

## CHROMATOGRAPHIC ANALYSIS OF *SILYBUM MARIANUM* (L.) GAERTN. FATTY OIL

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**Abstract.** The present paper describes biochemical (fatty oil) composition of *Silybum marianum* (L.) Gaertn. of Moldovan origin. The oil content of the seeds was approximately 25%. Linoleic acid (C18:2), an essential polyunsaturated fatty acid, is the most abundant (48.88%), followed by monounsaturated oleic acid (C18:1, 31.94%) and saturated palmitic acid (C16:0, 7.61%). Also, saturated stearic (C18:0, 4.31%), arachidic (C20:0, 2.63% and behenic acid (C22:0, 2.30%) were identified. The minor fatty acids are represented by saturated myristic (14:0, 0.09%) and margaric acid, (17:0, 0.07%), monounsaturated eicosenoic (C20:1, 0.99%), palmitoleic (C16:1, 0.07%) and erucic acid (C22:1, 0.08%). The RP-HPLC analysis of tocopherols composition showed the main components:  $\alpha$ -tocopherol (23.45 mg/100g) and  $\gamma$ -tocopherol (5.60 mg/100g). Based on the obtained results, the extracted oil from milk thistle seeds is rich in essential fatty acids (about 50%) and tocopherols (29.09 mg/100g) and it can be used in food preparation.

**Keywords:** *Silybum marianum* fatty oil, GC analysis, fatty acids methyl ester, RP-HPLC analysis,  $\alpha$ -tocopherol.

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