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ICP-MS utilization for molybdenum determination in marine samples

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Abstract The paper presents original results concerning Mo determination in marine biotope (sediment and water) and biocenosis (algae, crustaceans and fish) collected in 2003, 2004, 2005 and 2006 from the Romanian Black seacoast southern part, between Mangalia and Vama Veche. The solid samples were carefully washed, dried and mineralized with nitric acid and hydrogen peroxide in a Digesdahl device. Molybdenum concentration was determined by inductively coupled plasma - mass spectrometry with an Agilent 7500a ICP-MS apparatus. In sediment samples the levels of Mo varied from 0.03 to 0.12 μg/g, in water from 1.1 to 1.8 μg/L, and in biocenosis from 0.03 to 0.31μg/g. The measured concentrations show comparable values with other reported data.

Keywords: ICP–MS, molybdenum, alga, crustaceans, fish, wet digestion

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