

## **Fatty acids, Sterols and Vitamin E in Milk Thistle (*Silybum marianum* L.) Seeds Oil**

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*Silybum marianum* (Family: *Astraceae*) is an annual or biennial plant, native of the Mediterranean areas, which grows in sandy soil and requires warm and dry climate. It grows in the most of regions in Iran. This plant has been mostly used as an herbal medicine; however, the seeds can be used as an oil source. In this study, fatty acids, sterols and vitamin E were determined at four varieties grown in Ardebil–Iran: two modified foreign varieties of Budakalase (originated from Hungary) and CN-Seed variety (originated from England) and two native varieties of Khoreslo and Babak castle. The oil content was ranged from 26% to 31%. Fatty acids and sterols composition of the oil samples were determined by GC. The extracted oils contained fatty acids: linoleic acid, oleic acid, linolenic acid, palmitic acid, stearic acid, arachidic acid, eicosenoic acid, behenic acid and lignoceric acid. Results showed that linoleic acid was predominating followed by oleic acid. Myristic acid was also in trace amount in the all samples.  $\beta$ -Sitosterol, stigmasterol, campesterol, cholesterol, cleroesterol and  $\Delta^7$ - sterol were determined in the all extracted oil samples by GC, which  $\beta$ -Sitosterol was the predominate.  $\alpha$ - Tocopherol (vitamin E) was determined by HPLC which ranged from 187 to 465 ppm.