

# Sorption of metal ions by whole cells of bacillus and micrococcus

Cotoras,

Vledma,

Cifuentes,

Mestre,

Metal removal by seven strains of *Bacillus* and *Micrococcus* was investigated. The culture age of the cells had little or no effect on their sorption capacity. Using the Langmuir isotherm, it was possible to determine that *Bacillus subtilis* ATCC 6633 had the highest maximum sorption capacity for uranium while a *Micrococcus* sp. strain presented the highest affinity. pH of the solution affected the sorption of uranium, copper, cadmium and zinc by *B. subtilis*. Hydrochloric acid was effective for desorption of uranium from pre-loaded biomass. The presence of other ion inhibited uranium sorption in the following order:  $\text{Cu}^{2+} > \text{Zn}^{2+} > \text{Mg}^{2+} > \text{Cd}^{2+} > \text{Ca}^{2+} > \text{K}^+$ . © 1992 Publications Division Selper Ltd.