



Water sorptivity of peat and gyttja soils

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The sorptivity is often used for description of water infiltration process in soils. The paper presents the results of the laboratory measurements of water sorptivity, which were carried out for some organic soils (peat and gyttja). The sorptivity measurements were conducted using capillary infiltration method applied to undisturbed soil samples during their drying process. The performed analysis of the measured values showed that the water sorptivity of organic soils depends on soil moisture content. The decrease of soil moisture content to a critical value caused increasing values of the water sorptivity, while the further moisture loss by the soil led to decreasing values of the sorptivity. The measured maximum values of the water sorptivity were equal to $0.536 \text{ cm min}^{-0.5}$ for moss (moisture content range from 0.2 to $0.4 \text{ cm}^3 \text{ cm}^{-3}$), $0.364 \text{ cm min}^{-0.5}$ for moorsh (moisture 0.4 - $0.6 \text{ cm}^3 \text{ cm}^{-3}$) and $0.050 \text{ cm min}^{-0.5}$ for alder peat (moisture $> 0.8 \text{ cm}^3 \text{ cm}^{-3}$). The observed range of the water sorptivity changes in the considered organic soils is comparable to the values obtained for mineral soils.