Refining Committee Progress Report

General Refining Committee

We have had considerable correspondence with various refining chemists regarding interpretation of certain points in connection with the revised refining procedure. This method has been found so far to work quite satisfactorily, although a few oils from West Texas have been found which do not refine with all strengths of lye quite satisfactorily. Further study is being given to this condition.

The new Interstate rule requiring premiums for quality of crude better than prime makes it necessary to give more attention to refining procedure for oils with less than 3% F.F.A. It will be necessary to specify and limit more closely the choice of lyes on such oils in order that different chemists will report concordant results. This matter is now being considered and a recommendation will be made in the near future.

It has been possible for the chairman to visit various refining chemists recently in Fort Worth, Dallas, Memphis and Atlanta, where in all cases a full discussion of refining procedure on this season's oils was held. I believe this has resulted in considerable benefit in bringing ideas of various chemists in line.

It is planned to send out a few co-operative samples this year through regular business channels to commercial laboratories without indicating that they are co-operative samples. This is intended to assure that they will receive only regular routine attention like other ordinary samples.

It is planned to study the refining of cold press oil during the season.

Neutral Oil Committee

This committee will study the neutral oil refining procedure on the same samples as are sent out for co-operative work above mentioned.

Color Committee

This committee has already begun sending out co-operative samples in the effort to get greater concordance among chemists and will study the changes that appear to take place in refined oil samples within the first week or two after refining.

Corn Oil Committee

This committee is planning to study the application of the revised refining procedure to corn oil during this season.

C. B. Cluff, *Chairman*

Preliminary Report of Cake Color Committee

The committee plans to accomplish the following during the current year.

1. Further study of relative merits of the two methods of color comparison already proposed and also of the method based upon use of a weak lens out of focus.
2. Study of effect of kind of illumination upon the color comparison.
3. Recommendation of a method for official adoption.

Progress has been made on item 1. above. Indications are favor-

able to the method based upon use of a weak lens out of focus as the simplest satisfactory method of making the color comparison. However, it is too early to predict what the final recommendation will be.

A. S. Richardson, *Chairman*

Linseed Oil Committee

I have taken the matter up with the several chemists who are employed by the linseed manufacturers and I believe they all have indicated their willingness to cooperate on some comparative tests on linseed products within the ensuing year. Some of them, of course, are not members of the American Oil Chemists' Society. I have advised them that it will be necessary for them to join and most of them have replied that they will be glad to do this and also join in on the work.

The work I have planned for this Committee to do is to co-operate on the ordinary physical tests which are used for linseed and its products, such as the determination of the oil content of the seed, as well as the impurities, and the physical constants of linseed oil, paying particular and especial attention to make the comparative tests that are known, such as the Hanus and Wijs methods for determining the iodine number. It is a well-known fact that there are few chemists, especially public and government chemists, who use the same determination or method for the iodine number, and it is very essential in doing this to have the method used well established and well proven that it is workable and checkable. We have therefore decided to work along the lines just mentioned which will be comparative, I believe, to the earlier work which was done by the members of the old Cotton Products Analysts Society.

If any member has any suggestions to offer that might be of assistance to us, we will be very glad to get them.

B. H. Thurman, *Chairman.*

Smalley Foundation Committee

All that I am prepared to report at this time is that there are at present enrolled eighty-seven collaborators. From correspondence pending, there will be one additional name within a short time.

This is the largest enrollment we have ever had at this date. Last year at this time we had only eighty-five names on our list and at the close of the year eighty-eight.

The meal samples this year are being prepared under the supervision of Mr. T. C. Law of Law & Company, Atlanta, Georgia.

H. C. Moore, *Chairman*

Olive Oil Committee

To the members of the Olive Oil Testing Committee of the American Oil Chemists' Society.

We have before us the problem of detecting in Edible Olive Oil, small quantities of Extracted Olive Oil containing Sulphur from the Carbon Disulphide solvent.

The Chairman's laboratory has tried the three methods as outlined by M. F. Lauro in the September, 1927, issue of OIL & FAT INDUSTRIES, page 324, namely:

(1) Coin Test

(2) Acetic Anhydride (Italian) Test.

(3) Silver Benzoate Test.

We find as follows:

Coin Test. With 100% Extracted Olive Oil—a very definite

blackening of the coin. With 10% Extracted Oil and 90% Edible Olive Oil (by volume)—no definite blackening to enable a decision.

Acetic Anhydride Test. With 100% Extracted Olive Oil—a distinct rose-red coloration. With 10% Extracted Oil and 90% Edible Oil—A very slight pink coloration, that is, not very definite but better than the coin test for corresponding amounts.

Silver Benzoate Test. With 10% Extracted Oil and 90% Edible Oil—a very dark brown coloration. With 5% Extracted Oil and 95% Edible Oil—a dark brown coloration, about half the coloration of 10%. With 1% Extracted Oil and 99% Edible Oil—a definite brown coloration, distinctly different from 100% Edible Olive Oil.

Results: Since believing that Edible Olive Oil would not be adulterated with less than 6% Extracted Olive Oil, suggest that M. F. Lauro's Silver Benzoate Test be tried by all members of the committee in order to decide for the adoption of this Silver Benzoate Method which is definite to 1% Extracted Olive Oil.

For the test the Silver Benzoate was made from Silver Nitrate and Sodium Benzoate by precipitation from hot aqueous solution, cooling, washing with cold water and drying. 20 milligrams was used to 5 cc. of mixed Olive Oils, heating to 150° C., using an oil bath.

Louis M. Roeg, *Chairman*

Preliminary Report Detergents Committee

Immediately upon appointment, the Chairman and Vice-Chairman of the Detergents Committee began an intensive study of what they considered the greatest obstacle confronting the collaborators, namely, the preparation of a standard soiled cloth.

While the results of last year's work indicated clearly that the experimental washing device was very unsatisfactory, the fact that the soiling procedure employed produced a cloth which was hardly washable and thus introduced a complex factor of measurement of the degree of whiteness obtained (or amount of soil removed), the solution of this difficult problem seemed a positive necessity before any real further progress could be made.

Last year's results indicated that for the purpose of this collaborative work the soiled cloth should be prepared at one source, to eliminate as far as possible, the personal equation.

The Chairmen have sought to prepare a cloth which, as far as the actual soiling was concerned, could be prepared mechanically and thus to further reduce the personal equation and establish a standard which would be reproducible.

The Chairmen have also sought to divise a soiled cloth which could be washed under standard conditions of commercial laundering and be in such condition that no measurement of residual soil should be necessary. To accomplish this end the Chairmen have devised a pattern type cloth upon which the soil is placed in pattern against a white background. When the soil is completely removed it is readily discerned by the absence of all traces of the outline of the pattern when the washed fabric is held and viewed against the light.

The Chairmen have produced a cloth having these properties by printing in stripes upon bleached cotton cloth, a paste containing:

(*Continued on page* 393)