ALGAE IN HEAVY METAL — POLLUTED ENVIRONMENTS

Summary

Algae are very diverse photosynthetic plants that have neither roots nor leafy shoots and which also lack vascular tissues (VAN DEN HOEK *et al*., 1995). Most of them are aquatic organisms and occur both in fresh and saline waters, but they also inhabit terrestrial environments. As pioneers, algae take part in primary production and in colonization of poor and degraded habitats. The primary impact of heavy metals on algae is at the biochemical and physiological levels. These biochemical and physiological effects may cause ecological effects. Usually, in heavy metal-polluted environments algal biomass as well as algal species diversity decrease. In such places the sensitive organisms and species in algal communities may be replaced by tolerant ones as a consequence of chemical stress. The observed shift in species composition in a community affected by heavy metals is not a random process; chronic exposure to low concentrations of heavy metals may act as a selection factor. Preliminary studies on algal species diversity and heavy metal resistance of species inhabiting Zn, Pb or Cu polluted sites (near metallurgical and mining plants in Silesia) are described.