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Total chromium determination in Seaside Lake and marine ecosystems

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Abstract The paper presents original studies concerning the determination of the total concentration of Chromium (Cr) in two adjacent ecosystems: "Tăbăcărie lake" and Black Sea in Constanta district, Romania. Water, sediments, fishes and plants were prepared and chromium concentration was determined using the flame atomic absorption spectrometry. An AA 6200 spectrometer provided by Shimadzu Company with acetylene of 99,99% purity at a flow rate of 1.8 – 2 L/min as a fuel gas and also as a carrier gas for introducing aerosols was used. The wavelength used for analytical determination was 357.9 nm. The total chromium concentration in analyzed water ranged from 0.04 – 0.104 mg/L, in sediments 1,37-3.04 mg/kg dry weight, in fishes 4.65 – 17.27 mg/kg dry weight and 0.88 – 29.66 mg/kg dry weight in algae and other aquatic plants.

Keywords: chromium, AAS, wet digestion, Tăbăcărie lake, Black Sea, ecosystem

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