the sample for 6 hours at 105° C. in vacuum and to report the observed loss in weight as moisture.

The tentative procedure for determining moisture in soybeans by drying at 130° C. for 2 hours in an air oven at atmospheric pressure is confirmed for soybeans, expeller and hydraulic soybean meals, and toasted solvent-extracted soybean flakes. In following this procedure for these products the time period should be counted after the oven returns to 130° C.

The suggested referee method of heating for 6 hours at 105° C. in vacuum is the only procedure that appears satisfactory for the white solvent-extracted soybean flakes.

For a rapid method of determining moisture in these products, where highest reproducible precision is not required, it is suggested that the samples be heated for 1 hour at 130° C. in vacuum.

Repeated tests have shown that results obtained at 130° C. in a convection air oven and in a horizontal forced draft oven are identical.

Lipids. A considerable amount of work has been done on the study of the improvement of the present methods of determining lipids in soybeans and soybean products. Results so far are not conclusive, and no new modifications have been suggested for collaborative study.

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Rosin Cleanliness

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MOST producers are boastful when making "X" rosin, but are you proud of the cleanliness of your ordinary rosin?

Rosin containing a noticeable amount of trash, which heretofore has been known as "circled" rosin, is no longer acceptable on the market. This exclusion was brought about by "loan" stipulations and a desire to place a better product on the market. A second step toward better rosins has been taken by the Naval Stores Station which aims to produce a rosin that is free of the "haze" due to fine trash particles that are almost microscopic in size. This can be done by cleaning the gum by filtration and washing before distillation, and can be approached by careful straining of fire-still rosin, using a high grade and heavy cotton batting.

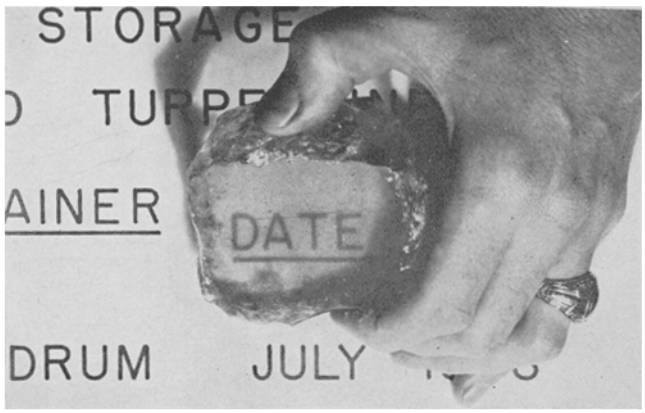


Fig. 1—This rosin was WG grade, having a cleanliness of about 57% and with some noticeably large trash particles of "peppery" appearance. This rosin would not be accepted on the market

One of the finer qualities of good rosin, regardless of grade, is its "brightness" or cleanliness, which is in reality a measure of its freedom from very fine trash or extraneous matter. A rosin containing no extraneous material would be considered as having a brightness of 100%. A poorly strained fire-still rosin, having a hazy or slightly smoky cast, would have a brightness of 50 to 60%, based on the same arbitrary standard.

Following are some photographs showing poorly strained rosin from a fire still, a well strained rosin from a fire still where a heavy batting was used, and a rosin made from cleaned gum.

These pieces of rosin, when photographed, were held in front of a sign so the lettering could be seen through the rosin in order to better illustrate its cleanliness.

The technical staff of the Naval Stores station will be glad to discuss rosin straining and gum cleaning problems with representatives of industrial concerns which are interested in the subject.

