Potential biovalorization techniques for olive mill biorefinery wastewater

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Abstract
The industrial process of olive oil extraction produces huge amounts of wastes that have great negative impact on the environment, because of their high phytotoxicity against soil microorganisms and aquatic life. Valorization of olive mill waste water (OMWW) presents significant challenges mainly due to the high phenolic content of the wastewater which leads to high chemical oxygen demand (COD) and dark color. There is an insistent equirement for strategies to control these wastes through technologies able to minimize their negative environmental effect and to convert them to sustainable resources. Different micro-organisms and techniques have been tested to valorize OMWW.
This review, after presenting a general overview, focuses critically on the most significant recent advances in the various types of biological valorization techniques of OMWW.

Keywords: olive mill wastewater; biorefi nery; waste valorization; bioenergy; biochemical

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