Changes in total minerals and their HCl extractabilities in rice varieties as affected by cooking methods

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The study examined the effect of four cooking methods on total minerals and their HCl extractabilities among rice varieties. The cooking led to a significant (p<0.05) decrease in total mineral contents (calcium, phosphorus, magnesium, iron and zinc) in rice upon cooking by all methods, while HCl extractability of minerals in cooked rice increased significantly in comparison to raw rice. The differences among various cooking methods were not significant for calcium, magnesium and zinc contents as well as for HCl extractability of calcium and zinc. The ordinary cooked rice samples had significantly (P<0.05) lower phosphorus and iron contents than the rice cooked by other methods which did not differ significantly to each other. Pressure, microwave and solar cooked rice samples had similar HCl extractability of phosphorus and magnesium, whereas, HCl extractability of iron was significantly higher in solar cooked than ordinary and pressure cooked rice samples.

Key Words: Minerals, HCl extractability, Rice, Cooking methods