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Study of the antioxidants and nutrients in cloudberry (Rubus chamaemorus L.) in Latvia

Cloudberry (*Rubus chamaemorus* L.) is a species of the boreal zone with a distribution areal in the northern hemisphere and the Latvian cloudberry localities are close to the southern distribution area of the species in Europe. It is an economically important plant that is already cultivated in the Fennoscandia. Fresh cloudberry fruits and compounds derived from fruits and leaves contain several health-promoting substances: vitamins, flavonoids and phenolic acids with antioxidant properties (tannins, flavone, quercetin, naringenin) The most valuable components are those with antioxidant properties, such as ascorbic acid, carotenoids, and polyphenolic compounds. The aim of the study is to create and analyse a collection of cloudberry samples representing Latvian population. Processed cloudberry seeds will be further used as breeding material for establishment of agricultural culture adapted to regional climatic and ground conditions.
Cloudberry samples from eight deposits in Latvia were analyzed. Presence of antioxidants including ascorbic acid, β-carotene, xanthophylls and total phenols were determined in the berries. Macroelements - N, P, K, Ca, Mg, S and microelements - Fe, Mn, Zn, Cu, Mo, B were determined in the leaves. Level of all detected antioxidants found in berries harvested in Baltais and Zaļezers bogs was higher in comparison to samples representing Nītaure, and Lielais un Pemme bogs. Highest content of all identified macro- and microelements was found in the leaves harvested in Lauga and Pelečāre mires.

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Key words: cloudberry, antioxidants, phenolic compounds, macro- and microelements

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