



Universiti Kuala Lumpur (UniKL) division chief Dr Nur Syazana Osman (left) and UniKL lecturer Zaifilla Farrina Zainuddin explain about the storage container to make it easier for the public to collect the waste oil at home for recycling purposes. — Bernama photo

Researchers at UniKL develop innovative container to encourage used oil recycling

KUALA LUMPUR: Realising the importance of proper disposal of used cooking oil, a group of researchers developed a more effective storage container to make it easier for the public to collect the waste oil at home for recycling purposes.

Universiti Kuala Lumpur (UniKL) lecturer Zaifilla Farrina Zainuddin who is the project leader, said the product prototype made of high-density polyethylene plastic and stainless steel has a fine filter element that is able to sieve and maintain the oil waste in ideal condition before being processed into bio-diesel.

"The filter on this innovative container lessens the hassle of recycling used oil because it is able to strain fine food particles such as sambal mixed with oil, compared to the containers and filters that are available in the market, thus facilitating recycling vendors," she told Bernama.

She said the five-litre container which has two parts was also created to maintain cleanliness and tidiness in the kitchen.

"Normally, used cooking oil are stored in small bottles in large quantities which must be

arranged and they are difficult to pour from cooking utensils and there are risks of spilling making the kitchen messy and greasy," she said, adding that temperature and the way they are stored would affect the quality of the waste product.

Elaborating, Zaifilla Farrina said the idea to develop the product came up in January last year when the local authority (PBT) shared about the issue of clogged sink drain that often occurred at the People's Housing Programme (PPR) flats.

"The habit of throwing away used cooking oil in the sink will cause it to accumulate in the drains which will later clog up the drainage system and become breeding grounds for rats and cockroaches.

"This not only pollutes the surroundings and environment but will also affect the health of the community," she said.

Zaifilla Farrina said the innovative product was created by UniKL Malaysia Italy Design Institute (UniKL MIDI) lecturers under the supervision of UniKL Foundation. It is currently at the design patent stage and they are still studying the best materials

for the actual product.

She said her team aims to commercialise the product by the end of this year and hopes to get the cooperation of a manufacturer who is able to realise the design.

Zaifilla Farrina said her team is in the midst of a study to design a vending or self-service machine to collect used cooking oil in large quantities at every housing area to make it easier for the community to manage the waste oil.

"Usually recycling vendors will buy in bulk, so when there is this vending machine, people don't have to wait too long to store their used cooking oil before they are sold. It can be cumbersome to wait for certain days to sell the waste product," she said.

Community awareness on the importance of recycling used cooking oil and that it can generate additional income, is still low, she added.

Used cooking oil is sold to vendors according to the current market and the price can reach up to around RM3 per kilogramme which is more expensive than cooking oil that has not been used. — Bernama