TABLE IV.
Unsaturated and Saturated Acids in Expressed Papaya Seed Oil

Acids	In unsaturated acids %	In saturated acids %	In original oil %	Glycerides in oil %
Oleic	100	......	76.58	80.03
Myristic	......	23.79	4.33	4.57
Palmitic	......	66.90	12.19	12.79
Stearic	......	9.31	1.70	1.78

Summary

The characteristics and composition of expressed papaya seed oil from Puerto Rico have been determined.

Acknowledgment

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Abstracts

Oils and Fats

Edited by
M. M. PISKUR and SARAH HICKS

BONE MARROW ANALYSES ON CATTLE AND HOGS. S. Schmidt-Nielson and Alf Espeli. *Kong. norske Vid. Selsk. Fork. 14*, 12 (1941). *Z. Fleisch- u. Michhyg. 52*, 232.

SPOILAGE OF ANIMAL AND VEGETABLE FATS; ESPECIALLY BY RANCIDITY AND ITS PREVENTION. Hans Werner. *Z. Fleisch- u. Milchhyg. 52*, 207-11 (1942).

PREPARATION OF FISH MEAL AND FISH OIL. J. A. S. van Deurs. *Ingeniøren 51*, No. 19, K 20-3 (1942); *Chem. Zentr. 1942, II*, 1191. The processing of lean and fat fish, crayfish, and other offal by a method in which the stock is acidified to a pH of 2 with an org. acid and followed by centrifuging to separate the oil is described. *(Chem. Abs.)*

THE COMPONENT GLYCERIDES OF LINSEED OIL. SEGREGATION BY CHROMATOGRAPHY. II. THE THIOCYANOGEN VALUE OF LINOLENIC ACID. F. T. Walker and M. R. Mills. *J. Soc. Chem. Ind. 62*, 106-9 (1943).

THE COMPONENT GLYCERIDES OF VEGETABLE FATTY OILS. PART II. SAFFLOWER OIL. N. L. VIDYARTHI. *J. Indian Chem. Soc. 20*, 45-50 (1943). The safflower seeds (Carthamus tinctorious) yield 30.5% of oil which contains myristic acid (along with lauric and other lower acids) 1.5%, palmitic acid 3%, stearic acid 1%, archidic acid with a trace of lignoceric acid 0.5%, oleic acid 33%, linolic acid with a trace of linolenic acid 61%.

IODINE NUMBERS AND REFRACTIVE INDEXES OF DOMESTIC (ARGENTINE) EDIBLE OILS. Geza Eckstein. *Industria Y quim. 5*, 25-34 (1943). *(Chem. Abs.)*

DETERMINATION OF THE IODINE NUMBER OF POLYMERIZED FOOD OIL. Robert Nergaard and Finn Jakobsen. *Tids. Kjemi, Bergvesen Met. 1*, 177-80 (1941); *Chem. Zentr, 1942, II*, 1192. Known methods were compared. Waller's method gave low results, Kaufmann's did not give a definite end point and the Wijs' method gave the best reproducible results. Recommended were ICl soln. prepd. with pure ICl and the I no. should be detd. at 16-18° with 2 hrs. reaction time and with at least 200% excess reagent. *(Chem. Abs.)*

ANTIOXYGENIC EFFECT OF CEREAL-FLOUR PASTE AS COATING ON CONTACT WRAPPERS FOR FATTY FOODS. W. L. Davies. *J. Indian Chem. Soc., Ind. & News Ed. 3*, 174-82 (1940). *(Chem. Abs.)*

FAT ABSORPTION IN SPRUE AND JEJUNOILETIIS. Nutr. *Revs. 1*, 331-2 (1943).

