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Czech J. Food Sci.

**J. Musilová, T. Tóth, J.
Árvay:**

Contents of Heavy Metals in Different Saccharides Fractions of Potato Tubers

Czech J. Food Sci., 27 (2009): S382-S385

In this work the Cd, Cu and Zn accumulation in potatoes, their influence on starch, water-soluble (WSS) and water-insoluble saccharide (WIS) contents and content of heavy metals in various saccharide fractions of potatoes were determined. The fraction of WSS was isolated by Somogyi method, the WIS fraction was obtained from delipided portion of potatoes. Enhanced pseudototal Cd contents in relationship to limit value 0.7 mg/kg of soil were determined in 13 soil samples (0.72–1.06 mg/kg). Contents of Zn and Cu were lower than their limit values in all observed soil samples. Observed heavy metals have not influence on their accumulation in potatoes, the Cd content in potatoes (0.0015– 0.0042 mg/kg f.m.), Cu (0.0590– 0.1780 mg/kg f.m.) and Zn contents (0.1887– 0.3517 mg/kg f.m.)

were also lower than their limit values.
The proportion of observed heavy metals in selected saccharide fractions: Cd (mg/kg): 0.017– 0.140 (starch), 0.0133– 0.2293 (WIS), 0.8711– 109.7713 (WSS); Cu (mg/kg): 0.067– 1.433 (starch), 0.2844– 6.9877 (WIS), 18.0134– 1070.5216 (WSS); Zn (mg/kg): 6.667– 66.300 (starch), 0.7869– 23.3673 (WIS), 101.4842– 4020.790 (WSS)

Keywords:

potatoes; heavy metals; saccharides; starch

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