

DETERMINATION OF QUALITY INDICATORS OF RIVER PRUT WATER

Gheorghe Duca ^a, Aliona Mereuța ^b, Natalia Velișco ^{b*}, Claudiu Tănăselia ^c, Tatiana Mitina ^d

^aAcademy of Sciences of Moldova, 1, Ștefan cel Mare blvd., Chisinau MD-2001, Republic of Moldova

^bState University „Dimitrie Cantemir”, 3/2, Academiei str., Chisinau MD-2028, Republic of Moldova

^cINCDO INOE 2000, Research Institute for Analytical Instrumentation (ICIA), 67, Donath str., Cluj-Napoca 400293, Romania

^dInstitute of Chemistry, 3, Academiei str., Chisinau, MD-2028, Republic of Moldova

*e-mail: n_yelishco@yahoo.com; phone / fax (+373 22) 73 84 03

Abstract. This study presents an assessment of water quality of Prut River using water quality index (WQI) that was calculated according the weighted arithmetic water quality index method. The following quality indicators were considered: pH, total dissolved solids (mineralization), hardness, chemical oxygen demand (COD-Mn), dissolved oxygen (DO), sulphate, nitrate, and ammonium ions and concentrations of heavy metals (Mn, Cd, Pb, Hg, Ni, Cu, and Zn). The obtained results show good water quality for sampling points Sculeni and Cislita-Prut, and very poor water quality collected from Prut River in Criva village.

Keywords: Prut River, heavy metal, quality indicators, water quality index.