NUTRITIVE DIFFERENCES IN RATIONS CONTAINING UNHYDROGENATED OR HYDROGENATED FATS AS SHOWN BY REARING SUCCESSIVE GENERATIONS OF RATS. H. G. Miller. *J. Nutr. 26*, 43-50 (1943). In the experiments nutrition was not improved by replacing the lard with unhydrogenated soybean oil. However, when partially hydrogenated soybean oil or partially hydrogenated cottonseed oil replaced the lard, there was a decided improvement in relation to the number of young which were born, the number of young which were weaned, and the breeding of successive generations of rats. Hydrogenation does not destroy the vitamin E present in vegetable oils. Under conditions where oxidation may cause destruction of essential factors in the diet, use of hydrogenated oil is preferable to the use of unhydrogenated vegetable or animal fats.

CHANGES INDUCED BY ANEMIA IN THE BONE MARROW LIPIDS OF CATS. R. F. Krause. *J. Biol. Chem. 149*, 395-404 (1943). In anemia, bone marrow loses total lipid owing to a reduction in the neutral fat fraction. The phospholipid, free fatty acid, cholesterol, and cholesterol-free non-saponifiable fractions increase in anemia. The ratios of free to bound cholesterol, of phospholipid to cholesterol, and of the molar concentration of choline to that of phosphorus show no significant change during anemia. There is no significant change in the iodine number or mean molecular weight of the fatty acids of marrow during anemia. The lipemia after acute hemorrhage may be due to the transport of lipids to and from the marrow.

PATENTS

PROCESS OF REFINING. B. H. Thurman (Refining, Inc.). *U. S. 2,327,569.* Special means for injecting refining agent into flowing oil has been designed for use in a continuous system.

TREATMENT OF PAPER AND PAPERBOARD. S. Musher (Musher Foundation, Inc.). *U. S. 2,325,624.* In the method of making antioxygenic paper and paperboard there are the steps of providing the paper and paperboard with a pH of between about 4 and 6.9, incorporating with the paper and paperboard between about 0.2% and 5% of deoiled spice residue and then heating the paper and paperboard to at least 220° F. to cause a reaction between the deoiled spiced residue and the paper and paperboard.

VITAMIN PREPARATION. K. C. D. Hickman (Distillation Products, Inc.). *U. S. 2,326,644.* The process comprises dissolving a fish oil stearin which contains a fat sol. vitamin in a vegetable oil having a low m.p., cooling this mixt. until the stearin-like solids separate, sepg. the liquid portion from the solids and subjecting this liquid to high vacuum, unobstructed path distn. to sep. the vitamin content thereof in concd. form.

DRAWING (WIRE) COMPOSITION AND METHOD OF MAKING THE SAME. E. A. Nill (H. A. Montgomery Co.). *U. S. 2,326,387.* A drawing compn. base comprises sulfonated talloil in major proportion and plasticizing amts. of sulfonated sperm oil.

TALLOEL ESTERS OF SULFONIC AMINO ALCOHOLS. D. W. Jayne, Jr. and H. M. Day (American Cyanamid Company). *U. S. 2,322,202.*

Abstracts

Soaps

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APPLICATION OF THE PHASE RULE TO SOAP BOILING. James W. McBain and Will Win Lee. *Ind. Eng. Chem. 35,* 917-21 (1943). A series of vapor pressure measurements shows that an important phase, kettle wax, occupies a dominant position in the system soap-water- electrolyte. Kettle wax, and not fibrous curd, is grained out in soap boiling, except where very high concentrations of salt are employed. Vapor phase diagrams and ternary system diagrams are given.

COLD-, WARM- AND HOT-WATER SOAPS AND THEIR "ACTION." Josef Hetzer. *Fette u. Seifen 49,* 47-9 (1942). The cleansing action of a soap depends on the onset of action of the fats used in the various temp. ranges (thus the washing action of K soaps begins at a much lower temp. than that of Na soaps). H. gives "onset points" for a large no. of salves and grain soaps. Transparent and yellow soft soaps are cold-water soaps; warm-water soaps are the so-called cold-stirred coconut soaps; grain soaps are the hot-water soaps. *(Chem. Abs.)*

GRANULATED SOAPS: PREVENTION OF DUST. *Perfumery & Essential Oil Record, 34,* 203-4 (1943). A process is described for applying to the surface of soap granules a small amount of a coating agent capable of strengthening the particles so as to prevent the formulation of soap dust. The agent should be hygroscopic in nature to withdraw moisture from the air and to bind dust particles to each other or to the larger granules. Substances which are suitable are: polyhydric alcohols, organic and inorganic phosphates, alkyl phosphates, water-soluble sulphonated oils, and materials of starch compositions.

