

Influence of cooking on the iodine content in pasta, potatoes and rice using iodized salt

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To prevent iodine deficiency in the population table salt in Germany is often fortified with potassium iodate. However, there are very limited data about the stability of KIO_3 during production, processing, and storage of different foods. Because of the lack of available data and the resulting insecurity of the general public concerning the iodine supply this study investigates the influence of cooking on the iodine content of pasta, potatoes, and rice when using KIO_3 -enriched table salt in cooking water (5, 15, and 5 g/l for pasta, potato and rice, respectively). Different cooking methods were applied based on commonly used cooking procedures. Concerning pasta the iodine content of uncooked spaghetti was compared to the content directly after cooking (10 min) and cold rinsed. The waxy potatoes were cooked for 23 min and rice was cooked for 20 min with and without discarding the water. Samples of the foods were taken before and after processing. The iodine was extracted overnight using 0.5% NH_3 . After filtration the iodine content was measured with ICP-MS and validated for the different matrices. In general pasta and potatoes have higher iodine contents after cooking. The cold rinsing after cooking leads to a decrease in iodine in the pasta. We expect the same results for rice with higher iodine contents in the rice without discarding the water. The use of iodized salt for cooking is therefore recommended to enhance the iodine supply.