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## Culturable microbial communities in a wastewater treatment plant from a tannery industry

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Tannins are water-soluble polyphenols usually used in the tannery sector. The wastewater produced by tannery industries contains high levels of polyphenols. Enumeration of different bacterial groups in the rhizosphere and root interior in the most representative plant species of an existing wastewater treatment plant: *Typha latifolia*, *Canna indica* and *Phragmites australis*, was carried out. Aerobic bacteria, denitrifying bacteria and sulfate-reducing bacteria were enumerated at different times of the year, considering two different depths (7 and 22 cm). Enrichment of bacterial mixed cultures able to degrade polyphenols was carried out using either tannins from the production process and liquid effluent as a carbon source. Mixed cultures obtained from aerobic enrichments could degrade between 61-98% of the polyphenolic compounds.

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