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報 文

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

Yoshikatsu UEDA[1]*, Yomei TOKUDA[2,3], Hiroshi GOTO[4], Tomoyuki KOBAYASHI[5], Yuji ONO[5]

[1]Institute for Sustainable Humanosphere, Kyoto University (Gokasho, Uji, Kyoto 611-0011 Japan)
[2]Institute for Chemical Research, Kyoto University (Gokasho, Uji, Kyoto 611-0011 Japan)
[3]Institute for Sustainability Science, Kyoto University (Gokasho, Uji, Kyoto 611-0011 Japan)
[4]Kureha Trading Co., Ltd. (2-2-7 Kawaramachi, Chuo-ku, Osaka 541-0048 Japan)
[5]Fukushima Agricultural Technology Centre (116 Shimonakamichi, Takakura, Hiwadamachi, Koriyama, Fukushima 963-0534 Japan)

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Summary

Remediation of nonwoven cloth contaminated with radioactive material such as ^{137}Cs 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 ^{137}Cs from nonwoven cloth. The ^{137}Cs 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