

Characteristics of fatty alcohols from the sodium reduction of palm fatty acid methyl esters

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Abstract

Fatty alcohols have been prepared from palm oil and palm kernel oil methyl esters by the sodium reduction process. The crude palm oil based product was a light brown soft waxy solid with an alcohol content of 76.4% (alcohol yield of 85.9%) while the palm kernel oil based product was a transparent semi-solid with an alcohol content of 75.9% (alcohol yield of 88.3%). The purified alcohol products gave the distinct infra red bands at 3.0 μ m, 3.3-3.6 μ m, 6.9 μ m and 9.5 μ m characteristic of long chain alcohols and refractive indices $n_D^{27.5}$ (27.5 deg C) of 1.4590 and 1.4505 for the palm oil and palm kernel oil based products respectively. The end use potentials of the products are discussed.