

Ecotoxicological Safety of Wastewater Treated with Lignocellulosic Adsorbents

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Abstract : Portugal is an important wine and olive oil producer, activities which generate a high quantity of residues commonly called grape stalks and olive cake, respectively. In this work grape stalks and olive cake were used as lignocellulosic adsorbents for wastewater containing lead treatment. To attain a better knowledge of the factors that could influence the quality of the treated wastewater, a chemical characterization of the materials used in the treatment was done. To access the ecotoxicological safety of the treated wastewater, several tests were performed. The results of the toxicity test show that the samples leachate has a mild effect on the living models tested. The tests performed in *lemna* and bacteria were the most sensible to toxicity effects of the samples. The results obtained in this work evidenced the importance of use of simple and fast toxicity tests to predict impacts in the environment.

Keywords : chemical composition, lignocellulosic residues, ecotoxicological safety, wastewater

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