

PIXE analysis of trace element levels in feather samples of birds of prey

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Abstract

The purpose of this research is to observe the effects of harmful trace elements in birds of prey.

The feathers of Osprey *Pandion haliaetus*, Black-tailed Gull *Larus crassirostris* and Ural Owl *Strix uralensis* were analyzed for 5 harmful trace elements (Cr, As, Cd, Hg, Pb) using PIXE at NMCC. The concentration of Hg and Pb were detected from all samples. Range of those elements' concentrations were as follows: (Hg 4.3–34.7µg/g, Pb 3.4–27.6µg/g). It seemed that the difference of Hg concentrations was not caused by the difference of food habits among birds of prey. Cr and As were not detected from most of samples. Cd was not detected from all samples.