

Assessment of concentrations of metal Cadmium and Cromium in different tissues of teal (*Anas crecca*)

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Abstract

The aim of this study was to determine the concentration of metals Cd and Cr in liver, kidney and muscle tissues of teal *Anas crecca* (N=16) from Fereydoonkenar wetland. The study was conducted between November and December 2015. The elements Cd and Cr were assayed using a graphite furnace atomic absorption spectrometer and the results were given as mg/kg wet weight. The concentration of metals was compared between the liver, kidney and muscle tissue and using one-way ANOVA, followed by Tukey's test. The highest mean concentrations of Cd and Cr were observed in the kidney at 1.45 and 0.56 mg/kg wet weight, respectively. The lowest mean concentration of Cd and Cr were measured in muscle tissue at 0.05 and 0.08 mg/kg wet weight, respectively. The distribution patterns of Cd and Cr in tissues of teal follow the order: kidney>liver>muscle. All the results were statistically significant at $P < 0.001$. The results indicated that there were negative correlations ($r = -0.798$, $P < 0.01$) between weight and Cr in muscle. In this study, Cd and Cr concentrations in the edible tissues of teal were below the maximum permissible limit of the WHO.

Keywords: Teal, Cd, Cr, Fereydoonkenar wetland.