



Research article

Analysis of arsenic in infant rice cereals by Inductively Coupled Plasma Mass Spectrometry

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Key words: Arsenic, Infant rice cereals, Baby Rice, Inductively Coupled Plasma-Mass Spectrometry.

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Abstract

Objective: The aim of this research was to determine arsenic concentration in infant rice cereals and to find out whether arsenic levels from infant rice cereals still meet the standards set by the National Agency of Drug and Food Control of Republic of Indonesia (NADFC). **Method:** The arsenic concentration was determined with an ICP-MS method and the analytical method was validated by measuring accuracy, precision, detection limits and quantitation limits. **Result:** The results of the validation method were obtained recoveries of spiked sample 96.06%, RSD 2.33%, limit detection and limit quantification 0.24 $\mu\text{g kg}^{-1}$ and 0.78 $\mu\text{g kg}^{-1}$. The arsenic levels in infant rice cereals were in the range 12.30 – 106.15 $\mu\text{g kg}^{-1}$ (n=12), on average they were 35.57 $\mu\text{g kg}^{-1}$. **Conclusion:** Arsenic concentration in infant rice cereals maximum 20 $\mu\text{g/kg}$, there are nine samples whose arsenic levels exceed the requirements.