Proposed treatment applicable scenario for the treatment of domestic sewage sludge which is produced from a sewage treatment plant under warm climates conditions

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**ABSTRACT**

Characterization and operation description of municipal wastewaters has been the subject, or the indispensable starting point, of many studies. The present paper (as there is a very limited work on the subject) deals with the operation, description, and characterization of the domestic sewage sludge (DSS) as well as a proposed applicable scenario (composting) is presented with a feasibility study. The area presented with a long period of warm and high temperature conditions (>27˚C, and during summer >32˚C). The sludge, almost 4,200 t/y, does not present significant concentration of heavy metals. However, the sewage sludge contains high concentration of organics and phosphorus, and with further treatment like composting may be used in agriculture purposes. DSS is presented with no significant concentration of heavy metals but it is presented with low concentration of humics, lignin, cellulose, and the germination index (G.I.) are too low. A co-composting of sewage sludge with pure organic which is produced from hotels green waste is presented as applicable scenario. The feasibility study indicated a total capital investment up to €600,000 while the yearly operation cost will be up to €50,000.

**Keywords:** Wastewater treatment plant; Sludge characteristics; Composting; Green waste; Feasibility study

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