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Original

Physical and Chemical Characterization of Radioactively Contaminated Soil Collected in Fukushima

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Summary

Physical and chemical characterization was made for soil samples collected in Fukushima area on the third year after radio-active contamination accident in 2011 in order to find out a good and practical method of decontamination. Major radio activity was due to cesium 134 and cesium 137. Dry sieving of soil samples revealed that a high radio-activity was present in the portion of fine particles including clay material. It was also found that high radio-activity was in the portion of botanical origin such as rotten leaf. Elemental analysis of soil was performed by using ICP-MS, X-ray fluorescence spectrometry and CHN recorder, but it was difficult to find any relation between specific elements and residue radio-activity.Thermal treatment was effective for reduction of volume of contaminated soil.

Key Words: Radiocesium, Soil, Physico-chemical characterization