ABSTRACTS

Oils and Fats

Edited by
W. F. BOLLENS and R. E. KISTLER

The sulfur dioxide index of solid fats. A. Mazzaron. *Olii minerali, olii grassi, colori vernici* 14, 122-3 (1934).—The SO_2 values found were butter 1.9, horse fat 6.5; lard 5.0, tallow 1.4, margarine 1.0, coconut fat 1.5 and coconut oil 1.2.
R. SANSONE.

The high-pressure hydrogen of soybean oil. III. The formation of a wax ester. Y. Shinozaki and H. Kubo. *J. Soc. Chem. Ind., Japan* 37, Suppl. binding 780-1 (1934); cf. *C. A.* 29, 1273[5]. —At 350° an almost entirely esterified, wax-like substance was found. The chem. characteristics of ester formation as a function of the reaction temp. are presented. Attempts above 300° decompn. of soybean oil glyceride and alc. formation occurred and 350° was the optimum temp., but above 350° another unsaponifiable matter was produced. The exptl. ester consisted of stearic acid and octadecyl alc. and had the following characteristics: m. p. 58.5°, sapon. no. 102.4, Ac no. 0.9, I no. 0.4, d_4^{65} 0.8296 and np^{65} 1.4419.
KARL KAMMERMEYER.

Notes on the principles of the extraction of sunflower seed. R. Heublyum. *Mat. grasses* 26, 10315-17 (1934).—A brief outline of performance and troubles experienced in com. operations in a U. S. S. R. plant. It was found advantageous to treat the decorticated seed in which about 10% of husks were left. By preheating the seed before extn. no difficulty was experienced in extn. to a residual fat content of about 1% in the residue.
A. PAPINEAU-COUTURE.

Blown castor oils and the plasticity of nitrocellulosic films. R. Tersand. *Rev. prod. chim.* 37, 609-14 (1934); cf. *C. A.* 29, 1268[6].—A general discussion of the properties, advantages and uses of the 3 grades of blown castor oil produced by Soc. Anon. des Établissements Roure-Bertrand et Justin Dupont.
A. PAPINEAU-COUTURE.

A reaction of sesame oil. Livio Pavolini. *Olii minerali, olii grassi, colori vernici* 14, 41-3 (1934).—Add to a few drops of oil 1-2 cc. Ac_2O with a few drops of concd. H_2SO_4. A green color denotes sesame oil. Some olive, arachis, cotton and soy oils give a slight green. Mix 10 cc. of oil in a small separatory funnel with 5-6 cc. Ac_2O, adding 2-3 drops 2% furfural, and with precaution H_2SO_4; in absence of sesame oil, arachis, colza, soy, cotton and olive oils give a red-brown. With sesame oil there appears a cherry-red, soon changing to blue-green. If furfural is omitted, there is produced a green color turning bluish on addn. of furfural.
R. SANSONE.

A new vegetable oil from the seeds of pinus pumila Regel. G. V. Pigulevskii and M. A. Ivanova. *J. Applied Chem. U. S. S. R.* 7, 569-71 (1934).—The seeds of the *Pinus pumila* Regel contain 23.77% of oil. The kernel contains 51.2% oil, in addn. to starch, reducing sugars and albumin. The oil has d_{15} 0.9276, acid no. 2.34, sapon. no. 191.3, I no. 161.1; thiocyanogen no. 91.0. It contains satd. acids 5.09, oleic acid 17.52, linoleic acid 71.84 and linolenic acid 5.55%.
A. A. B.

Tobacco-seed cake and tobacco-seed oil. István Varga and Géza Dedinszky. *Kiserletügyi Közlemenyek* 37, 153-6 (1934).—Av. values for 10 samples of cake were H_2O 3.38, crude protein 34.05, crude fat 24.33, crude fiber 23.64, N-free ext. 9.63 and crude ash 4.97%. Averages of 10 samples of oil pressed at low pressure from different varieties of tobacco seed were d_{15} 0.9302, refraction at 25° 74.84, at 40° 66.39, sapon. no. 190.49, I no. (Winkler) 139.74 and point of inflammation in open crucible 294°. Viscosity ranged from 9.35 to 11.47° Engler. Oxygen absorption according to Livache in 2 days was 0.43%; in 7 days, 6.04; and in 14 days, 9.47%. Consistency of tobacco oils was similar to that of table oils. Colors ranged from transparent greenish to dark red. Neither oils nor cakes had any tobacco odor but the taste was bitter.
S. S. DE FINALY.

Action of commonly occurring micoörganisms on fats. A. Seduikh. *Bull. State Inst. Agr. Microbiol.* (U. S. S. R.) 5, 299-313 (1933).—Many of the commonly occurring microörganisms are able to decompose fats, with the formation of aldehydes and free acids. Rancidity of fats may thus at times be due to microörganic action.
H. C.

