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## Czech Journal of FOOD SCIENCES

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# Czech J. Food Sci.

Srebo<sub>čan</sub> E., Prevendar Crnić A., Ekert Kabalin A.M., Lazarus M., JurasovićJ., Tomljanović K., AndreićD.,. Strunjak Perović I., Čož-Rakovac R.: Cadmium, lead, and

mercury concentrations in tissues of roe deer *(Capreolus capreolus L.)* and wild boar (*Sus scrofa* L.) from Lowland Croatia

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Cadmium, lead, and mercury concentrations were determined in roe deer and wild boar tissues (muscle, liver, kidney) of three different age groups from

Iowland Croatia. Cadmium concentrations in the examined tissues increased with age in both species, being the highest in the kidney, and higher in roe deer as compared to wild boar. Lead concentration was higher in younger animals in comparison with both older groups. Contrary to the expectations, roe deer tissues revealed mostly higher lead concentrations than those of wild boar. Mercury concentration in the tissues of the animals examined was relatively low and no correlation with age was found. However, mercury concentration was higher in kidney than in liver with both species. Wild boar had higher mercury concentrations in tissues than roe deer in all age groups. Cadmium and mercury concentrations in both species from Iowland Croatia are comparable to those given in similar studies in other European countries, while lead concentration was lower in wild boar and higher in roe deer tissues than those in the same species from European countries. From the hygienic point of view, the muscle samples from roe deer and wild boar were edible as the concentrations of cadmium and lead did not exceed the values

However, cadmium concentration in liver exceeded the prescribed values in one fifth of all samples while lead concentrations were lower than the allowed concentrations. Most kidney samples from both animal species contained cadmium exceeding the recommended concentrations, while lead concentrations in all samples did not exceed the official value regulation. Mercury concentrations are no longer (since 2008) a matter of legislative.

#### **Keywords:**

roe deer; wild boar; heavy metal; tissue concentrations; legislation

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