

International Conference on

Nuclear Chemistry

December 08-09, 2016 San Antonio, USA

Effect of carbonized paper sludge on cesium concentration in contaminated paddy soil

Ai Van Tran

Corelex San-Ei Co., Ltd., Japan

Contaminated soil in a paddy field in Fukushima was treated with industrial carbonized paper sludge (PSC) and then used to grow rice in 2011. The sum of activity concentrations of ^{134}Cs and ^{137}Cs in polished rice were approximately one third of the Japanese governmental safeguard value of 100 Bq.kg^{-1} . Upon contacting with the contaminated soil, the contents of calcium, magnesium, copper, potassium, barium in PSC were decreased. Among the PSC's impregnated with various chlorides and sulfates of the previously mentioned minerals, potassium chloride, copper sulfate, magnesium sulfate and potassium sulfate gave higher decontamination degrees compared to the original PSC. These results imply that radioactive cesium in the soil exchanges cations with these minerals.

Biography

Ai Van Tran has completed his PhD from Kyushu University (Japan) and Post-doctoral studies from Auburn University, AL, Chemical Engineering Department. He works mainly on the bio-fuels, green production of pulp and paper and decontamination of radio-contaminated paddies. He has published more than 30 papers in reputed journals, produced 8 patents of which 3 were related to radio-decontamination, and has often been asked to review manuscripts for reputed journals including Journal of Radio-analytical and Nuclear Chemistry.

aivantran@b-web.co.jp

Notes: