PIXE analysis of atmospheric deposition samples

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Abstract

PIXE was applied for multi-element analysis of geochemical reference materials and atmospheric deposition samples collected at fixed points in Fukushima prefecture. In the present study, palladium-carbon powder was used as an internal standard and well-mixed with each sample. The mixture was fixed on backing material for the target exposed to an ion beam. The measured concentrations of major and trace elements in the reference materials agreed with the certified values of elements with the exception of Ti and the low-Z elements such as Na, Mg, Al and K. The measurement results of deposition samples suggest the contributions of sea-salt aerosol and soil particles.