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The Cs-134 and Cs-137 concentrations in soil water covered by different vegetations

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The soil water was collected using a suction lysimeter (consisting of a ceramic porous cup) in a flask using a hand pump at the depths of 10, 30, and 50 cm in the grassland and forest sites and at 10, 20, and 30 cm depths in the farmland site. The collected water was filtered using 0.45 micro meter membrane. The Cs-134 and Cs-137 concentrations were determined by a gamma ray spectrometry using a germanium semiconductor detector. Each sample was analyzed for 30,000 seconds at Meteorological Research Institute in Tsukuba.

The concentration of Cs-134 and Cs-137 in the soil water ranged from 0.1 to 2.5 Bg/kg, and the concentration at a depth of 10 cm was higher than that at 30cm and 50 cm depths in the grassland and the farmland, whereas in the forest site, the highest concentration of Cs-137, 1.6 Bg/kg was observed at 50 cm depth in the young forest.

Keywords: cesium, soil water, forest, grassland

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