

## Investigation of Migrated Heavy Metals from Enamel Ware

DUANGKAMOL CHAOSRIMUD, JITWILAI WALUVARUK, VANNAPA TANYUENYONG

*Department of Science Service, Ministry of Science and Technology, Thailand*

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In 2014, it was popular that Thai restaurants put papaya salad, spicy and acidic food, in decorated enamel trays and served to their customers. For consumer's safety, 94 samples (71 decorated samples and 23 non-decorated samples) were collected from local and border markets in Thailand and investigated hazardous elements for health safety of the enamel ware product. The samples were tested according to TIS 835: Thai Industrial Standard for Domestic Enamel Ware which controls quantity of lead and cadmium. In addition, other elements such as aluminium, copper, iron, zinc, manganese, chromium, and magnesium were determined as well. Results of decorated enamel ware samples showed that more than 50 % of them containing cadmium at higher amount than permissible limit of standard while lead could not be detected. In case of non-decorated samples, cadmium and lead could not be detected. However, it was interesting that aluminium, copper, iron, zinc, manganese, chromium, and magnesium were found in both kinds of samples. From this study, it can be concluded that the decorated enamel ware was not appropriate for use as a direct food container.

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