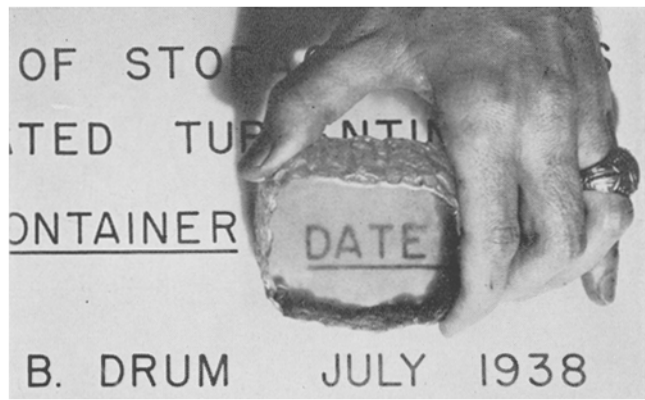
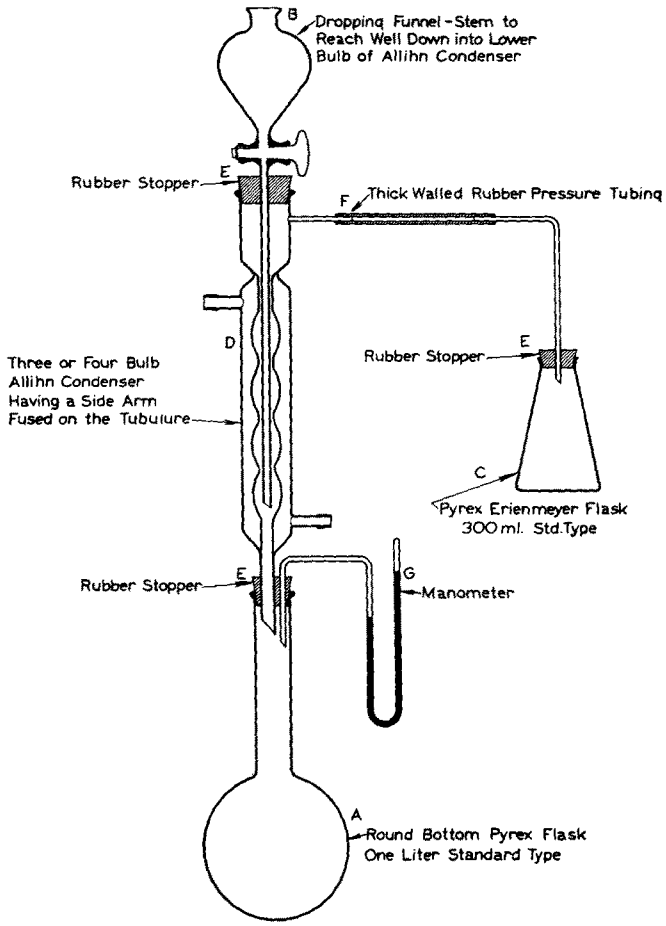


Fig. 2—This rosin was WG grade, having a cleanliness of about 83%. This compares with the best strained five-still rosin when using a heavy batting

Fig. 3—This rosin was WG grade, having a cleanliness of about 96%. This represents the brightest rosin obtainable from cleaned gum

CORRECTION

Apparatus for Evolution – Volumetric Method for the Determination of Carbonates as CO_2 in Soap and Other Detergents



Apparatus for Evolution-Volumetric Method for the Determination of Carbonates as CO_2 in Soap and Other Detergents.

(We regret that this drawing in the April issue was incorrect. A comparison with this corrected sketch will show that the extension of the thistle tube inside the condenser to coincide with the inside condenser tube was the mistake.)

Abstracts

Oils and Fats

Edited by M. M. PISKUR

CHARACTERIZING OILS BY DETERMINING THEIR INTERFACIAL TENSION AGAINST WATER AND WATER SOLUTIONS. F. Seelich. *Fette u. Seifen 48,* 15-20 (1941).

EXTRACTION OF FAT FROM TISSUE FOR THE DECOMPOSITION TESTS. Fr. Kiermeier. *Fette u. Seifen 48,* 11-2 (1941). The influence of solvents and extn. methods on the peroxide and aldehyde reactions of fats was investigated. For peroxide detn. K. recommends refluxing 10 g. sample with 50 cc. low boiling petrol. ether. An atm. of CO_2 may be used. Filter in 100 cc. flask, make to vol. and evap. 10 cc. in a special app. Det. peroxide value of the residue. The method is not suitable for obtaining sample for the aldehyde test.

