

present and the inclusion of a few extra kernels materially increases the percentage of both oil and nitrogen. The use of a mechanical sample splitter may largely eliminate this source of error, and I think work of this kind should be included in the program of any committee on peanut analysis.

The detailed procedure for the proposed method is as follows:

Weigh, thoroughly clean, and mix the entire sample of nuts. Weigh the foreign matter and calculate the percentage. Mix and divide the sample, taking every precaution to include in the portion taken for analysis the correct proportion of the shelled nuts, if any are present.

Grind at least 100 grams of the nuts through a Russwin or Universal food chopper, using the 12 or 16 tooth blade. Thoroughly mix this sample in a two-quart Mason jar by shaking. Weigh duplicate portions of 5-10 grams and dry for 5 hours at 101°C. in the official forced draft oven for moisture.

Dry about 55 grams of the ground nuts for one hour at 130°C., and when cool, weigh 45.0 grams \pm 0.1 gram. Add to this, 15.0 grams, \pm 0.1 gram, of diatomaceous earth and mix well in a one-quart Mason jar by shaking. Let stand for one hour to allow the diatomaceous earth to absorb the excess oil. Then grind in the Bauer Brothers No. 148 mill used for cottonseed. Special precaution must be taken to insure that no loss of material takes place during grinding. Mix the ground material in a two-quart Mason jar.

Oil: Weigh 2.666 grams, wrap in 2 filter papers and extract 4 hours with petroleum ether exactly as specified for cottonseed. Divide the weight of oil extracted by 2 and multiply by 100 for percentage of oil.

Nitrogen: Weigh 1.87 grams (corresponding to 1.401, the nitrogen factor) and proceed exactly as for nitrogen in cottonseed.

Second Moisture: Weigh 2.666 grams and dry for 2 hours in a forced draft oven at 101°C. The loss in weight divided by 2 and multiplied by 100 gives the per cent moisture in the ground material. The calculation to the original basis is the same as for cottonseed.

OFFICIAL METHOD			PROPOSED METHOD	
Moisture	Oil	Ammonia	Oil	Ammonia
8.0	36.0	4.80	35.7	4.84
6.4	35.9	4.45	36.0	4.50
7.4	34.8	4.41	35.2	4.55
7.0	37.2	4.41	37.1	4.50
7.0	37.9	4.24	38.0	4.35
	(37.8)	(4.46)	(37.6)	(4.49)
5.2	(37.9)	(4.42)	(37.8)	(4.39)
	(37.9)	(4.43)	(37.6)	(4.42)

SHELLED PEANUTS (Ground With 50 Grams Nuts and 25 Grams Diatomaceous Earth)				
OFFICIAL METHOD			PROPOSED METHOD	
Moisture	Oil	Ammonia	Oil	Ammonia
4.7	49.0	5.76	48.8	5.86
	49.2	5.73	48.4	5.75

ANALYTICAL DATA By E. C. Ainslie, Buckeye Cotton Oil Company, Atlanta, Georgia					
COX PROPOSAL			RULES		
Unground % Oil	Ground % Oil	Moist.	Unground % Oil	Ground % Oil	Moist.
41.40	41.50	0.65	40.55	40.90	0.7
41.40	41.50	0.50	40.55	40.90	0.7
40.80	40.95	0.35	40.70	40.85	0.78
40.80	40.95	0.45	40.80	40.90	0.80
40.00	40.00	0.4	40.00	40.00	0.80
40.00	40.00	0.4	40.00	40.00	0.76
40.90	40.95	0.55	41.05	41.30	0.62
41.00	40.95	0.8	41.05	41.40	0.76
41.35	41.30	0.8	41.10	41.35	0.68
41.30	41.35	0.95	41.10	41.35	0.72
41.00	41.00	0.2	41.20	41.20	0.62
40.85	41.00	0.12	41.20	41.20	0.58
Ave. 41.10*	41.14*	0.49	41.06*	41.24*	0.71

* Oil averages reported here have been calculated to a dry basis.

Should the diatomaceous earth show a loss on heating at 101°C. for 2 hours, this moisture must be determined and the weight of moisture in the 0.66 grams of earth used for the second moisture determination subtracted from the total loss of weight before calculating to percentage.

I wish to acknowledge the help of Mr. E. C. Ainslie in verifying the agreement between the present method and the one I am proposing.

Report of the Uniform Methods and Planning Committee—Spring Convention 1942-1943

As you know, the past year has been an exceedingly difficult one for all of our laboratories and as a result very little work has been reported by the committees that requires changes in our methods. Most of the reports received were progress reports. We are hoping that during the coming year the committees will get under way earlier and in this way be able to complete some work in time for our next annual convention.

