Report of The Committee on Soap in Refined Oil

THE Committee is not ready at this time to propose an official or tentative method for the determination of soap in refined oil. For the past year we have been studying the Durst method as modified by R. C. Stillman. In general the method as published in the Committee report of 1938(1) has been found to give somewhat high results. This has been traced to incomplete removal of hydrochloric acid in the three evaporations to dryness that are required by the method. The committee is now working on the improvement of this part of the procedure.

The problem of the sensitivity of the indicator is also being considered. Dichlorfluorescein has been suggested as an indicator for the chloride titration by N. T. Joyner, a member of the Committee. Should a sufficiently sensitive indicator be found, the accuracy of the titration can be much increased by the use of a more dilute $AgNO_3$ solution or a micro-burette.

(1) Harvey, et al; Oil and Soap 15, 209 (1938)

We have rewritten the method making the improvements that have been indicated by our work this year. The method follows:

Weigh 125 gms. of oil into a 500 ml. extraction cylinder or separatory funnel, add 25 ml. of conc. C. P. HCl and shake vigorously for a few minutes. Then add 100 ml. of hot water (70° C.) from a pipette. Shake vigorously for at least 2 minutes and allow the acid and water to settle and cool. Pipette 100 ml. of the water-acid solution into a 250 ml. pyrex beaker and evaporate to dryness on a hot plate. Bake slightly but avoid overheating. It is well to place an asbestos board under the beaker. Allow the beaker to cool somewhat, add about 50 ml. of distilled water, evaporate to dryness and bake as before. Water is again added, evaporated off, and the residue baked. Take up the residue with 10 ml. distilled water, cool to room temperature, add 1 ml. of a 10% solution of potassium chromate and titrate with N/100 $AgNO_3$. Blank determination should be conducted in parallel with the actual determinations.

All glassware should be scrupulously cleaned and then rinsed with conc. HCl before being used.

In pipetting the 100 cc. aliquot from the water-acid solution care should be taken to exclude all oil. Any oil remaining after this step seriously interferes with the evaporations and bakings.

We recommend that the Committee be authorized to continue its work for another year. If this action is taken, the Committee would appreciate receiving comments from the membership at large regarding modifications or new methods of approach.

E. H. Harvey, Chairman
C. A. Crapple
N. T. Joyner
H. A. Schuette
R. C. Stillman
W. L. Taylor

REPORT OF COLOR GLASS DEVELOPMENT COMMITTEE

THERE have been no changes in the status of the work of the Color Glass Development Committee during the past year, The Electrical Testing Laboratories having continued the work of standardizing and regrading Lovibond Glasses for members of the Society.

Dr. Allan E. Parker, head of their Photometric Department and a member of the committee, reports as follows:

"We have examined our records and find that during 1938 we adjusted 50 Red glasses and regraded 84 additional ones. This is a considerable decrease as you realize from the report of 1937. As to what the source of this decrease is I am not certain, presumably because many companies are now equipped with a sufficient number of regraded glasses to serve their purposes."

Dr. Parker is also studying the possibilities of grading Lovibond glasses by means of the recording spectrophotometer. His comments are given below:

"The Laboratories has undertaken recently an investigation of the suitability of regrading Lovibond red Glasses by means of transmission curves obtained on the recording spectrophotometer. As you know, the original work at the Bureau in standardizing Lovibond Red Glasses was carried out by means of spectrophotometric transmission data. At that time there was no recording device on the market and it was impractical to rapidly grade glasses on the basis of data so obtained. However, we believe that we will be able to improve our accuracy and also promptness of our services by means of the transmission curves and computations of the r/g ratio.

It is quite possible that this matter will be sufficiently complete for presentation before the American Oil Chemsts' Society at their fall meeting."

There are no recommendations to be acted upon by the Society at this time.

J. W. Flynn
K. S. Gibson
W. A. Welch
Allan E. Parker
A. W. Meetze
Roger S. Estey
P. E. Ronzone
L. M. Gill, Chairman