**GREYWATER TREATMENT VIA INTEGRATION EFFECTIVE**

**MICROORGANISMS AND CONSTRUCTED WETLAND**

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**ABSTRACT**

Separation of wastewater at source point may enable greywater to be reused for non-

potable purposes as landscape irrigation, and toilet flushing. The present study deals with

real greywater that was collected from five flats and connected to a pilot plant. The objective of this study is to investigate different treatment processes for handling the greywater for the purposes of reuse. The addition of Effective Micro-organism (EM) in the sedimentation process to enhance the efficiency was also investigated. Greywater treatment was examined first in batch experiments to determine the optimum operating conditions including: the settling time and the dose of EM. The viability and efficiency of sedimentation process followed by Constructed Wetland (CW) hybrid system was examined. The experimental method involves monitoring of specific water quality constituents under varying operating conditions in a different sedimentation period, and EM doses to reach the allowable limits for water reuse according to “Egyptian Environmental Association Affair (EEAA)”. Final removal rates reached 94%, 90%, 94%, and 98% for the TSS, COD, BOD and Oil & Grease successively. The E. Coli-count and the Number of cells or eggs of Nimatoda in the final effluent reached 100/ml and (1 Count/l) respectively.