

QUALITATIVE AND QUANTITATIVE CHARACTERISTICS OF ORGANIC MATTER IN THE WATER OF A SMALL RESERVOIR

KATARZYNA PARSZUTO, RENATA TANDYRAK, JAROSŁAW GALIK

Abstract: The aim of this study was to determine the qualitative and quantitative characteristics of organic matter in water of a small reservoir Modrzewiowy Pond using a SUVA indicator, particulate organic carbon (POC) and dissolved organic carbon (DOC). The concentrations of total organic carbon (TOC) and DOC were determined using a Shimadzu TOC-5000 analyzer. The POC value was obtained from the difference of TOC and DOC. High average TOC concentration ($32.20 \text{ mg C}\cdot\text{dm}^{-3}$), resulting mainly from high POC ($21.03 \text{ mg C}\cdot\text{dm}^{-3}$) in TOC, maximum SUVA parameter ($30.87 \text{ dm}^3\cdot\text{cm}^{-1}\cdot(\text{g C})^{-1}$) and chlorophyll concentrations ($75.60 \text{ mg}\cdot\text{m}^{-3}$) and pheophytin ($94.39 \text{ mg}\cdot\text{m}^{-3}$), was observed in the over sediments waters of the pond. The high value of the SUVA indicator in the water of Modrzewiowy Pond, prove high-molecular organic compounds resistant to biodegradation in the DOC pool. The examinations showed a significant influence of the primary and secondary production on the quality and the amount of organic matter in the examined reservoir.