UMS develops new technique to detect fish

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KOTA KINABALU: The Biosensor Research Group at the University Malaysia Sabah's (UMS) Biotechnology Research Institute has developed a method that can detect a low concentration of formaldehyde in fish and fish sample products within five seconds of testing, with an accuracy of 99 per cent.

Its senior researcher, Dr Md Shafiquzzaman Siddiquee said the newly developed technology was capable of yielding results within five seconds compared to the conventional method which required a whole day.

"This research work was done by our final-year students pursuing their undergraduate programme. They have developed a faster way to detect formaldehyde or more commonly known as formalin (30 to 55 per cent in aqueous solution) compared to the conventional method," he told Bernama, here.

Md Shafiquzzaman said formaldehyde was a preservative that was used to prolong the self-life of fresh fish but posed a potential health hazard and a threat to public health and safety.

According to the Malaysian Food Regulations Act 1985, the permissible level of formaldehyde in fresh food is five parts per million (ppm) or five micrograms per gram.

The World Health Organization (WHO) and US Environmental Protection Agency (EPA) have also set the standards, to limit human exposure and health risk in occupations involving formaldehyde use, he said.

The researcher reported that formaldehyde was often used in the fisheries industry as a preservative to maintain the freshness of the catch and prevent spoilage caused by microbes.

"It is harmful for human consumption when used in excess as the residue is retained in the fish muscles even after cooking, roasting and boiling.

"The consumption of formaldehyde over long periods of time can lead to cancer formation," he said. - Bernama