

ABSTRACT

Growing population and industrialisation has put a great stress on water resources globally. As the fresh water availability declines, the need to develop ways to recycle and reuse wastewater increases. Greywater is the water generated out of bathroom, wash basin, kitchen sinks and bathrooms and contributes to 70% of total wastewater produced at households. The organic strength of greywater is quite low as compared to blackwater. This quality allows greywater to be treated by simple treatment technology like filtration. Filtration is a very simple, stable and efficient process. In this study, sand filtration using locally available sand is analyzed for greywater treatment and reuse. The process is examined for its efficiency at different loading rate and different water column head. The parameters of evaluation were chemical oxygen demand, biochemical oxygen demand, conductivity and turbidity. Characterisation of greywater regarding these parameters was also done. Characterization, however, indicated mildness of greywater. The COD, BOD and Turbidity removal efficiency of the filter was 57%, 67% and 95% respectively. The study showed that high filtration rate and high water column depth decreases the efficiency of filtration. It also shows that sand filtration is not adequate to meet requirements of reuse for horticulture and toilet flushing. However, it can be used for irrigating crops.