Full Paper _____ *Thematic Section:* Biochemical Research.
Reference Object Identifier – ROI: jbc-02/16-47-9-150 *Subsection:* Biochemistry.
Publication is available for discussion in the framework of the on-line Internet conference "*Chemical basis for the rational use of renewable natural resources*".
http://butlerov.com/natural_resources/
Submitted on November 24, 2016.

Bioactive lipids and antioxidants cranberry, lingonberry and thistle

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Keywords: thistle oil, cranberry, lingonberry, polyunsaturated fatty acids, carotenoids, alpha-tocopherol, vitamin A.

Abstract

It the article the fatty acid and vitamins composition – antioxidants thistle seeds, fruits, cranberries and cranberries – are studied. Fatty acid composition was examined by GFA soluble antioxidant amount determined by HPFA. Known multivitamin agents were tested in comparison: sea buckthorn oil and wheat fetus oil, have practical significance for the pharmaceutical and food industries. It is found that cranberry, lingonberry and thistle lipids preferably contain polyunsaturated fatty acids: 72%, 74%, 68.5% respectively. In comparison, wheat fetus oil and sea buckthorn at 1.5 and 3.9 times lower than the investigated lipids on this indicator. Monounsaturated fatty acid fraction is oleic acid (18:1): 24.7% for, cranberries – 13.3%, milk thistle – 21.5%. There is palmitic (16:0) acid among saturated fatty acids in milk thistle and cranberry: 1.9% and 4%, respectively, and in fruit cranberries – lauric (12:0) acid – 10.2%. The sea buckthorn fruit oil level of saturated and monounsaturated fatty acids is comparable and between 39% and 42%, wheat fetus oil – 14.8% and 38.2%. Unsaponifiable part of the lipids presented by tocopherols, carotenoids, vitamin A. High levels of tocopherols found in wheat fetus oil 478.1 mg/100 g, carotenoids – in sea buckthorn fruit oil 435 mg/100 g. Compared with those oils cranberry, lingonberry and milk thistle fraction contain to 3.0-4.5 times fewer tocopherols and almost 30 times lower levels of carotenoids. The content of tocopherols, carotenoids, vitamin A is: lipid cranberry 141 mg/100 g, 1.4 mg/100g, 13.3 mg/100g; lipid cranberries 86 mg/100g, 0.6 mg/100g, 11.7 mg/100g, respectively. Carotenoids were not detected in seeds of milk thistle.

Analysis of the features of fatty acid composition and the amount of natural fat-soluble antioxidants number shown that thistle lipids, cranberries and cranberries can be considered as a promising source of polyunsaturated fatty acids and fat-soluble vitamins.

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