J Chromatogr Sep Tech 2018, Volume 9
DOI: 10.4172/2157-7064-C3-047



## GC-MS and FT-IR characterization of oil from Neocarya macrophylla seed

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Fatty acids qualitative determination from hexane extracts of Neocarya macrophylla seed oil was carried out using gas chromatography–mass spectrometry (GC-MS). The results obtained from the analysis showed that the oil contain the following fatty acids; myristic acid, palmitic acid, stearic acid, palmitoleic acid, elaidic acid, oleic acid, erucic acid, behenic acid, heneicosanoic, icosatetraenoate and eicosatrienoic acid. The results of the Fourier-transform infrared spectroscopy (FT-IR) analysis showed 3475.84 $cm^{-1}$ for bonded and non-bonded –O–H groups, 2934.79 $cm^{-1}$, 2869.21 $cm^{-1}$ and 2037.86 $cm^{-1}$ The asymmetrical and symmetrical modes of vibration is at the region of unsaturated fatty acid. The ester carbonyl functional group of the triacylglycerols i.e. C=O which showed a very strong and sharp band at 1740.81 $cm^{-1}$, 1521.74 $cm^{-1}$ for carboxylic C=O stretching vibrations. The bending vibrations of the $CH_2$ and $CH_3$ aliphatic groups and the in-plane bending vibration of CH cis-olefinic groups are seen at around 1358.9 $cm^{-1}$. At 721.4 $cm^{-1}$ and 442.68 $cm^{-1}$, showed the frequencies of the in- and out-of plane rocking of the cis-olefinic $CH_2$ group and C–O stretching vibration (e.g in triacylglycerols) these results showed the potential of this oil in cosmetic industry.

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