

of variation (CV) based on ten replicate analyses of a sample whose total As concentration was determined to be 0.04 mg/kg dry weight. Since the CV obtained was 1.8%, reproducibility was also good.

The above results demonstrated that the method is efficient both in terms of accuracy and precision.

Application to brown rice samples

The method was applied to ten commercial brown rice samples. The measured concentrations of iAs, MMA, DMA, and total As are given in Table 3. The concentrations of iAs detected were in the range from 0.108 to 0.227 mg/kg dry weight. DMA was also detected in most samples. Total As concentrations were in the range from 0.118 to 0.260 mg/kg dry weight. iAs as a percentage of total As was 62.2–96.3%. Thus, iAs was the principal As species in the short-grain brown rice samples.

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