

Original

Removal of Radioactive Cs from Nonwoven Cloth with Less Waste Solution Using Aqueous Sodium Metasilicate

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Summary

Remediation of nonwoven cloth contaminated with radioactive material such as ¹³⁷Cs is important for the reuse of protective garments. Here, we report the effectiveness of aqueous sodium metasilicate prepared with a microbubble crushing process (SMC) in the removal of radioactive ¹³⁷Cs from nonwoven cloth. The ¹³⁷Cs removal ratio obtained using SMC was found to be 78%, and multiple washings at low SMC concentrations were effective. In addition, the volume of the waste solution could be reduced by neutralizing the SMC and using gelation to remove the radioactive material.

Key Words: (Standardized) Cesium-137, Decontamination, Accident, Nuclear criticality safety
