



## **Field measured extremes of forest litter moisture content**

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Forest litter improves hydrological conditions of the soil. The litter layer protects the soil from direct impact of drops, reduces the temperature fluctuations in soil. Moreover, litter coverage decreases the evaporation of the topsoil, and increases the infiltration due to large porosity and the higher hydraulic roughness. Further hydrological effect of leaf litter is water retention.

A forest litter has a huge surface available for evaporation; therefore, it is very important element of a forest water balance, so the moisture content of the litter is an important key parameter for hydrological modelling. This research tries to determine the water storage capacity of the litter for three species (spruce, beech, sessile oak) under field conditions on the eastern foothills of the Alps. The data were produced with a collection of about 450-500 samples over three years (2003-2005). Although the litter dry weights of the forest stands were different, our results suggested that the specific water storage capacity values of the litter were also identical for needle-leaf and broad-leaf forest ecosystems. According to our measurements, the maximum water storage capacities of all types of litter samples were 2.0-2.1 litres per kilogram dry weight regardless of the tree species. Under natural conditions, the desiccation proceeded to 0.17-0.18 litres per kilogram dry weight.

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