Wet Sieving Apparatus

Model **08.13, D0037855** | Brand **Master Science** | Unit **Pc**



Wet Sieving Apparatus

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.

KEY HIGHLIGHTS

- Determines Aggregate Stability
- Eight Inert Beakers
- Pre-Programmed Immersion Time
- Adaptability
- Quantitative Measurements

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Overview

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

Key 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.

Adaptability
Works effectively with simple, disturbed soil samples.

Sieves with 0.250 mm openings to capture relevant particle sizes.

Quantitative Measurements
Tracks the grains disintegrating and passing through the sieve.

Filling 8 sieves (each with a 60-mesh screen and 0.250 mm openings) with soil aggregates.

Immersing the sieves in water-filled cans mounted on a shaking machine.

Oscillating the cans up and down for a fixed duration to simulate water-induced breakdown of aggregates.

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

Additional Information
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.

Technical Specifications

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

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.

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.