

**ACCUMULATION AND DISTRIBUTION OF MICROELEMENTS IN *VACCINIUM VITIS-IDAEA* PLANTS  
(ERICACEAE) IN THE SOUTHERN BAIKAL AREA**

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SUMMARY

The purpose of this study was to determine the microelements (Mn, Fe, Zn, Cu, Co, Cr, Ni, Pb and Cd) content and distribution in the aboveground and underground parts of the *Vaccinium vitis-idaea* L., grown in the Southern Baikal region. Atomic absorption spectrometry was used to determine the concentrations of microelements. Results obtained indicated that the metals concentrations ranged from 0.1 (Cd) to 1105 (Mn) ppm. The rows of the elements accumulation in the plant were compiled; the coefficients of accumulation (CA) and of root barrier were calculated. It was shown that Fe, Ni, Pb, Cd and Co accumulated in roots of *V. vitis-idaea*, Mn and Zn accumulated in leaves, Cu and Cr in berries. According to the CA, *V. vitis-idaea* acted as accumulators of Mn, Zn, Cu, Cd (CA > 1), and excluders of Fe, Ni, Pb, Cd, Co (CA < 1). Significant correlations were found between content of acid-soluble forms of Mn, Fe, Zn, Cr in the soil and leaves and stems of *V. vitis-idaea* ( $r = 0.67\text{--}0.88$ ,  $P < 0.05$ ,  $n = 10$ ). We have concluded that 100 g berries of *V. vitis-idaea* can provide up to 30–160 % of daily human nutrient requirement of Mn, Cr, Ni and Co.

Key words: *Vaccinium vitis-idaea*, berries, leaves, stems, roots, microelements.