Hairy Enhanced Oil and Grease Trap for Cleaner Environment

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Oil is a hydrocarbon material that can pollute the drainage system. The Hairy Enhanced Oil and Grease Trap function is to trap oil droplets from the wastewater. We are using human hair as the main ingredient which is organic and suprisingly effective as an agent to adsorb the oil because of the hair structure that allows to hold the oil droplets much more than its effectiveness for water. Our scopes of research are to study the best method of employing waste hair and to study the effect of waste hair concentration. We used USEPA METHOD 1664 REVISON B to analyse the oil content of treated wastewater. The test was conducted in laboratory, school canteen and dining hall. So, we obtained and collected the hair waste from barber shop and transformed it into a hair mat by sewing and compressing the hair into a gauze. The oil and grease extraction process start with acidified the sample of the treated wastewater using Hydrochloric Acid and mixed it with Hexane for separation process.Through evaporation process, Hexane and cooking oil evaporated easily because of the big difference in boiling point. Based on the result, we can concluded that when hair mat is used, the oil and grease adsorption increased from 70.43% to 98.52%. We also focused to reduce the number of oil in the wastewater at the same time to improve the drainage system condition continuously.The Hairy Enhanced Oil and Grease Trap or shortly called as hair mat is a long- term product and eco-friendly. In addition, we can widen the usage of human hair from the waste hair and make it as a source of income. The Hairy Enhanced Oil and Grease Trap is indeed a simple product with such great impacts.

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