MEASURING OXIDATION OF A VEGETABLE OIL. G. L. Clark and F. M. Rugg. *Ind. Eng. Chem. Anal. Ed. 13,* 243-4 (1941). The measurement of the spreading pressure of a drop of liquid placed on a monomol. film on the hydrophilic balance is a far more accurate evaluation of oxidation in a vegetable oil such as soybean oil or the presence of hydrophilic groups in any liquid than the familiar peroxide number. The evaluation of lubricating addn. agents is an especially valuable application.

FRACTIONAL DISTILLATION OF UNSATURATED FATTY ACIDS. THE EFFECT OF VACUUM DISTILLATION ON THE ABSORPTION SPECTRA OF POLYETHENOID ESTERS FROM COD LIVER OIL. Frank A. Norris, Irving I. Rusoff, Elmer S. Miller and Geo. O. Burr. *J. Biol. Chem. 139,* 199-205 (1941). Spectroscopic and chem. evidence indicates that distillates obtained by vacuum fractional distn. of methyl esters of highly unsaturated fatty acids are sufficiently representative of the original material to be used in isolation and structure work. Analytical applications of the process are limited by the concn. of isomerized material in the residue.

SOLVENT EXTRACTION OF COTTONSEED OIL. H. S. Olcott. *Ind. Eng. Chem. 33,* 611-15 (1941). Problems involved in the introduction of solvent-extn. methods into the cottonseed oil industry are reviewed. Although there is a slightly higher refining loss, the hexane extn. of rolled and cooked cottonseed meats yields a refined oil directly comparable to that obtained by pressing methods. Except that larger yields of oil are obtained, no changes in the existing methods of treatment and disposal of oil and meal are required.

ANTIOXIDANTS AND THE AUTOXIDATION OF FATS. XIII. THE ANTIOXYGENIC ACTION OF ASCORBIC ACID IN ASSOCIATION WITH TOCOPHEROLS, HYDROQUINONES AND RELATED COMPDS. Calvin Golumbic and H. A. Mattill. *J. Am. Chem. Soc. 63,* 1279-80 (1941). Ascorbic acid is an effective antioxidant for certain vegetable oils, their hydrogenated products and esters. It enhances the antioxygenic activity of tocopherols, hydroxy chromans, hydroquinones and related compds.

A SUGGESTION FOR A U.S.P. TEST FOR OLIVE OIL TO ELIMINATE TEASEED OIL. Wallace H. Dickhart. *Am. J. Pharm. 112,* 371-2 (1940).

PURIFICATION OF GLYCEROL BY CRYSTALLIZATION. H. B. Hass and J. A. Patterson. *Ind. Eng. Chem. 33,* 615-16 (1941).

THE ISOLATION OF PURE LINOLEIC ACID BY CRYSTALLIZATION. Jerome Frankel and J. B. Brown. *J. Am. Chem. Soc. 63,* 1483-4 (1941). A bromination procedure is followed by crystn. to remove iso-acids.

FORMATION AND DETERIORATION OF PAINT FILMS. J. L. Overholt and A. C. Elm. *Ind. Eng. Chem. 33,* 658-60 (1941). Changes in the glyceryl esters of several unsaturated fatty acids under exposure to ultraviolet light. Data on the changes in I, acid, aldehyde, peroxide and ester values, viscosity, refractive index and total oxygen of olein, linolein, linolenin stearin on exposure to ultraviolet light are graphically presented.

THE PRODUCTS OF THERMAL TREATMENT OF RICINOLEIC ACID AND ITS MIXTURE WITH OXALIC ACID. V. I. Esafov and A. V. Shpadi. *J. Applied Chem. (U.S.S.R.) 13,* 1040-4 (1940). In heating ricinoleic acid at 200°, no decompn. to enanthaldehyde and undecylenic acid was observed, the main reactions being the formation of (1) estolides of linear type: and (2) cyclic esters: The products of both polymerization reactions (especially of the latter one) may be used for the prepn. of a composition for a plastic mass. (*Chem. Abs.*)