ABSTRACTS

David Wesson, *Abstract Editor*

Stable high chlorinated fish oils of good adhesive and weather resisting properties and which may be used in paints are obtained by chlorinating fish oil until chlorine is no longer absorbed and then passing air or inert gas into the oil at 70° for several hours, followed by treatment with air containing ammonia for a short time and addition of a small proportion of monoethylaniline. British Pat. No. 323,801.

Materials such as fish, fish waste, fats, seeds or garbage are subjected to mechanical impaction and disintegration, oils and fats are melted from the material, and the partially disintegrated mass is partially dehydrated to a point where the moisture content of the solid residue is reduced to from 5 to 20% while maintaining the material at temperatures of about 43-100°. The dehydrated solid residue is then subjected to continuous expression. U. S. Pat. No. 1,760,059.

Experimental data on the butter of *Dumoria africana* is said to show conclusively that the butter is essentially a mixture of the glycerides of stearic and oleic acids. It also contains small quantities of the glyceride of palmitic acid and of an acid-alcohol. No fatty acid higher than stearic is present. This butter has been suggested as a possible new source of pure stearic acid. *Mat. Grasses* 21,8701-3(1929).

Among papers presented before the Division of Agricultural and Food Chemistry at the Meeting of the American Chemical Society at Cincinnati, September 8-12, are the following of particular interest in the chemistry of oils and fats:

1. The chemical and physical characteristics of the expressed and the residual oil of the Brazil nut have been determined. The low acidity of both types of oils suggests the probable absence of any very active fat-splitting enzymes in the nut. The reported presence of stearin, palmitin and olein has been confirmed. To this list have been added myristin and linolein. The percentage composition of the residual oil was found to be as follows: myristin, 1.79; palmitin, 13.55; stearin, 2.58; olein, 55.64; linolein, 21.65; unsaponifiable matter, 0.68; residues and undetermined, 4.11. H. A. Schuette, Ralph W. Thomas and Mabel V. Duthey, *University of Wisconsin.*

2. Of the terms used to designate the more or less elastic mass resulting from the interaction of sulfur monochloride and fatty oils, such as caoutchouc surrogate, rubber substitute, vulcanized oil and white factis, the latter is probably most common. The discovery of this reaction some eighty years ago is probably traceable to accidental origins in that a French chemist, Nickles, having sealed with olive oil the stopper of a bottle containing sulfur chloride, observed that a gummy substance had formed where the vapors of the sulfur chloride had come into contact with the oil. Ellery H. Harvey and H. A. Schuette, *University of Wisconsin.*

For the separation and determination of solid fatty acids in edible fats, 2.5 grams of the fat to be studied is saponified at the boiling point for ten minutes under a reflux condenser with 1 cc. of 50 percent potassium hydroxide solution and 25 cc. of 95 percent alcohol. In the case of oils with solid unsaturated fatty acids, 1 gram is taken, and a 5 percent alcoholic solution of palmitic acid substituted for the alcohol. The boiling is continued after addition of 100 cc. of a solution containing 50 grams of lead acetate and 5 cc. of 96 percent acetic acid in 1 liter of 80 percent alcohol (by volume), and 5 cc. of 96 percent acetic acid until the precipitate is completely dissolved; 20 cc. of boiling water are added, and the mixture is allowed to cool slowly overnight to 22°C. The filtered precipitate is washed with 50 cc. of 70% (by volume) alcohol, and extracted with 3 cc. of 96% acetic acid and 100 cc. of the hot lead acetate solution. The hot solution is shaken with 15 cc. of hot water, and the pure lead salts of the solid fatty acids separated by filtration on the following day, washed with alcohol as before, dissolved in 5 cc. of dilute nitric acid (sp. gr. 1.2) added. Warm water is added carefully, and the acids separated by heating at 98°C. until they form a clear layer on the surface. They are then filtered from the cooled solution, washed till neutral and dried in the air, and finally in the oven. *Z. Unters. Lebens.*, 59, 237-58 (1930).