



OLIVE MILL WASTEWATER AS A RENEWABLE RESOURCE

Cristiana Gonçalves, Carina Pereira, Madalena Alves, Isabel Belo*

IBB – Institute for Biotechnology and Bioengineering, Centre of Biological Engineering, University of Minho, Campus de Gualtar, 4710–057 Braga, Portugal

Abstract

The olive mill wastewater (OMW) is a stable emulsion composed by water, olive pulp and residual oil. An approach for using this waste as a renewable resource is of greater interest. Several authors have been studying physicochemical treatment methods. However, the biological treatments allow not only the treatment, but also the effluent valorization, by producing several valuable products. This effluent is also a source of natural antioxidants and its extraction is economically attractive. The ideal OMW valorization process could be achieved by the combination of methods, for instance the use of physical-chemical methods as pre-treatment can highly reduce the pollutants concentrations and allows better production efficiency by microorganisms.

Key words: biogas, lipase, olive mill wastewaters, treatment, valorization

* Author to whom all correspondence should be addressed: e-mail: ibelo@deb.uminho.pt, phone: +351 253 604413; fax: +351 253 678986.