ABSTRACT

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Effectiveness of Coagulation-Flocculation, Sedimentation, and Filtration Methods in Reducing TSS (Total Ssupended Solid) Liquid Waste of Barokah Tofu Industry in 2021

viii+78 pages+8 Table+15 Figure+7 Appendix

The tofu industry in its production process produces liquid waste which contains TSS which can have an impact on biotic life and the aquatic environment, especially on the process of photosynthesis in water. This study aims to determine the effectiveness of the coagulation-flocculation, sedimentation, and filtration methods in reducing the levels of TSS (Total Suspended Solid) of tofu industrial wastewater.

The type and design of this research is descriptive. This study used 5 samples with a volume of 5 liters each so that the total volume of samples taken was 25 liters. The sampling technique in this study used a momentary sampling technique (grab sampling). Samples were treated using coagulation-flocculation, sedimentation, and filtration methods with the addition of 0.5 grams of PAC coagulant and 0.1 grams of Superfloc. The results showed that the TSS level of the tofu industrial wastewater before being treated was 294 mg/l. The average TSS level after being treated in the five samples was 167.6 mg/l. The average decrease in TSS levels was 126.4 mg/l and the average percentage decrease in TSS levels was 42.98%. An analysis of the effectiveness of the decrease in TSS (levels wasTotal Suspended Solid)carried out and the results of the study were presented in tabular form.

This study can be concluded that the coagulation-flocculation, sedimentation, and filtration methods with the addition of PAC and Superfloc coagulants are not effective because the decrease in the levels of TSS (Total Suspended Solid) produced does not meet the requirements according to the quality standard which refers to the East Java Governor Regulation Number 72 years. 2013.

Reading List : 22 (2002-2018)
Key words : Coagulation-flocculation, Sedimentation, Filtration, TSS