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P69. *Labrys portucalensis* F11 efficiently degrades Di-(2-ethylhexyl) Phthalate

Irina S. Moreira, Rafael D.C. Duarte, Rafaela A.F. Geraldo and Paula M.L. Castro

Universidade Católica Portuguesa, CBQF - Centro de Biotecnologia e Química Fina – Laboratório Associado, Escola Superior de Biotecnologia, Porto, Portugal

E-mail: ismoreira@porto.ucp.pt

Phthalates, such as Di-(2-ethylhexyl) Phthalate (DEHP), are compounds extensively used as plasticizer. Due to the extensive usage, DEHP is found in many wastewaters, surface waters and soil. DEHP is persistent in the environment and the toxicity of the byproducts resulting from the degradation of DEHP sometimes exacerbates the parent compound toxicity. They are now becoming contaminants of emerging concern, considered as potential environmental endocrine disruptors, included in priority list of European Union water directive. The bacterial strain *Labrys portucalensis* F11 has shown to be able to degrade DEHP supplied as sole carbon source. Total degradation was achieved for concentrations up to 10 ppm. For 50 ppm, 60% of the compound was degraded in 30 days, with concomitant bacterial growth. The bacterial strain was also able to completely degrade Mono-(2-ethylhexyl) Phthalate (MEHP) and Phthalic acid (PA), which are considered as possible intermediates of DEHP degradation. Whole sample toxicity after degradation of the compound was reduced assessed through the inhibition of germination and growth of tomato and lettuce. Elucidation of the metabolic pathway of degradation is ongoing.

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