Fertilization of Contaminated Soils through Biodegradation of Phenol and Naphthalene by *Corynebacterium glutamicum*

김빛나, 이수연[1], 김양훈[2], 민지호*
전북대학교; [1]한국세라믹기술원; [2]충북대학교
(jihomin@jbnu.ac.kr*)

Corynebacterium glutamicum is industrially useful organism for production of amino acid. In addition, *C. glutamicum* is able to utilize various aromatic compounds such as phenol, catechol and naphthalene as a sole carbon source. In this study, *C. glutamicum* was cultured in a mineral salt medium containing 1% yeast extract without any additional carbon sources. It was found that when *C. glutamicum* was added to soil contaminated with phenol and naphthalene, amino acid was synthesized by degradation of aromatic compounds through the intermediate analysis by HPLC. In addition, the useful amino acids synthesized in soil were confirmed by seed germination and root elongation. Finally, this work suggests that *C. glutamicum* can be applied to the environment-benign fertilization technology for aromatic compounds-contaminated soils.