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An Analysis of Cafeterias Operators in Proper Waste Cooking Oil Management

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Abstract
Cooking oil is largely used in preparing food. Unfortunately, untreated cooking oil waste is disposed improperly. Hence, this research study carried out to determine cafeterias operators in proper waste cooking oil management in one of the government university. Quantitative approach with questionnaire method applied, with targeting 20 out of 32 cafeterias operators in sampling size due to willingly in cooperation. Two categorized are formatted in collecting the information, namely respondent's demographic profile and method disposal of waste cooking oil. Result indicate majority cafeterias operators choose to thrown into sink without having any treatment, continue by thrown with normal waste which having primary treatment, and only minority are choose to sell the waste cooking oil to the relevant parties for further action. As conclusion, majority cafeterias operators are no following the guidelines in manage the waste cooking oil and no concerned about the environment with taking an easy way by dispose the cooking waste into sink and let it flow into drain. Apart from responsibility towards the environment by cafeterias operators, the university should also take action through having some activities like campaign and distributing flyers on the awareness to environment.
Keywords: waste cooking oil, guidelines, campaign, awareness

1. Introduction

Cooking oil is used for preparation of food. Cooking oil consist of plant, animals, synthetic fat used in frying, baking and other types of cooking. Scientific definition for cooking oil is glycerol esters of fatty acids. Common types of cooking oil use by Malaysian are palm oil, peanut oil, corn oil and sunflower oil. Normally cooking oil is used as a heat-transfer medium in frying to generate nicely cooked foods. Cooking oil is typically liquid, although some oils that contain saturated fat such as coconut oil, palm oil and palm kernel oil are solid at room temperature.

Malaysia is among top three exporter of palm oil in the world [1]. About 40% of palm oil mostly made into cooking oil, margarine, specialty fats and oleochemicals. Major of cooking oil made from palm oil [2]. Meanwhile, used cooking oil term refers to cooking oil that is no longer used in food production. The main producers of used cooking oil are the restaurants, food stalls, night market also cafeteria. The disposal of cooking oil becomes a huge problem because of fried food such as fried chicken, French fries and burgers can produce as much as 15 litres of used cooking oil per day not including restaurants that provide Malay food. There are more than hundreds of restaurants in Malaysia and larger volume of used cooking oil is generated per day. Therefore, this research study is conducted to determine cafeterias operators in proper waste cooking oil management.

2. Methods and Materials

This research study is carry out based on one of government's university in Malaysia. The total cafeteria that running the business are 39, but only 20 cafeterias were selected as sampling size in providing information due to willingly in giving cooperation [3-4]. In collecting data, questionnaire will be distributed to the selected sampling size, which will receive information on respondent's demographic profile and respondent's perceptions towards the awareness in used cooking oil management [5].

Figure 1: Selected area for research study.

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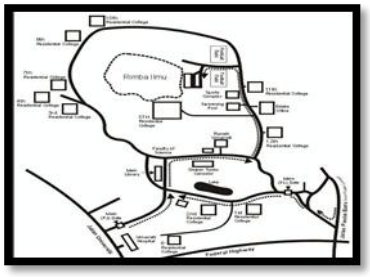

3. Results and Discussion

According to Table 1, respondent's demographic profile is involved with gender, age, occupation types, monthly income, and education level. In gender, female are the highest rating with 55 respondents while male are 25 respondents. In age, 21 to 30 are the highest respondents with 29, continue by 31 to 40 with 28 respondents, 41 to 50 with 14 respondents, and lowest are more than 51 with 9 respondents. Next, majority respondents are working there are non-owner with 57 people while owner only 23 people. Lastly, most of the respondents are only having the education level until primary school with 48 respondents, continue with secondary school with 19 respondents, pra-university level are 8 respondents, and the least are university level with 5 respondents.

Based on the Table 2 for method disposal of waste cooking oil, majority cafeterias operators choose to thrown into sink without having any treatment, which involve with college 5 (1,2,3), college 12 (4), college 7, and food court (2,3,4,5); continue by thrown with normal waste which having primary treatment are college 12 (3,5), college 11 (1,2,3), food court 1, and Academy of Islamic Study. Lastly, only minority cafeterias operators like college 12 2, Faculty of Science, and Student Complex are choose to sell the waste cooking oil to the relevant parties for further action.

Table 1: Respondent's demographic profile.

Category	**Frequency**
Gender	
Male	25
Female	55
Age	
21-30	29
31-40	28
41-50	14
>51	9
Occupations Types	
Owner	23
Non-Owner	57
Monthly Income (RM)	
0 – 500	13
501 – 1000	42
1001 – 1500	7
1501 – 2000	9
> 2001	9
Education Level	
Primary	48
Secondary	19
Pra-University	8
University	5

Table 2: Method disposal of waste cooking oil.

Cafeteria	Volume of Cooking Oil Consumed per day (L)	Method Disposal of Waste Cooking Oil
College 5 (1)	21 – 30	Sink
College 5 (2)	21 – 30	Sink
College 5 (3)	10 – 20	Sink
College 12 (1)	21 – 30	Sink
College 12 (2)	> 31	Sell
College 12 (3)	21 – 30	Thrown with Normal Waste
College 12 (4)	10 – 20	Sink
College 12 (5)	10 – 20	Thrown with Normal Waste
College 11 (1)	> 31	Thrown with Normal Waste
College 11 (2)	> 31	Thrown with Normal Waste
College 11 (3)	21 – 30	Thrown with Normal Waste
College 7	10 – 20	Sink / Drain
Food Court 1	21 – 30	Thrown with Normal Waste
Food Court 2	21 – 30	Sink / Drain
Food Court 3	> 31	Sink / Drain
Food Court 4	21 – 30	Sink / Drain
Food Court 5	21 – 30	Sink / Drain
Faculty of Science	10 – 20	Sell
Academy of Islamic Study	> 31	Thrown with Normal Waste
Student	> 31	Sell

Complex		

4. Conclusion

As conclusion, if cafeterias operators are following the guidelines that provided by the university, most probably the water pollution especially involve with river can be prevent and reduce. Based on the analyzed result indicate that majority cafeterias operators are no concerned about the environment and taking an easy way by dispose the cooking waste into sink and let it flow into drain. Apart from responsibility towards the environment by cafeterias operators, the university should also take action through having some activities like campaign and distributing flyers on the awareness to environment.

5. References

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