

## Physico-chemical And Biological Characterization Of Urban Municipal Landfill Leachate And Treatment By Ozone Process

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**Abstract :** The waste production nationwide is increasing every year, on account of therapid urbanization and growing populations, also consumption modes. Algerian political authorities have chosen Technical Landfill Centres (TLC) as a competitive and safe technique of waste management. However, storing these wastes in a bad way poses several environmental challenges, especially in the Department of Saida, the latter have significant groundwaters. The major problem registered on this Landfill is the leachate resulting from the degradation of buried wastes which were disposed off the outside of the leachate basin and present a source of pollution for the local groundwaters by heavy metals and pathogenic germs. The present paper investigates the leachate treatment ozone process produced by Dielectric Barrier Discharge (DBD) under high potential. The experimental results obtained allowed us to show the efficiency of the treatment process by ozone based on the micro pollutant analysis (DCO, DBO5 , COT, heavy metals) and microbial analysis, after ozonation treatment. The results show that 80% of micro pollutants are eliminated and 100% destruction of all bacteria which reveals the high efficiency of the process.

**Keywords :** landfill, leachate, treatment, ozone, pollutants, bacteria, micropolluant

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