Generate soil moisture release characteristics

Measure water potential of soil samples for the root zone, seed zone, and under mulch.

Monitor water potential for bioremediation.

Measure water potential dependence of seed germination.

Monitor seed priming media.

Study plant-water relations

The WP4 is accurate and fast, and can be used with a variety of sample types.

WP4-T
Water Potential Measurement

Is temperature impacting your water potential results?

The WP4-T makes the difficult measurement of water potential easier. The WP4-T has a measurement range from 0 to -300 MPa and 3 to 6.5 pF (saturation to air dry) with an accuracy of 0.1MPa or better.

The WP4-T senses the dew point of water vapor with a cooled mirror lo-cated above a sample in a closed cham-ber. Sample temperature is monitored with a built-in infrared thermometer, and the WP4-T's internal peltier cooler allows you to control the sample temperature from 15°C-40°C. Readings for individual samples are obtained rapidly (5-10 minutes for most soil samples).

Internal Temperature Control

Your lab temperature may vary as much as 5 degrees during the day. This results in as much as a -0.5 MPa difference in water potential readings on dry soil.

Most researchers know that water potential changes with temperature. When you use the WP4-T you can measure the water potential of all your samples at a pre-set temperature. Temperature control allows you to monitor small changes in water potential from one sample to the next. By removing the temperature variables from your readings you more accurately measure water potential variations from sample to sample.

DECAGON DEVICES
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1-800-755-2751
www.decagon.com/wp4
wp4@decagon.com

SPECIFICATIONS

Accuracy:
0 to -10 MPa (3 to 5 pF)± 0.lMPa
-10 to -300 MPa (5 to 6.5 pF) ± 1%

Range: 0 to -300 MPa
(3 to 6.5 pF)

Resolution: ± 0.01MPa.

Measurement Time:
5-10 minutes typical for most soils, 15-20 minutes for plant tissue

Operating environment:
5 to 43°C, 20 to 85% relative humidity.

Temperature control:
15°C to 40°C ± 0.2°C

Weight: 3.2 kilograms.

Shipping Weight: 5.2 kilograms

Case material: Powder coated aluminum.

Sample dish capacity:
15ml full (7ml recommended).

Enclosure size:
25.4 x 22.8 x 11.4cm

Warranty: 1 year.

Sensors: 1. Infrared sample surface temperature. 2. Cooled mirror condensation dewpoint.

Power: 110V or 220V AC, 50/60Hz.

Communications: 9-pin D-subminiature, RS232A compatible, 8 data bit ASCII code, 9600 baud, no parity, 1 stop bit. Standard RS232A serial cable included

Measuring water potential has never been so easy.

FEATURES

- Durable laboratory-grade instrument with integral sensor drawer.
- Internal chilled-mirror dewpoint measurement is accurate ± 0.lMPa from 0 to -10MPa (3 to 5 pF), ± 1% from -10 to -300 MPa (5 to 6.5 pF).
- R5232A port allowsdirect data transfer to an attached computer.
- Disposable, lidded sample cups make sample handling easy.
- Single-point calibration; fast and simple.
- Both water patential and sample temperature are displayed.
- Displays water potential in MPa & pF.
- Menu-based user interface with 10 selectable languages.

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