



Customer Story

Preventing Food Fraud in Malaysia

PerkinElmer teams up with Universiti Tunku Abdul Rahman to test food products for contamination

Background

When students at a boarding school in Kuala Nerang, Malaysia, complained that the chicken in a spicy tomato sauce smelled bad earlier this year, no one paid much attention — until more 150 of them became violently ill. Like everywhere else in the global food supply chain, incidents of foodborne illnesses due to adulteration or food mishandling are on the rise in this Southeast Asian country of more than 29 million multi-ethnic residents. In the past few years, alone, hundreds of poisoning incidents and thousands of people have been sickened¹.

Improving Food Safety from Farm to Table

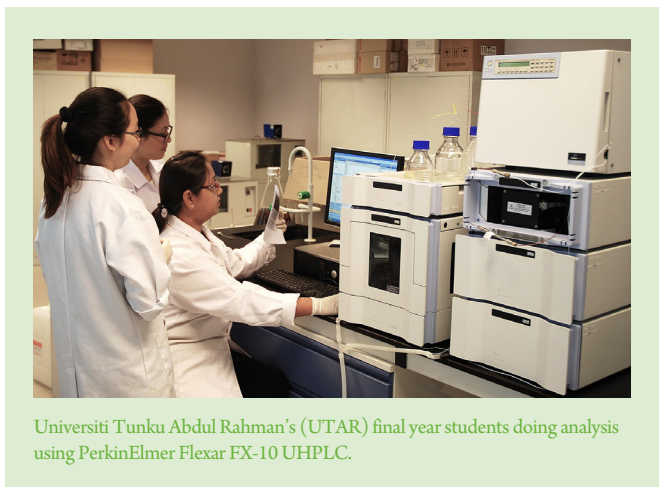
Existing food analysis throughout Malaysia is largely restricted by a shortage of funds. At the country's nonprofit Universiti Tunku Abdul Rahman's (UTAR) Perak Campus, however, faculty and students have earned a reputation for excellence for their work to improve the health and safety of people and the environment.

Drawing on university funding, researchers are currently measuring Bisphenol A in polycarbonate household materials and its migration into water. UTAR developed the Solid Phase Extraction (SPE) method to extract BPA from various canned foods and modified the method for using spectrofluorimetric methods to determine its presence in water from different sources. BPA is found in a variety of common consumer goods and is considered a carcinogen by many nations of the world.

UTAR students are also involved in validating High Performance Liquid Chromatography operating parameters for extraction methods used to determine melamine in the nation's food supply chain. UTAR researchers are also focused on measuring food additives, preservatives (such as benzoic and sorbic acids), and synthetic dyes (Sudan dyes) found in different foods matrices in Malaysia.

A Blossoming Partnership

Thanks to a new partnership recently announced between UTAR and PerkinElmer, a global leader in the life and environmental sciences, the company is installing state-of-the-art chromatography instrumentation at the university's Perak Campus to further advance its mission to test food and agricultural products for compliance with national safety standards. The Flexar™ FX-10 Ultra-High Performance Liquid Chromatography (UHPLC) instrumentation by PerkinElmer will allow UTAR researchers to perform an extensive range of fundamental application studies involving native agricultural products. Research using the advanced instrumentation that includes a binary pump, fluorescence, and ultraviolet detector, will initially focus on the discovery of sialic acid in edible bird nest, a delicacy ingredient used widely in Asian cuisine. Sialic acid is related to salia disease, which can cause retardation and certain influenza viruses. Future projects for the



Flexar-10 UHPLC will include studies to determine the presence of pesticides, such as melamine and other economically-motivated adulterants that may be found in Malaysia's food supply chain.

"As a university that is well known for excellence in teaching and research to benefit our local community, UTAR's collaboration with PerkinElmer will have an impact on improving the food supply chain and help Malaysia's agriculture industry support compliance with safety regulations," said Dr. Lim Tuck Meng, Faculty of Science Dean, UTAR. "Together with PerkinElmer's continued support, we hope to expand our future joint endeavors to cover a broader range of research areas."

Tan Boon Chun, Country Manager, PerkinElmer Malaysia, agrees. "Providing our detection capabilities and technical expertise to UTAR will help its researchers make a difference in the local agriculture industry in Malaysia," he says. Equally important, "this collaboration illustrates how our solutions and industry knowledge are helping scientists, government professionals, and clinicians to address important issues for food producers and consumers around the world, Chun says."

For additional details on PerkinElmer's groundbreaking analysis research in food, beverages, and nutraceuticals, click here for more details.

References

1. <http://www.foodsafetynews.com/2012/11/food-poisons-849-students-at-16-sabah-schools-in-39-incidents-this-year/#.U9JhtGPSQcE>. See also, <http://www.foodsafetynews.com/2014/02/158-students-in-malaysia-sick-with-food-poisoning/#.U9JlzGPSQcE>

For additional information visit www.perkinelmer.com/foodstories

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