

Use of Natural Fibers in Landfill Leachate Treatment

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Abstract : Due to the resultant leachate from waste decomposition in landfills has polluter potential hundred times greater than domestic sewage, this is considered a problem related to the depreciation of environment requiring pre-disposal treatment. In seeking to improve this situation, this project proposes the treatment of landfill leachate using natural fibers intercropped with advanced oxidation processes. The selected natural fibers were palm, coconut and banana fiber. These materials give sustainability to the project because, besides having adsorbent capacity, are often part of waste discarded. The study was conducted in laboratory scale. In trials, the effluents were characterized as Chemical Oxygen Demand (COD), Turbidity and Color. The results indicate that is technically promising since that there were extremely oxidative conditions, the use of certain natural fibers in the reduction of pollutants in leachate have been obtained results of COD removals between 67.9% and 90.9%, Turbidity between 88.0% and 99.7% and Color between 67.4% and 90.4%. The expectation generated is to continue evaluating the association of efficiency of other natural fibers with other landfill leachate treatment processes.

Keywords : Indfill leachate, chemical treatment, natural fibers, advanced oxidation processes

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