

## Sorptimeter Materials and Instructions

### Materials

Graduated cylinder	Core
Sorptimeter (metal or PVC cylinder)	2 zip lock bags
Hammer	Trowel
Water	Marker (for labeling)
Stopwatch	Pencil
Wooden board	Datasheet
Small level	Clipboard

### Procedure

- 1) Collect a core outside of the area where you are testing sorptivity to calculate bulk density and volumetric soil moisture (see directions for measuring these). Both may impact your study
- 2) Measure diameter of sorptimeter in centimeters
- 3) Place sorptimeter on the ground with the sharp edge on the bottom
- 4) Place board on top of sorptimeter and hammer the board until the sorptimeter is pushed halfway into the ground
- 5) Place the level on the top of the sorptimeter to make sure it is level with ground
- 6) Tamp down the soil around the edges of the inside of the sorptimeter
- 7) Fill up the graduated cylinder with water until the desired volume is reached. We usually use 80 milliliters so the infiltrated depth (denoted by  $I$  below) is 1 cm.
- 8) Quickly pour the water inside the sorptimeter and simultaneously start the stopwatch
- 9) As soon as all the water has finished entering the soil and no more is left at the surface, record the time on the stopwatch.
- 10) Sorptivity is calculated as the infiltrated depth  $I$  divided by the square root of time (seconds)
- 11) Scoop a small amount of soil from directly underneath the disk at the surface. Put this in a plastic bag to calculate gravimetric soil moisture (see instructions).

