

Istiqfarrani, G. 2019. Design and Application Slanted Soil System Combined with Grease Trap for Household Wastewater Treatment, this script was supervised by Nur Indradewi Oktavitri, S.T., M.T. and Dr. Ni'matuzahroh, Environmental Engineering, Departement of Biology, Faculty of Science and Technology, Universitas Airlangga.

ABSTRACT

This research aims to determine the optimum length of each media, which were pumice, gravel, and sand, then combined with a grease trap and to classified water products in National Regulation Number 82, 2001. The independent variables in this study were length, duration operation, and grease trap combination. Length of media variety that used were 100 cm, 200 cm, 300 cm and 400 cm. Durations of the process variety that used were 24 hours, 36 hours, and 48 hours. The parameters measured to determine the optimum length and the effect of the grease trap combination in this study was TSS and to classified water product from Slanted Soil System were pH, TSS, COD, and oil-fat. The results of this study were the optimum length of pumice stone media is 200 cm, gravel media is 100 cm and sand media is 100 cm. The efficiency of TSS between greywater treated with and without Grease Trap before Slanted Soil System showed a significant difference. The grease trap combination may not have a direct effect on decreasing concentration, but can extend the life of filtration reactor. The output from Slanted Soil System with Grease Trap is meet with water quality standart class Iv, which is for reuse to irrigate crops, and/or other designations with the same water quality requirement.

Keywords: *Grease Trap, Greywater, Slanted Soil System, and TSS*

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