

Investigation on potential of *Suaeda fruticosa* as a source of edible oil

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Abstract

Given the extent of saline lands in Iran, cultivation and utilization of halophytes and salt tolerant species under the condition that both water and soil are saline could be a viable option in production and extraction of vegetable oils from halophytes and salt tolerant species. *Suaeda fruticosa* is a leaf succulent perennial halophytic shrub which is highly salt Soil salinity in Iran . *Suaeda fruticosa* species belong to the Chenopodiaceae family, the second largest family in the world of plants kingdom. It is a leaf succulent perennial halophyte plant and large number of biomass. The aim of this study is to investigate the potential of *Suaeda fruticosa* as a source of edible oil as well as qualitative and quantitative analysis of the oil. For this purpose, seeds of *Suaeda fruticosa* were collected from saline soils of Aran & Bidgol, Iran. The extraction of fatty acids was performed by solvent in Soxhlet method, and GC was used to analyze the fatty acids. The quantity of oil present was 6.61%. According to the results of seed oil analysis by gas chromatography, the seeds of *S. fruticosa* contains 14 fatty acids as saturated fatty acids Butyric acid, Caproic acid, Caprylic acid, Capric, Lauricaci), Myristic, Palmitic, Stearic, Arachidic acid and un-saturated fatty acid Myristic acid, Palmitoleic acid, Oleic acid, Linoleic, and γ -Linoleni (GLA). Our data clearly indicate that the seeds of halophyte *Suaeda fruticosa* could be used as a source of oil for human consumption.

Key words:, *Suaeda fruticosa*, seed oil, fatty acid, saturated fatty acids, un-saturated fatty acid, saline soils.