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Migration of heavy metals and formaldehyde from polylactide food contact materials into a food simulant

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Recently, many ecofriendly plastics have been developed and used worldwide. Polylactide (PLA) is one of them, easily biodegradable by microbes in the soil. As interest in eco-friendly plastics grew, PLA has been widely used for disposable food contact materials in South Korea. So, we collected PLA food contact materials in domestic markets and analyzed heavy metals (lead, cadmium and arsenic), formaldehyde that migrated from PLA food contact materials into a food stimulant. All the samples are eluted with a food simulant (4% acetic acid) for 30 min at 70^{O}C and 100^{O}C in laboratory oven. The analytical methods were developed and validated using inductively coupled plasma mass spectrometry (lead, cadmium and arsenic) and high-performance liquid chromatography photo diode array (formaldehyde) under the Korea regulations. The result of this study can be used as valuable data for the safety control of the PLA food contact materials in South Korea.

Biography

Hyun Uk Kim works for the Regional Office of Ministry Of Food And Drug Safety (MFDS). He is In Charge of food contact materials test and research.

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