Behavior of dissolved radiocesium in the decay degree of organic matter of deciduous broad-leaved trees

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Approximately 70% of radiocesium released by the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company Holdings accident was deposited in the forest and would remain in the forest. Dissolved radiocesium would be easy to be incorporated into organisms. There are many unknown parts regarding the elution mechanism of the elution of dissolved radiocesium from organic matter such as litter, which would be a potential source of dissolved radiocesium. Here we report the results of the study on the difference in transfer behavior of dissolved radiocesium at the different degree of decomposition of organic matter of deciduous broad-leaved tree leaves. After making organic matter with different degree of decomposition (litter, leaf mold, humus) using litter collected in deciduous broad - leaved forest in Fukushima prefecture, dissolution rates of dissolved radiocesium eluted from these organic matters were compared. The highest dissolution rate was litter in organic matters with different degrees of decomposition. The dissolution rate of leaf mold and humus was about 1/10 of that of litter. These results suggested that dissolved radiocesium elution from organic matter on the forest floor differs at the decomposition stage of organic matter

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