

## TO INNOVATE WATER OF PURIFICATION

### Abstract:

Industry has grown and become more polluted water source water filters have emerged over the centuries in response to a growing recognition of the need for water, clean. The objective of this project is to design and innovation filter using Grease Traps Water Filter which can separate solid waste and oil. We use the methods of physical and we did a test using pH, and turbidity JAR TEST before and after use Grease Traps Water Filter uses the Water Quality Index(WQI) .Skop our project is to install a water filter in the drain in Melaka Merlimau Point. The design of the cylinder and is easy to install. Our filter layer consists of material neutral. Among them is the banana peel, Charcoal activated, gravel, sand and Cocos nucifera. Production of this project given priority to the aspects of clean water. Our methodology is an important aspect that should be given attention in order to get reviews baik..Hasilnya is Jar test that takes about 1 hour and 20 ° C. Jar Test method using "Alum" [A12 (SO4) 3. 18H20] as clarifying agent and the result before the trap of using cylinders is 110.28mg / L and after the use of grease traps result is 37mg / L. we also test the turbidity and APHA methods we use 213 B (2005) and the result before and after we use the trap cylinder 400 NTU and 59.0 NTU. The conclusions of this product, we have identified the problems that often occur in the food court in Merlimau. Most drains have water problems such as dirty water, clogging and oily. Therefore, we took the initiative to produce a grease trap in certain banana skin and cocos nucifera water as an alternative explanation.

**Keyword:** Filter, water, Grease Interceptor, Charcoal

### IP no:

### Finding:

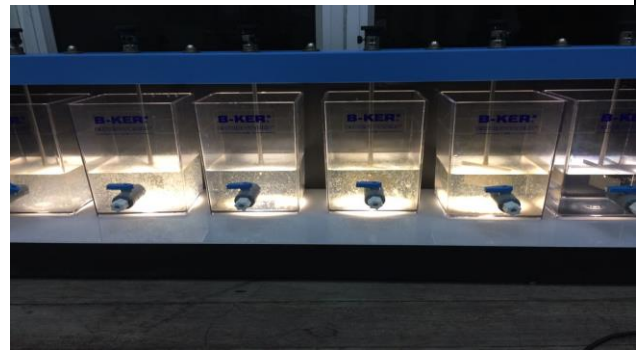
After use the Sand, activated charcoal, banana peel, cocos nucifera and gravel different before using the material.

DATE	CLASSIFICATION	BEFORE	AFTER	NOTE
28 / 02 / 2017	Waste product	Flow out directly to the drain	Get trapped at the basket filter on upper of the grease trap	The result is no changes
	Odor	Uncomfortable smell	Have a pleasant smell	
	Oil	The drain became oily	The drain was clear and not oily	

	01 / 03 / 2017	Waste product	Drain water from food waste and stagnant water drainage is clogged	Drain water flow move smoothly	The result were same as yesterday and no changes.
		Odor	Uncomfortable smell	Have a pleasant smell	
		Oil	The drain became oily	The drain was clear and not oily	
	02 / 03 / 2017	Waste product	Flow out directly to the drain	Get trapped at the basket filter on upper of the grease trap	After a few days of usage banana peel and cocos nucifera,oil can be controlled from directly into the drain.
		Odor	Uncomfortable smell	Have a pleasant smell	
		Oil	The drain became oily	The drain was clear and not oily	
	03/ 03 / 2017	Waste product	Drain water from food waste and stagnant water drainage is clogged	Drain water flow move smoothly	Sand, activated charcoal, banana peel, cocos nucifera and gravel still functioning well.
		Odor	Uncomfortable smell	Have a pleasant smell	
		Oil	The drain became oily	The drain was clear and not oily	

**Suggestion for future work**

- i. Product improvements can be made as frequently clean the bagasse or waste food residues trapped in the filter basket. The quantity of banana peel and cocos nucifera which are used as trap oil must be added to be more effective.
- ii. Can isolate solid waste and oil as a main objective. The second objective is generate a using simple and economic. It also to creating a more workable filter. The last one is to avoid clogging of the drainage system.

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