TOTAL CAROTENOID CONTENT OF LOCAL BERRIES LIPOPHILIC EXTRACTS*

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Abstract: Nowadays consumers tend to prefer natural compounds and additives to be used in food products production although food industry uses mostly chemically synthesized antioxidants and food additives. Sea buckthorn and rosehips berries are widely spread in Moldova which fact can motivate its use mainly in food industry.

Carotenoids represent a class of compounds that have colouring power, health benefit, antioxidant capacity, and antiobesity effect [1]. In order to analyze the carotenoid content of local berries were performed extractions in sunflower oil at preset temperature and time. Using analytical methods were determined the content of chlorophyll a and chlorophyll b, lycopene, β-carotene and zeaxanthin.

According to bibliographic sources, the carotenoids content may vary between 1 and 20 mg/L [2]. The results showed that the sea buckthorn extract has a content of chlorophyll a - 0,36±0,04 mg/l and b - 0,36±0,07 mg/L, the amount of β-carotene is 21,69±0,04 mg/L; lycopene - 21,49±0,14 mg/L; zeaxanthin - 24,31±0,06 mg/L. For the rosehip extract the content of chlorophyll a and b is 0,047±0,006 mg/L and respectively 0,28±0,01 mg/L, and the amount of β-carotene is 13,58±0,05 mg/L; lycopene - 14,39±0,38 mg/L; zeaxanthin - 15,19±0,06 mg/L.

Evaluating the carotenoids content of local berries extracts we can conclude that there is a high possibility to motivate the continuous use of this compounds in the production of functional food products with a high lipid content. Also there are possibilities to replace synthetic additives with natural ones to offer to consumers high quality and safe for consumption food products.

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References

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