

# The American Oil Chemists' Society

## Notes and Correspondence

### The American Oil Chemists' Society Report of Olive Oil Committee for the Fall Meeting in New York City

The members of the Olive Oil Committee are as follows:

Charles V. Bacon, H. S. Corman, Wallace H. Dickhart, George S. Jamieson, M. F. Lauro, Sidney Musher, C. J. Post, Madison L. Sheely, Ralph W. Wechsler, and Louis M. Roeg, Chairman.

The Chairman has mailed to these members the following plans:—We have before us the problem of differentiating between Virgin Olive Oil and Refined Olive Oil by the identification of minute quantities of soap in Refined Olive Oil and the absence of soap in Virgin Olive Oil.

In our laboratory (Brewer & Company, Inc., Worcester, Mass.) we have taken a quantity of Virgin fruity Spanish Olive Oil from an original drum. This drum was a part of a shipment imported direct by us last February. The free fatty acid when tested this month was 0.49%.

We refined one gallon of this Virgin Olive Oil using 32° Baumé Solution Sodium Hydroxide, mixing at room temperature for fifteen minutes; raising the temperature to 120° F. in fifteen minutes; and continuing the stirring for an additional fifteen minutes. We had the desirable "break" of the soap from the oil. The next morning we filtered the Olive Oil through fine white filter paper, discarding the first portion to be assured that the

Olive Oil was free from suspended soap. The free fatty acid was found to be nil.

This Refined Olive Oil was then tested for the presence of Sodium by extracting the dissolved soap from a 100 cc sample with 25 cc of neutral alcohol. This alcohol was prepared by making slightly alkaline to phenolphthalein with N/50 Sodium Hydroxide and distilling.

This alcoholic extract was filtered, and examined by means of the spectroscope. A loopful on a platinum wire was evaporated by holding near the burner, and was then placed in the flame. The characteristic yellow Sodium band was visible for 1.6 seconds using a stop watch.

When this test was conducted in the same manner with a similar alcoholic extract from the original Virgin Olive Oil, we failed to observe a definite yellow Sodium band, although there was noticed a flash which took only 0.3 seconds to record with the stopwatch. On repeating this test several times we obtained identical results, proving to our satisfaction that the flash cannot be confused with the definite Sodium test.

We also tested these alcoholic extracts by a Micro-Chemical procedure. The extracts were made slightly acid to litmus paper using Hydrochloric Acid, evaporated to dryness on a steam bath, and the residue taken up with 10 cc distilled water and filtered through paper previously washed with distilled water.

One drop of this distilled water solution prepared from the Refined Olive Oil alcoholic extract was evaporated on a slide, and exam-

ined under the microscope, where crystals having the characteristic structure of Sodium Chloride were seen.

One drop of this distilled water solution prepared from the Virgin Olive Oil alcoholic extract when evaporated under similar conditions showed no crystals of Sodium Chloride. However, there were observed green crystals which we believe to be Ethyl-Chlorophyll crystals (Chemistry of Plant Life, Thatcher, 1921, Page 104). These green crystals were absent from the distilled water solution prepared from the Refined Olive Oil alcoholic extract, indicating that the Chlorophyll was removed in refining with Sodium Hydroxide.

Samples have been mailed to the nine members of this committee for corroborating these tests, and their results will be given at our next meeting.

LOUIS M. ROEG,  
*Chairman.*

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### Italian Olive Oil Market

The olive oil market, according to a commercial newspaper of Messina, Sicily, dated October 8, after a long period of calm is now manifesting some reanimation, especially in southern Italy and Sicily. Prices generally are firm with upward tendency. In Tuscany prices are on the basis of 800-900 lire per quintal and even touch 1050 lire for the best qualities from famous districts. In Umbria and Lazio prices range from 780 to 900 lire according to quality; in Puglia from 750 to about 850 lire; in Basilicata and Algeria the market continues rather calm and transactions are effected on the basis of 815 to 860 francs per quintal, according to a report to the United States Department of Commerce, dated October 12, 1928.

### Forecast of Olive Oil Production in Spain

The International Institute of Agriculture in Rome states that the forecast of olive oil production in Spain this year will be about 27.8 per cent of that of last year, or in figures, the 1928 production will be 1,850,000 quintals as compared to 6,656,000 quintals of last year. This is the smallest yield in Spain in the last twenty-years, except in 1910-1911 and 1912-1913 when the yield was 1,085,000 and 630,000 respectively. A large carry-over of the 1927-1928 crop however will prevent to some extent the high prices that might be expected.

The above information was contained in a letter received in the United States Department of Commerce, October 12, 1928, from American Commercial Attache Mitchell, Rome, Italy.

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### New Margarine Factory at Moscow, Russia

It is reported that the Russian oils and fats industry is working out a project for a margarine factory in Moscow, the capacity of which will be twenty tons per seven hour shift. It is to be constructed on the ground next to the cold storage plant now being built by the Centrosoyous, according to a report received in the United States Department of Commerce from Assistant Trade Commissioner Frank Messenger, London, England.

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John P. Harris, Chicago, a representative of the Industrial Chemical Sales Co., Inc., 200 Fifth Avenue, New York City, has moved his headquarters to the Engineering Building, Suite 1306, 205 W. Wacker Drive, Chicago.