

**6818. Oil Palm.** African oil palm. Tropical tree, *Elaeis guineensis* Jacq., *Arecaceae* (alt. *Palmae*), bearing large bunches of plum-sized fruit. Grown primarily for the edible oils obtained from the fruit and seed. *Habit.* West Africa, Malaysia. The closely related **American oil palm**, *E. oleifera* (Kunth) Cortés, is grown in Central and South America and is also used. Review of cultivation, oil production, characteristics and uses: J. A. Cornelius, *Prog. Chem. Fats Other Lipids* **15**, 5-27 (1977); Y. Basiron, *J. Oleo Sci.* **50**, 295-303 (2001). Review of safety assessment of oils: W. Johnson, Jr., *Int. J. Toxicol.* **19**, Suppl. 2, 7-28 (2000).

**Palm oil.** [8002-75-3] Obtained from the fleshy orange-red mesocarp of the fruit. *Constit.* Fatty acids, primarily palmitic (44%), oleic (39%), and linoleic (10%); carotenoids, esp.  $\alpha$ - and  $\beta$ -carotene; tocopherols, esp.  $\gamma$ -tocotrienol; sterols, esp.  $\beta$ -sitosterol. May be refined to remove color and odor components and separated into olein and stearin fractions. Review of biochemistry, toxicology and role in nutrition: D. O. Edem, *Plant Foods Hum. Nutr.* **57**, 319-341 (2002). Crude oil is deep orange in color with characteristic sweetish odor. Semisolid at 21-27°; mp 27-50°.  $d_{25}^{50}$  0.89-0.92.  $n_D^{40}$  1.453-1.459. Sapon. no. 196-209. Iodine no. 46-60.

**Palm olein.** Liquid oil, mp 21.6°.  $d^{50}$  0.91-0.92.  $n$  1.47. Sapon. no. 189-198.0. Iodine no. 55.0-61.54.

**Palm stearin.** Solid, mp 44.5-56.2°.  $d^{50}$  0.88-0.89.  $n$  1.45. Sapon. no. 193-206. Iodine no. 21.6-49.4.

**Palm kernel oil.** [8023-79-8] Obtained from seed by mechanical expression or solvent extraction. *Constit.* Fatty acids, primarily lauric (48%), myristic (16%) and oleic (15%); sterols, esp.  $\beta$ -sitosterol; triterpene alcohols; hydrocarbons. Review of properties and uses: T. P. Pantzaris, M. J. Ahmed, *Palm Oil Devel.* **35**, 1123 (2001). Colorless to brownish yellow oil, solidifying to a white to yellowish fat. Crude oil has a strong, characteristic taste and odor and is most often refined before use. mp 25-30°.  $d_{25}^{40}$  0.900-0.913.  $n_D^{40}$  1.4495-1.4515. Sapon. no. 244-254. Iodine no. 14-20.

**USE:** Cooking and frying oil. In margarines, shortenings, non-dairy creamers, whipping creams; as cocoa butter substitute. In manuf of soaps, oleochemicals. In cosmetics, personal care products as skin conditioner, viscosity increasing agent, solvent.