Isolation and characterization of phenol-degrading microorganism: recent advances

ABSTRACT

Phenol is among the common toxic environmental pollutants that occur naturally and also originated from industrial effluents. Biodegradation is a major mechanism for the removal of pollutants from a contaminated site. The focal point of this review was on the recent researches on isolation and characterization of phenol degrading microorganisms mainly by bacteria, fungi and yeast from places around the world. Scientists are interested to have their own isolates because there are no individual organisms or groups of organisms that were universally appropriate and applicable for bioremediation since the place of origin does play a role in determining the important properties of microorganisms. The compatibility of the application site as well as the biochemical and physiological potential of the microbes should be considered. Overall, bacteria were generally capable as biodegradation agents in aquatic systems, while fungi play a greater role in terrestrial system.

Keyword: Bacteria; Fungi; Yeast; Phenol; Biodegradation