VAPOR SORPTION ANALYZER

DESCRIPTION

The VAPOR SORPTION ANALYZER (VSA) is your simplest, most accurate option. It automates the entire process of soil-water characteristic curve construction in the dry region (-10 to -475 MPa) by accurately measuring simultaneously, at regular intervals, the water potential and the moisture content of a sample. No other instrument gives this much detail about soil in the dry range.

The VSA enables you to make detailed measurements no other instrument can. This means you can study the soil at a particle level, examining its chemical makeup and how the layers of soil imbibe water as it gets wetter or lose water as it gets drier. For the first time ever, it's possible to see hysteresis in dry soils because the VSA analyzes both wetting and drying curves. This is critical information because the area between those curves is indicative of water intrusion into clay layers at the molecular level.

VSA

- Fast, expansive soil characterization
- Automatic static and dynamic soil water characteristic curves
- Measure soil-specific surface area
- Generates curves with up to 200 data points for both adsorption and desorption
- Works in the dry soil range (-10 to -475 MPa)
- Set up a test in five minutes
- Steady sorption dynamics with static water potential feature

The VSA generates both Dynamic Dew Point Isotherm (DDI) and Dynamic Vapor Sorption (DVS) moisture release curves. How? It continuously wets the sample and stops periodically to measure how heavy it is (DDI), or it keeps the sample at a constant humidity, recording how long it takes the sample to come to equilibrium (DVS). In just 24 to 48 hours, the VSA generates curves with up to 200 data points (water potential vs. water content) for both adsorption and desorption.

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Set up a test, and walk away

With the VSA, it takes about five minutes to set up a test. Simply tell the instrument the water potential range and times you'd like to use, put the sample into the instrument, and move on to other tasks. The data from your test are automatically recorded and sent to your computer. Powerful automation adds up to powerful time savings.

SPECIFICATIONS:

Water potential range	-10 to -475 MPa
Accuracy	±1 MPa, or ± 1%
Isotherm methods	Dynamic Dew Point Isotherm (DDI) & static DVS (Dynamic Vapor Sorption)
External gas	Not needed. If external gas is used, no more than 7 PSI.
Water reservoir	20 mL
Temperature control range	15 to 60 °C (sample chamber temperature; sample temperature is measured separately and may vary)
Temperature operating range	15 to 40 °C
Computer interface	USB
Universal power	110 V to 220 V AC 50/60 Hz
Dimensions	W 25.4 cm (10 in.) x L 38.1 cm (15 in.) x H 30.5 cm (12 in.)
Weight	12.7 kg (28 lbs.)
Sample weight range	500-5000 mg
Sample cup volume	10 cc
Weight accuracy	± 0.1 mg

Contact info

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FEATURES

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This Instrument is manufactured by our principle company

METER Environment - USA