

Original

Super Volume Reduction of ^{137}Cs -contaminated Solid Waste by Ion Chromatographic Elimination of Cs from ^{137}Cs -enriched Dust Generated by Pyroprocessing Decontamination

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Summary

Using an ion chromatography with copper ferrocyanide-loaded silica gel as an adsorbent, Cs was selectively removed from the simulated rinsing solution of Cs-enriched dust generated by pyroprocessing of solid waste that had been contaminated with radioactive Cs due to the Fukushima Daiichi Nuclear Power Plant accident. The spent adsorbent was stably solidified by using metakaolin as a hydraulic solidifier. The weight of the final radioactive waste was estimated to be less than 1/1000 of the original one.

Key Words: ^{137}Cs decontamination, Super volume reduction, Pyroprocessing, Ion chromatography, Copper ferrocyanide, Geopolymer
