

## The study of heavy metals distribution on the Olt River course around Ramnicu Valcea area

Anisoara PREDA<sup>a</sup>, Cristina BARBU<sup>b</sup>, Alexandru POPESCU<sup>c</sup> and Claudia PEARSICA<sup>a</sup>

<sup>a</sup>*National R & D Institute for Cryogenics and Isotopic Technologies – ICSI Rm. Valcea, Valcea, Romania, Spiru Haret University, Craiova, Dolj, Romania*

<sup>c</sup>*Department of Chemistry, Craiova University, Craiova, Dolj, Romania*

---

**Abstract** The Olt River is one the most important river from Romania which length is 670 km. It flows through Romania counties Harghita, Covasna, Brasov, Sibiu, Valcea and Olt. Heavy metals represent one the most important categories of pollutants of natural water and wastewater. Small amounts of metallic pollutants can cause extreme damages on environment quality. The main stationary sources of pollution within this hydrographical basin, area Valcea are the following industries: Olchim Ramnicu Valcea, Uzinele Sodice Govora with chemical pollutants and also Ramnicu Valcea communal economy activities. The aim of the paper is to study the distribution of the copper, chromium, iron, manganese and zinc on the Olt river course around Ramnicu Valcea area between January and June 2005. The concentration of heavy metals was determined by flame atomic absorption spectrometry. The obtained results are in the following ranges: low than 0.08 mg/L for copper, low than 0.13 mg/L for chromium, 0.213 - 0.69 mg/L for iron, 0.044 - 0.498 mg/L for manganese and low than 0.06 mg/L for zinc.

*Keywords:* heavy metals, wastewaters, atomic absorption spectrometry, environment

---