

EFFECTIVENESS OF OIL DERIVATIVES REMOVAL FROM STORMWATER
TREATED BY THE EXPERIMENTAL CONSTRUCTED WETLAND BEDS IN SEMI-
TECHNICAL SCALE

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Abstract: In the paper, the research results on the removal of aliphatic hydrocarbons (C7 to C30) on constructed wetlands have been presented. The research has been realized on a semi-technical scale constructed wetlands planted with reed *Phragmites australis*. The experimental installation is located on the filling station in Balice and treats the fraction of stormwater from this utility.

The concentrations of total aliphatic hydrocarbons in analyzed stormwater were between $96.02 \mu\text{g}/\text{dm}^3$ and $6177.33 \mu\text{g}/\text{dm}^3$, and from $47.55 \mu\text{g}/\text{dm}^3$ to $5011.14 \mu\text{g}/\text{dm}^3$ in effluent from the installation. The average total aliphatic hydrocarbons removal effectiveness was 48%, the values ranged from 19% to 81%. Hydrocarbons C14 to C18 were removed with the lowest effectiveness (26%–32%), the lighter hydrocarbons – with higher one (39%–68%), however the highest removal effectiveness were observed for the hydrocarbons with the highest carbon atoms numbers (from 51% for C20 to 92%–93% for C26–C30).