

ABSTRACT

Treatment Of Domestic Grey Wastewater Using Upflow Filters

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Domestic grey wastewater from a single household was treated on-site using a septic tank and upflow filter with sand, activated carbon and peat moss as the filter media. The performance of the upflow filter was monitored twice weekly over a three month period for each of the media, except for the peat moss which was used in the filter for one month. The filtration system effectively reduced the BOD, COD, SS, TS, producing an effluent with an acceptable quality for discharge according to the existing standards. There was substantial bacterial removal efficiency from the treatment system but the counts in the final effluent remained at a level which made it unsuitable for discharge in any receiving water body. Both the sand and activated carbon filter media showed similar effects for the pollutants monitored. However, the removal efficiency differed markedly for the BOD and COD with the activated carbon filter producing an effluent with a higher quality BOD, COD and TS. The peat moss was an unsuitable filter medium but showed superior coliform removal when compared to the sand and activated carbon. An evapotranspiration bed was examined as a possible means for the final disposal of the greywater and it was found that the prevailing climatic conditions makes this a suitable option for final disposal.

Keywords: Parmeshwaree Bahadoorsingh; Greywater; Upflow Filter.