

PIXE analysis of atmospheric deposition samples

H. Fujiwara¹ and K. Sera²

¹National Institute for Agro-Environmental Sciences
3-1-3 Kannondai, Tsukuba, Ibaraki 305-8604, Japan

²Cyclotron Research Center, Iwate Medical University
348-58 Tomegamori, Takizawa, Iwate 020-0603, Japan

Abstract

PIXE was applied for multi-element analysis of a geochemical reference material 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 material agreed with the certified values of elements with the exception of Pb and the low-Z elements such as Na and Mg. The measurement results of deposition samples suggest the contributions of sea-salt aerosol and soil particles.