POTASSIUM OR SODIUM SOAP. Kurt Lindner. *Wascherei-Ber. 9,* 197-200 (1941). The K soaps, soft soaps, have better sudsing and cold washing capacity and are easier to rinse off than Na soaps. The inconvenience of portioning these soaps in the household is a disadvantage. The K soaps solns. do not gel. Since K soaps are superior to Na soaps at low temps., K soaps are especially suitable for washing colored and fine fabrics. *(Chem. Abs.)*

THE ACTION OF ZINC SOAPS IN PAINTS. A Foulon. *Farbe u. Lacke 1942,* 171. The white Zn pigment reacts with the fat acids in paint ingredients forming Zn soaps. These produce a smooth, water-repellent surface and retard the absorption of water and the swelling of the paint film, but tend to render the paint coat brittle and hard. This last effect can be alleviated by the use of softening agents. *(Chem. Abs.)*

COLD PROCESS SOAPS: LOCAL MANUFACTURING METHODS OF CEYLON. Reginald Child. *Soap, Perfumery & Cosmetics 16,* 457-8 (1943). A review of the cold process of soap making, giving formulae, tables, and working methods.

STANDARD SOAP. Karl Braun. *Deut. Parfum-Ztg. 27,* 271 (1941). B. discusses pretreatment of fat for manuf. of standard soap, the action of added kaolin and the detn. of the fat acid and the clay content of the finished soap. *(Chem. Abs.)*

COMBATING RANCIDITY IN SOAPS. Paul I. Smith. *Seifensieder-Ztg. 68,* 408-9, 418-19 (1941). Induction period, the influence of carotene, oxidation inhibitors, the use of additives and salts as preservatives and the modified Kreis test are discussed. *(Chem. Abs.)*

SPECIFIC OILS USED IN THE MANUFACTURE OF ROSIN SOAPS. Henri Blin. *Bull. Inst. pin. 1939,* 108-9. The Marseilles soap industry uses 3-6% of pale colophony in the prepn. of pure soap and coconut oil (up to 50%) and peanut oil are the principal raw materials for extra-pure white Marseilles soap. Coconut oil, palm-kernel oil, bleached palm oil and tallow are recommended for use in rosin soaps. Specifications and standards for the rosin soaps, fats and fatty oils are included. *(Chem. Abs.)*

EVALUATION OF ROSINS IN SOAPS. Soap 19, No. 8, 57-8 (1943). Refined wood rosin is superior to gum rosin or hydrogenated rosin in maintaining and improving sudsing action. They are about the same in detergent action under ordinary conditions, but vary according to hardness of water. Tables give the results of detergent action in built soaps.

SULPHONATED OIL PRODUCTS: USES IN TEXTILE PROCESSING. *Textile Colorist 65,* 283-7, 330 (1943). The main types of sulphonated oils used in the textile industry are castor and olive oils, palm oil, cottonseed oil, rape-seed oil, coconut oil and tallow. Possible applications include: Wetting-out agents, emulsifying agents, softening and finishing agents for all types of fibers, detergents in conjunction with other scouring and bleaching agents, dyeing assistants with solvent, dispersing, penetrating and levelling actions, textile printing, printing assistants, stain removal, crepeing and dulling, rayon treatment, and dull finishes for rayons.

SOAP AND DERMATITIS. *Soap 19,* No. 4, 37-8 (1943). Reports of experiments are given showing that although alkalinity has long been regarded as the chief cause of soap irritation on skin, this is true only if