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Original

Study on the Simplified Measurement Method for Radiostrontium in Incineration Ash Samples

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Summary

An examination of simplified measurement method using selective absorption material (Rad Disk Strontium) for radiostrontium in incineration ash samples was carried out. Extraction of strontium from ash samples can be performed using concentrated nitric acid by soaking overnight. Due to coexisting elements such as Ca, Ba, and Pb, recovery of Sr by Rad Disk Strontium (3M Company) was poor without removing of these coexistence elements. It was found that coexistence elements were effectively removed by alkaline coprecipitation and chromate coprecipitation procedures, and recovery of Sr improved to 75 - 80%. Because the measurement results of ^{90}Sr obtained by this method were consistent with the results obtained by the official method, radiostrontium in ash samples can be determined by this simplified measurement method. Detection limit of ^{90}Sr was approximately 4 Bq/kg, when 5 g of ash samples was analyzed.

Key Words: Radiostrontium, Incineration ash, Simplified measurement method