Before taking up the individual committee reports we would like to commend the Journal Committee on the fine work that they have done during the past year. This is the first year that the journal has been pub-

lished entirely by our Society and we think the results have been most excellent. This is due both to the untiring efforts of the Editor and his assistant and to the Advertising Committee who were quite successful in obtaining additional advertising for the journal.

One of the difficulties which we have faced through the past year was to revise our methods. It was decided a couple of years ago that the methods should be entirely revised and all arranged uniformly so as to make a better appearance and enable the chemist to save time in using them. Mr. J. T. R. Andrews thought that he would be able to undertake this work

outside of his regular hours but has found it impossible to complete what has been started. A format has been agreed upon and an appropriation of \$500.00 was made some time ago to take care of any additional expenses which might be incurred. We have given considerable thought to this and have discussed it with Mr. Mitchell, and there are probably two ways open to us which might bring about an early completion of the work. The methods might be divided among the various committees of the Society requesting them to rearrange those assigned to them according to the format previously mentioned. Another, and perhaps better way would be to have some one person with the assistance of a young lady hired for the purpose undertake the work. Of the two methods the latter will probably bring about the quickest results.

Oil Characteristics Committee:

The Oil Characteristics Committee has recommended standards for the following oils: Palm Oil, Palm Kernel Oil, Coconut Oil and Sunflower Seed Oil. The Uniform Methods and Planning Committee approves the report as submitted with the exception of the setting point for Palm Kernel Oil and Coconut Oil. At the present time we have no official or tentative method for this determination and when a method has been devised the setting point can then be inserted.

Color Committee:

The Color Committee report is largely one of progress. However, they have made the following recommendation:

"The committee recommends that the following change be made in the A. O. C. S. Methods on Page 16F under 'Refined Oils - Color'—sub-paragraph 'Lovibond Color Glasses'—and after the paragraph which reads: 'Laboratories analyzing corn and soybean oils shall have 50 and 70 yellow glasses in addition to the above,' add the following paragraph:

'The color glasses should be kept clean and free from oil film. They should be handled carefully and protected against acquiring scratches. It is especially important that every color glass used shall be clean at the time of its use.'"

The Uniform Methods and Planning Committee approves this report and the recommended change.

Committee for Analysis of Commercial Fats and Oils:

This committee has rewritten the method for measuring colors of fats and oils with the F. A. C. standards. The Uniform Methods and Planning Committee approves this revision and recommends that it should be inserted as a tentative method during the coming year.

As to the publication of the tables showing the relationship of F. A. C. Color Standards for Commercial Fats, owing to the doubt as to our jurisdiction the matter is being referred to the Governing Committee.

Cellulose Yield Committee:

This committee merely presented a progress report which is approved with the recommendation that this committee be continued for another year.

Refining Committee:

The Refining Committee has again carried on a great deal of work on the refining of extracted soybean oil. They should be commended for their untiring efforts and we particularly wish to commend Dr. Milner of the Northern Regional Laboratory for the analyses which he has made. We believe that the recommendations for future work are sound and should bring an early conclusion to the work of this committee.

Bleaching Methods Committee:

In the method on refined and bleached oils this committee recommended the following changes. After the words "Laboratories analyzing corn and soybean oils shall have 50.0 and 70.0 yellow glasses in addition to the above," the following paragraph is inserted, which is similar to that recommended by the Color Committee:

"The color glasses should be kept clean and free from oil film. They should be handled carefully and protected against acquiring scratches. It is especially important that every color glass used shall be clean at the time of its use."

After the words: ". . . observing the colors of the oil and the glasses through the eyepiece" the next paragraph shall be headed "Refined Oils." The paragraph immediately following this one shall be headed "Refined and Bleached Oils."

They also recommend the insertion of a note after the paragraph reading:

"If the above ratios fail to give a satisfactory match, this fact should be noted and a second reading made, using the amount of yellow required for a good match. Report both Readings."

"Note. Soybean Oils are subject at times to abnormalities in the composition of their pigment contents, resulting in the occurrence of hues which cannot be matched even approximately using the fixed yellow or yellow-to-red ratio designated above. In the case of such oils, report only the reading with the yellow required to give the best match."

The Uniform Methods and Planning Committee approves these changes.

Committee for the Study of the Analysis of Cottonseed for Percent Lint:

This committee recommends that the method as now described in the 1942-1943 N. C. P. A. Rules, page 187, be inserted in our methods and adopted as a tentative method of the Society. This recommendation is also approved by the Uniform Methods and Planning Committee.

All of the above recommendations were voted upon and accepted unanimously by the Society.

J. J. VOLLERTSEN,
Chairman

J. T. R. ANDREWS
E. B. FREYER

J. J. GANUCHEAU
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