

**THE FATTY ACID PROFILE OF PEANUT OIL EXTRACTED
USING VARIOUS SOLVENT**

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ABSTRACT

FATTY ACID PROFILE OF PEANUT OIL EXTRACTED USING DIFFERENT SOLVENT

Peanut oil has been used in various products such as cooking oil, cosmetic, biodiesel and others due to its unique properties. Five major solvent were used to extract oil from peanut which is given into different amount of oil content and fatty acid profile. The solvent used were acetone, diethyl ether, ethyl acetate, hexane, and petroleum which results in oil content of 42.8%, 43.6 %, 41.8%, 43.6%, and 41.6% respectively. The fatty acid profiles of commercial peanut were determined by gas chromatography mass spectrometer with capillary column. The result obtained were higher unsaturated fatty acid (UFA) consists of oleic and linoleic acid and lower for saturated fatty acid (SFA) which is palmitic, stearic, and arachidic acid. The percentage of UFA is 67.03% for acetone, 66.75% for diethyl ether, 66.85% for ethyl acetate, 67.85% for hexane, and 66.55 % for petroleum ether and the acid value is 2.1, 2.5, 2.8, 2.1, and 2.1 mgKOH/gram of oil used respectively. In order to obtained very high oil content, high unsaturated fatty acid percentage and high quality of oil, hexane is the effective solvent compare to other solvent.

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