

Acrylamide toxicity and its biodegradation

ABSTRACT

Acrylamide is a synthetic monomer that has been classified as toxic and carcinogenic apart from its diverse application in the industry. Its application is in the formation of polyacrylamide. Polyacrylamide usage is diverse and is found as herbicide formulation, as soil treatment agent and in water treatment plants. Deaths and sickness due to the accidental exposure to acrylamide has been reported while chronic toxicity is also a source of problem. This review highlight on the toxic effect of acrylamide to various organism like human, animal and plant. This review also discusses on the potential use of biological technologies to remediate acrylamide pollution in the environment and the degradation pathways these microorganisms utilize to assimilate acrylamide as a nitrogen, carbon or both as carbon and nitrogen sources.

Keyword: Acrylamide; Pollution; Biodegradation; Metabolic pathway; Microorganism