumed ground cottonseed is indicated.

5. There appears to be no substantial reason for the present difference in drying periods of 2 hours for fumed ground seed and 3 hours for cottonseed meal. The weight loss curves and the collaborative work showed a negligible increase in loss during the third hour of drying. It is recommended that the drying periods be made uniform for the two materials, viz., 2 hours at 101°C.

The Uniform Methods Committee felt that no action was required on Recommendations No. 1 and No. 4. Recommendations No. 2, No. 3, and No. 5 were approved.

The Cellulose Yield Committee made the following recommendations:

1. That samples be sent out during the next year for the yield check analyses at least five times during the season.

2. That the method be changed to include the option of the use of red oil in wetting out the lint before digesting. These changes have been made in the Standard Analytical procedure which is attached.

3. That the Fischer and Porter rotameter be installed as given in the attached sketch.

The Uniform Methods Committee approved Recommendation No. 1. Recommendation No. 3 was likewise approved with the understanding that a flowmeter be specified which would be equivalent to a Fischer and Porter rotameter. The Committee did not approve Recommendation No. 2 as they felt there should be no optional procedures in our methods. If the use of red oil is of sufficient value in this method, it should be made imperative. Until such time as this has been decided by the Cellulose Yield Committee, the method will stand as written.

All of the above recommendations of the Uniform Methods Committee were adopted by a vote of the Society.

The standard supplies of the Society are being distributed through the Uniform Methods Committee. During the last year arrangements have been made for the Central Scientific Company to handle the supplies for us, which has resulted in reducing the labor required in the Executive Secretary's Office. An inventory of these supplies indicates that there is sufficient on hand at all times to take care of our present needs.

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