

Study on the elution of cesium and strontium from tea-leaves evaluated using PIXE analyses

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Abstract

In this work we aimed to measure the concentration of cesium and strontium in unused and used tea leaves using a particle-induced X-ray (PIXE) analysis to investigate the elution of these elements in the leaves into green tea. We used the tea leaf samples which were grown in soil with stable cesium and strontium added. The conventional PIXE analyses were performed on the basis of the internal standard method. The amount of cesium elution into green tea was 12% of total cesium weight contained in the tea leaves whereas that of strontium elution was 0.65%. The results of the PIXE analysis suggest that the elution of radioactive cesium into green tea is much lower than cesium.