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ROMANIAN SURFACE WATER QUALITY: TARNAVA MARE RIVER BETWEEN MEDIAS AND COPSA MICA CASE STUDY

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Abstract

A set of 500 water samples collected from various sites of Tarnava Mare River, between Medias and Copsa Mica were analyzed, during three years (2010-2012). The physicochemical parameters like: temperature, pH, electrical conductivity (EC), total dissolved solids (TDS), salinity, calcium (Ca^{2+}), magnesium (Mg^{2+}), sodium (Na^+), lead (Pb^{2+}), chloride (Cl^-), sulfate (SO_4^{2-}), ammonium (NH_4^+), nitrite (NO_2^-) and nitrate (NO_3^-) were determined. The results were compared with the standards prescribed by WHO (2003) and Romanian Water Law (2004). It was found that the water samples collected from various sites were contaminated with chloride, nitrate and nitrite. Since health, plant and animal life can be affected, the system needs to be monitored and improved in terms of water quality, based on appropriate measures and rehabilitation options, to make it good for uses. In particular, the industrial units along the river need to improve their technology and implement cleaner production methods.

Key words: lead, nitrate, physicochemical parameters, surface water, Tarnava Mare River

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