

Chemical Analysis and Anti-Microbial Activity of *Malva Sylvestris* Seed Oil

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ABSTRACTS

New and interesting unusual fatty acids (Fatty acids containing functional group other than carboxyl group) present in high concentration in certain seed oils are being exploited for commercial use. These fatty acids of unusual structures are highly important to the production of oleo-chemicals. They are used in protective coatings, plastics, cosmetics, lubricants, varieties of synthetic intermediates, stabilizers in plastic formulations.

Malva sylvestris (Malvaceae), commonly known as common mallow or cheeses is a Biennial or perennial herb, has a wide spectrum of pharmaceutical properties such as anti-phlogistic, anti-oxidative, anti-inflammatory, astringent, demulcent, diuretic, emollient, wound healing, expectorant, laxative, anti-cancer etc. Although it exerts anti-cancer property, its seed oil contains good percentage of carcinogenic epoxy and cyclopropanoid fatty acids.

The seed of *Malva sylvestris* was found to contain 4.37% oil. It responded to the Halphen test as well as picric acid test indicating the presence of cyclopropanoid as well as epoxy fatty acids, respectively, in addition to the other usual fatty acids. The identification of epoxy and cyclopropanoid fatty acids was made on the basis of chromatographic and spectroscopic techniques. GLC analysis shows 10 % Vernolic, 10.2 % Malvalic and 11.4 % Sterculic acids in addition to normal fatty acids. The oil was analysed for anti-bacterial and anti-fungal activities. The oil shows promising anti-bacterial activity.