

Comparative study of fluorine and trace elements in teeth of sharks by PIXE analysis

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Abstract

We have measured the concentration of elements in tooth of sharks using PIXE method. 50 samples were taken from 10 species, 3 family of shark. As a result, 18 elements were detected in tooth of sharks. Three elements, calcium, phosphorus and fluorine showed high concentration. Four transition elements, chromium, manganese, iron and nickel, showed low concentration, and there were difference in concentrations by family. There were differences in fluorine concentrations by shark family. Fluorine concentrations of tooth may be caused by structures and shape of teeth and differences of predation.