Wet Sieving Apparatus

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Model: 08.13 (D0037855)
The **Wet Sieving Apparatus** is designed for precise soil aggregate stability analysis, offering key insights into soil's sensitivity to water and wind erosion. This complete set facilitates the wet sieving method to evaluate the stability of soil aggregates under controlled laboratory conditions.

Features

- **Determines Aggregate Stability:** Measures the proportion of stable to unstable aggregates for erosion studies.
- **Eight Inert Beakers:** Allows the use of chemicals without contamination.
- **Pre-Programmed Immersion Time:** Ensures standardized testing across samples.

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- **Adaptability:** Works effectively with simple, disturbed soil samples.
- **Fine Sieving Capability:** Sieves with 0.250 mm openings to capture relevant particle sizes.
- **Quantitative Measurements:** Tracks the grains disintegrating and passing through the sieve.

Applications

- **Soil Physical Laboratory Research:** Analyzes physical properties of soil aggregates.
- **Erosion Research:** Studies soil's vulnerability to water and wind erosion.
- **Soil Stability Research:** Evaluates aggregate stability as a soil health indicator.

Specifications

- **Maximum Number of Samples:** 8
- **Measured Parameters:** Aggregate stability
- **Measuring Range:** 0 - 100%
- **Reading Accuracy:** Dependent on weighing equipment
- **Sample Type:** Disturbed soil
- **Voltage:** 110-240VAC, 50/60Hz

Description

The apparatus operates on the principle that unstable soil aggregates disintegrate more readily in water compared to stable aggregates. The procedure involves:

1. Filling **8 sieves** (each with a 60-mesh screen and 0.250 mm openings) with soil aggregates.
2. Immersing the sieves in water-filled cans mounted on a shaking machine.
3. Oscillating the cans up and down for a fixed duration to simulate water-induced breakdown of aggregates.

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4. Collecting disintegrated aggregates in water-filled cans beneath the sieves.

Following this initial phase, the cans are replaced, and remaining aggregates are destroyed, leaving behind sand grains and plant roots. After drying the cans, the stable and unstable aggregate weights are determined. The **aggregate stability index** is calculated by dividing the weight of stable aggregates by the total aggregate weight.

Standard Set Includes:

- Shaking machine for wet sieving (110-240 VAC, 50/60Hz adapter included)
- **8 sieves** (Ø 39x39 mm, 0.250 mm opening, 10.2 cm² surface)
- Stainless steel sieve cans (Ø 64x45 mm)

Optional Accessories:

- Sieves with various openings (2.0 - 0.045 mm)
- **Electronic Pocket Balance** for precise weight measurements

The **Wet Sieving Apparatus** is an indispensable tool for soil stability and erosion research, enabling reliable and repeatable laboratory analysis of aggregate behavior under water stress conditions.

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