Investigation of fats and oils. R. Strohecker. *Z. anal. Chem.* 98, 210-20 (1934).—The first part of a comprehensive review of recent works.
W. T. H.

The surface tension of oils. E. Canals and M. E. Flous. *J. pharm. chim.* 20, 241-3 (1934); cf. *C. A.* 28, 1139.[2]—Upon re-detg. the surface tension of olive oil with an improved Lecomte du Nouy app., the results now agree with those obtained by the drop method. Between large limits of temp. ($t = 0$ — 150°), the surface tension (f in dynes per cm.) of olive oil varies linearly with temp. according to the equation $f = 36.5 - 0.073\ t$.
S. WALDBOTT.

A new method for the manufacture of castor oil. Lamy Torrilhon. *Compt. rend. acad. agr. France* 20, 976-8 (1934).—A rapid method is mentioned for the prepn. of a practically neutral castor oil. Such an oil can be used advantageously *for greasing motors* and can be stocked for long periods of time. It also has little tendency to gum.
J. R. ADAMS.

The sensitized bleaching of palm oil by light. Emil Baur and G. F. Fabbricotti. *Helv. Chim. Acta* 18, 7-17 (1935).—Various dyestuffs were added to emulsions of the palm oil and these exposed to intense light absorbed by the dyestuffs. The percentages of bleaching after certain times are given. Estd. quantum yields are given for the different dyestuffs, which are significant on a comparative basis.
A. B. F. DUNCAN.

Detection of sulfur oils [in olive oil]. E. Jaffe. *Industria chimica* 9, 890-4 (1934).—"S oil" can be detected by shaking the $CHCl_3$ soln. with $AgNO_3$ and $N(C_2H_4OH)_3$ in EtOH soln. The reduced Ag forms Ag_2S, which colors the $CHCl_3$ layer yellow-brown. Acids must first be removed from the oil.
B. C. A.

Report of the cotton experiment station, Barberton, S. Africa, Rotation crops. W. L. Fielding and M. F. Rose. Empire Cotton Growing Corpn., *Repts. Expt. Stations* 1932-33, 83-100 (1934). —Samples of the Yellow 1 variety of *soybeans* grown in S Africa contained H_2O 7.8-8.7, crude protein 36.5-40.0, oil 17.0-18.3, crude fiber 4.8-5.1, carbohydrates 24.5-26.6, and ash 4.8-4.9%. Kernels of the Barberton strain of *peanuts* contained H_2O 5.4 and oil 48.4%; the extd. oil contained 0.05% free fat acids (expressed as oleic acid) and had an acid value of 0.1. The B.4 and St.3 strains of *sunflower seed* grown in S. Africa contained H_2O 6.7, 6.8; crude protein 14.0, 18.4; oil 24.6, 26.0; carbohydrates 20.9, 18.7; crude fiber 31.9, 28.0, and ash 1.9, 2.6%, resp.
K. D. JACOB.

PATENTS

Decolorizing agents for oils, etc. *Norddeutsche chem. Fab.* Ger. 606,346, Nov. 30, 1934 (Cl. 12i. 38.02).—In making decolorizing agents for oils, fats, etc., by treating ferruginous clays with mineral acid, e.g., HCl, precautions are taken to avoid repptn. of Fe compds. in the clay when the latter is washed after the treatment. Thus, the clay may be washed with very dil. acid, or a compd. capable of forming a sol. nonhydrolyzable compd. with Fe, e.g., glycerol, may be added in a small proportion to the washing water. Exptl. results are given illustrating the deleterious effect of Fe compds. on the bleaching power of clay.

Purifying oils and fats. Soc. anon. "Le Carbone." Fr. 774,644, Dec. 10, 1934.—Oils and fats are purified in contact with filaments of activated carbon, preferably entangled in all directions.

Press for oleaginous materials. Fried. Krupp Grusonwerk A.-G. Fr. 774,131, Nov. 30, 1934.

Refining sesame oil. Guy W. Phelps and Raymond Bradley (to The Industrial Patents Corp.). Can. 345-681, Oct. 30, 1934.—Sesame oil is treated with NaOH soln. and water, and soap stocks formed are removed. The filtered oil is hydrogenated and washed with a small amt. of NaOH soln. The refined oil is used in shortening.

Separating oils from water. Aktiebolaget Separator. Fr. 774,102, Nov. 30, 1934.—Animal and vegetable oils, e.g., olive oil, contg. water are introduced into the bowl of the centrifuge under pressure so as to prevent the liquid forming a free surface in the interior of the bowl; this emulsification is avoided.

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