

**UTILIZATION OF *RHODOCOCCUS* SP. STRAIN IN BIODEGRADATION OF PAHS
FROM HAZARDOUS WASTE DISPOSAL SITE SOIL**

**VYUŽITÍ KMENE *RHODOCOCCUS* SP. K BIODEGRADACI PAHS
V ZEMINĚ ZE SKLÁDKY NEBEZPEČNÝCH ODPADŮ**

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Abstract:

The work deals with the study of degradation capacities of bacterial strain *Rhodococcus* sp. CCM 4446. The rate of biodegradation of selected organic compounds was examined in the laboratories of the Institute of Environmental Engineering of VŠB – TU Ostrava on real soil samples drawn from a hazardous waste disposal site in Pozdátky, one of the most serious environmental burdens in the Vysočina Region. The examined soil samples contained increased contents of organic pollutants and a significant impact on the quality of both the soil and ground water was proved due to the leach from the dumped waste.

The efficiency of the bacterial strain is compared with other studies published to date; in *Rhodococcus* sp. CCM 4446 a striking effect on faster degradation of all observed low-molecular PAHs, i.e. anthracene, fluorene, naphthalene and phenanthrene, was verified.

Keywords:

Biodegradation, bioremediation, hazardous waste disposal site, polycyclic aromatic hydrocarbons (PAHs), *Rhodococcus* sp.