

UPM invention makes porcine DNA testing easier

KUALA LUMPUR: A halal test, or detection of porcine DNA in food and pharmaceutical products, can now be done in an effortless, timely and accurate manner, thanks to HaFYS Porcine-DNA Detection Assay system developed by Universiti Putra Malaysia (UPM).

The portable device — GeneSTAT System machine — uses the HaFYS technology where porcine DNA testing can be done within two minutes and the results can be obtained within an hour.

UPM's Halal Products Research Institute deputy director Professor Dr Shuhaimi Mustafa said the HaFYS technology was developed in 2011 and had been licensed to DxNA LLC (a United States company) to be used in the polymerase chain reaction (PCR) GeneSTAT device to detect porcine DNA in food and non-food products.

It comprises a portable real-time PCR instrument and a closed cartridge containing the reagents required to perform the test.

"The GeneSTAT system is easy to use, requiring only the transfer of the specimen to the HaFYS cartridge and pressing the run button.

"The instrument carries out activities to detect porcine DNA in the specimen. A result (positive or negative) can be obtained in an hour.

"It requires no laboratory training to operate, unlike other PCR assays and systems that require highly-trained laboratory personnel to perform the tests," he said during the product demonstration at the World Halal Week 2016 here yesterday.

Shuhaimi said the combination of HaFYS and PCR GeneSTAT created a device with high accuracy in detecting products containing porcine DNA as low as 0.001 per cent.

The system was commercialised last year and had penetrated the global market, including the US, the United Kingdom and European and Middle Eastern countries.

"We hope this technology will increase the credibility of the halal certification, not just in Malaysia,

but around the world," he said.

UPM's innovation, promotion and marketing division deputy director Dr Mohamad Fakri Zaky Jaafar described this invention as a proud moment for Malaysia, where a local invention had been commercialised at an international level and was set to become a de facto standard in the detection of porcine DNA.

"The technology developed by UPM will help Malaysia retain its status as one of the world's leading halal hubs," Fakri said.

Kaysha Kencana Sdn Bhd is the sole distributor of the product in Malaysia and Southeast Asia.

Its business development manager, Shamsul Bahrin Abdul Aziz, said it was high time for companies and halal certification authorities in Southeast Asia to take a more assertive role to detect and control any contamination of porcine DNAs in halal-certified products.

"With the supply chain becoming complex, there are high chances of food and non-food products being polluted deliberately or accidentally. This system does not jeopardise the sample as the test is done in a closed system that does not require DNA extraction," he said.

Todd Snowden of DxNA business development said the portable machine could also be used in factory sites, ports, restaurants or slaughterhouses, where testing can be done directly.

"Authorities need to increase surveillance and auditing to ensure the quality and purity of halal-certified products to the Muslim community and make sure the confidence in the halal market is maintained," he said.

"The device is suited for increased surveillance and auditing in the halal market because it's portable. You can take it wherever you need to test, in a manufacturing facility, restaurant or a raw material supplier."

Those interested in buying the device could contact Kaysha Kencana at 03-60343414 or via email at inquiry@kencana.com.



Universiti Putra Malaysia's Halal Products Research Institute deputy director **Professor Dr Shuhaimi Mustafa** with the GeneSTAT System machine in **Kuala Lumpur** yesterday. Pic by **Surianie Mohd Hanif**