

USE OF *LACTOBACILLUS PLANTARUM* IN TREATMENTS OF OLIVE MILL WASTEWATER

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Abstract:

Strains of *Lactobacillus plantarum* isolated from brines of olive fermentation were tested in order to evaluate their possible contribution to the degradation of phenolic compounds in olive mill wastewaters (OMW). High Performance Liquid Chromatography (HPLC) coupled with Diode Array, Fluorescence and Electrochemical Detection were used in order to study the changes in phenolic compounds composition in OMW. Comparison of the chromatograms obtained with these detectors gave complementary information on the compounds analysed and their properties. Chromatographic profiles of original wastewater were compared before and after treatments with *Lactobacillus plantarum* at original pH= 4.6 and at pH= 7.1. Differences were observed in the chromatographic profiles of samples with and without treatments with *Lactobacillus plantarum* with emphasis for compounds with higher retention times in the chromatograms. Some compounds in chromatograms were identified using standard solutions and comparisons with published chromatograms of similar samples.