

Promoting awareness in handling of used cooking oil for biodiesel production in Bintulu Sarawak, Malaysia

ABSTRACT

Abstract The persistence of inappropriate dumping of used cooking oil (UCO) containing triglyceride into water flow has become a significant complication for the purification process in wastewater treatment. UCO conversion using transesterification process still conquer as famous method to produce biodiesel especially in an industrial scale. This study was conducted to reveal the awareness in food premises in Bintulu, Sarawak, Malaysia, in the handling of UCO and support toward biodiesel production. A questionnaire was distributed to 200 owners of various food premises which were randomly selected regardless of gender or occupation. It was found that 13.1% of the participants generate 5 L of UCO per day, demonstrating promising frequency. The survey revealed that 8.4% of respondents discarded the UCO into the dustbin, while another 9.2% and 18.3% discarded the UCO into soil and drainage system, respectively. The remaining 48.1% sold the UCO and or completely consumed it during cooking. It is worth nothing that only 24% of respondents were expressed the interest to donate UCO for free by collecting from their premises. Meanwhile, 64% were reluctant to send UCO to the biorefinery centre due to the location distance of their premises. This study reveals a lack of awareness among local respondents regarding efficient UCO management, mandating the implementation of a proper UCO management workshop. Keywords: Triglyceride, Wastewater Treatment; Municipal Waste Management; Used Cooking Oil; Food Premises; Respondent

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