

Fatty alkyl tosylate from *Sesamum indicum* seed oil: a potential resource for the oleochemical industry

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Fatty alkyl tosylate was synthesized from the seed oil of *Sesamum indicum* using simple chemical reaction. The fatty acid composition of the oil was determined using Gas Chromatography coupled with Flame ionization detector (GC-FID). The progress of the synthesis was monitored using Fourier Transform Infrared spectrometer (FTIR) and Nuclear Magnetic Resonance (¹HNMR). The tosylate was characterized using X-ray Diffraction analysis technique (XRD), Scanning Electron Microscopy (SEM) coupled with energy dispersive spectroscopy (EDS) and Thermogravimetric analysis (TGA). The oil yield was 43.36 % while the most dominant fatty acid in the oil was C18:2. The study presents *Sesamum indicum* seed oil (SSO) as a potential resource for the oleochemical industry.

Keywords: Fatty acid; Fatty alkyl tosylate; *Sesamum indicum*; Underutilized seed oil

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