ABSTRACTS

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The progress of the drying of raw linseed oil and of boiled oil prepared with manganese or cobalt driers has been studied by means of the Wolff "spreading drop" method. For normal thickness of film the rate of drying was found proportional to the gain in weight. With cobalt drier the drying at the beginning proceeded faster than the gain in weight. For thicker film, there was a loss in weight at the beginning, although the drying proceeded in the normal manner. *Farben-Ztg.* 34, 2069-72 (1929).

Hydrogenated sunflower seed oil is said to contain forty-five percent of iso-oleic acid. It is claimed that the presence of various isomers of oleic acid in such hydrogenated sunflower oil makes the material more suitable for the manufacture of soap. *Maslob. Zhirov. Delo* 1927, No. 1,23-7.

A newly-patented vitamin-containing food product is prepared by treating a vitamin-bearing fatty material such as fish-liver oil with an alkaline earth hydroxide; pulverizing the water-soluble soap thus obtained, and extracting the vitamins from the soap by the use of an edible fat, such as cottonseed oil. U. S. Pat. No. 1,715,945.

A patent recently granted in England to a German company claims that active carbon of high absorptive power and mechanical strength is obtained by heating fine-pore vegetable materials such as plum stones, coconut shells, and other hard shells, which are broken up into small pieces, with a concentrated solution of zinc chloride, the weight of zinc chloride employed being less than that of the vegetable material treated.

Colorless condensation resins are prepared from glycerol and phthalic anhydride by effecting the initial reaction at a temperature not exceeding 175° C. and heating the product at a temperature not exceeding 100° C. until it has attained a rubbery consistency, then hardening at a temperature not exceeding 135° C. —Brit. Pat. No. 300,668.

A critical investigation of the conduct of the titer determination of fatty acids has shown that the test should be carried out in a tube of 26-30 mm. diameter, as a tube of 14 mm. in diameter gives results about 0.8° too low; the presence of a trace of water may lower the result about 1°; allowing the acids to cool without stirring with the thermometer introduces an error of about -5°.—*Chimie & Industrie* Special No. 521-2 (Feb., 1929).

It is said that the rancidity of coconut oil can be entirely removed by simple agitation with clay, by boiling with an aqueous colloidal suspension of clay, or by treating with superheated steam under reduced pressure in the presence of clay.—*J. Am. Phar. Assoc.* 18, 491-3 (1929).

From examination of the determination of saponification numbers on oils and fats in experiments on tallow and vegetable oils, it is concluded that no error is introduced because of the strength of the alcohol, provided it does not fall below 45-50 percent at the end of the titration; that saponification is generally complete in fifteen minutes and thirty minutes is ample for all ordinary purposes; and that a 3 gram sample should preferably be taken, 5 grams giving a less sharp end point. It is recommended that the acid (generally 0.5 N hydrochloric), should be standardized directly against c.p. sodium carbonate and that determinations be made in duplicate.—*Chimie & Industrie* Special Number, 525-6 (Feb., 1929).

A new fatty acid has been identified in montan wax. The procedure involved saponification of the wax with an aqueous solution of potassium hydroxide under pressure, extraction of unsaponified and unsaponifiable material with benzol, liberation of the acids and their conversion into the corresponding methyl esters. These methyl esters were fractionated under 5 mm. pressure. The fractions were then saponified and the acids fractionally pre-

cipitated. Besides fatty acids C_{25}, C_{27}, and C_{29}, previously found, an acid $C_{31}H_{62}O_2$ was identified. Its amount was 4.7 percent of the total acids present. The acid $C_{30}H_{60}O_2$ was not present in the sample of wax used for this examination. *Brennstoff-Chem.* 10, 82-6(1929).

The preferential demand in Europe for Polish linseed oil in preference to the Argentine seed has been explained on the basis of the experiment of Ivanov, who concluded that the chemical composition of the oil changes markedly in relation to the climate in which the plant is grown. Ivanov contended that not only geographical latitude, but longitude and altitude as well, affect the content of unsaturated linkages in the oil. He maintained that iodine value increases in the South-North direction at the rate of about two units per degree of latitude for linseed oil, 0.65 units for rapeseed oil and 1.3 units for sunflower seed oil. Przemysl Chem. 13, 167-8(1929).

An apparatus and method for the determination of turbidity time numbers and solidifying points of solid fats, especially cacao butter, is described as follows: The apparatus used is a squatty flask with inlet and outlet for water and a tubulure for a thermometer. It carries in its neck a titer tube, 23 mm. in diameter and within this a 19 mm. titer tube and another thermometer; the 19 mm. tube has a vertical blue line 1 mm. wide, at its back. The flask is filled with water kept at 20°, and the space between the two titer tubes is filled with liquid petrolatum. Method: Neutralize 100 grams of cacao butter with 2 grams magnesium oxide, filter, remove the 19 mm. titer tube, place 10 cc. of the filtered cacao butter in it, heat to 50°, replace, stir with the thermometer until the blue line becomes invisible, using a 25 watt light in the background. The time interval in seconds between start and finish is noted by means of a stop watch. Continue the test without stirring and note the highest temperature reached by the thermometer. The time interval between the turbidity point and the highest temperature point is expressed in minutes. In some cases different results are obtained; the test is then immediately repeated. Results are tabulated for various cacao butters, varying in turbidity point between 510 seconds for pure, pressed cacao butter and 1140 seconds for dark, hull-extracted cacao butter, and between 75 minutes and 265 minutes in the titer time in the first test. The second determination varied between 450 and 1020 seconds and 66 and 233 minutes respectively. American lard (second test) showed 360 seconds for turbidity and 8 minutes for titer; tallow 75 second and 1¼ minutes; hardened fish oil 90 seconds and 1½ minutes and hardened coconut oil 330 seconds and 9 minutes. *Chem. Umschau Fette, Oele, Waschse u. Harze* 36, 165-7 (1929).

In treatment of material by dry rendering, to produce cracklings which are substantially water-free and which are separated by draining from rendered fat, the heated separated cracklings are subjected to the action of hot vapor to promote the extraction of their fat content, under pressure and temperature conditions which are substantially inhibitive of condensation of the vapors in the presence of the cracklings. U. S. Pat. 1,722,015.

A newly described process for the production of sulfonated oils comprises the sulfonation of animal or vegetable oils or fatty acids or hydrocarbons, oils or mineral waxes in the presence of oxidizing or reducing bleaching agents and the application of a subsequent bleaching treatment, either before or after neutralization. As bleaching agents, sulfites, hyposulfites, persalts or hydrogen peroxide may be used. Fr. Pat. No. 658,094.

Fats, oils or fatty acids are treated with alkali hypochlorites in the presence of a mineral or organic acid, and the products thus modified are treated with alkali hypochlorites or hypobromites either alone or in the presence of specified organic compounds. Fr. Pat. No. 33,131, addition to No. 633,922.

The extraction of fat from cacao powder or similar extractions may be accomplished in an apparatus in which a solvent such as benzol is caused to flow upwardly by displacement through a zone in which it is agitated with the cacao powder or other material to be extracted and through a second zone where it is permitted to become relatively quiescent so that material in the latter zone acts as a filter for the solvent. U. S. Pat. No. 1,721,858.