

**Utilization of Different Carbon Compounds by Sulphate-reducing Bacteria in Mediums with Phosphogypsum** – Dorota Wolicka, Włodzimierz Kowalski

Summary

In this work the effectiveness of the biotransformation of phosphogypsum in the cultures of sulphate-reducing bacteria (SRB) was studied. SRB were isolated from soil contaminated with automobile fuel. The microorganisms were grown by two methods: the enrichment of the cultures and microcosms in: Postgate, minimal medium (with phenol, acetate or lactate) and Emerson medium. All media contained phosphogypsum as electron acceptors. The isolated microorganisms were passage in medium containing different carbon compounds: ethanol, lactate, phenol, acetate casein or lactose to test the effectiveness of biotransformation of phosphogypsum depending on the source of carbon used. In cultures in Postgate medium with lactate or casein there were found the maximal H<sub>2</sub>S concentration (654 and 540 mg HS<sup>-</sup>/dm<sup>3</sup>) and maximal decrease of phosphogypsum 84% and 64%, respectively. The isolated microorganisms utilized alcohol, sugar, protein and phenol.