Chemical quality indicators of surface water from Danube Delta lakes – heavy metals

Liliana Teodorof, Cristina Nastase, Irina Anuti, Cristina David

Danube Delta National Institute for Research and Development, 165 Babadag, Tulcea – 820112, tel: 0240 524546, email: lilianateodorof@indd.tim.ro

The heavy metals concentrations for the second quality class in the Danube Delta lakes are established by the Normative 161/2006.

We establish the sampling points as follows: Fortuna, Nebunu, Somova, Merhei, Iacub, Rosu, Cuibu cu lebede, Uzlina, Erenciuc, Isac, Razim, Sinoe.

The selected heavy metals are: iron, cadmium, lead and manganese and we take into account the heavy metals concentrations between 2004 – 2007. The results are expressed in µg/l.

First the samples were digested at the Anton Paar microwave, and then the samples are analysed with mass spectrometer with inductively coupled plasma.

The samples were treated and analysed in our chemical laboratory, using ISO standards and super quality reagents.

The concentrations of cadmium and lead exceed the values for the second quality class (1µg/l for cadmium and 10 µg/ l for lead) for all lakes and in all period analysed.