

Sulfur isotopic composition of Throughfall and stemflow in three forest stands

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A comparative study on the sulfur isotopic composition of rainwater was made at the adjacent forest stands : Japanese cedar (*Cryptomeria japonica*), Hinoki cypress (*Chamaecyparis obtusa*) and Kojii (*Castanopsis cuspidata*). Precipitation, throughfall and stemflow were collected and were analyzed for pH, electric conductivity, cations, anions and sulfur isotope ratio ($^{34}\text{S}/^{32}\text{S}$). 1) the sulfur isotope ratio of precipitation was 4.2 with a range of 1.7 to 8.1. 2) the values of throughfall in Kojii, Japanese cedar and Hinoki cypress stand were 3.6, 3.1 and 3.5. 3) the values of stemflow in Kojii, Japanese cedar and Hinoki cypress stand were 2.4, 2.1 and 2.4. 4) while the sulfate concentrations increased in the order of precipitation, throughfall, stemflow, their sulfur isotope ratios decreased in the order of precipitation, throughfall, stemflow. These results suggest that there exists the mechanism of nutrient enhancement in throughfall and stemflow by the leaching from leaves, branches and stem.