



Product Overview

The Particle Charge Tester is a laboratory instrument designed to determine the ionic polarity of dispersed particles in liquid media. It identifies whether particles exhibit **anionic, cationic, or non-ionic characteristics**, enabling accurate evaluation of chemical compatibility and dosage requirements.

The instrument is widely used in water treatment laboratories, asphalt and bitumen emulsion testing facilities, research institutions, and quality control laboratories. It assists in determining the appropriate chemical treatment levels and evaluating the compatibility of emulsified materials with aggregates and other substrates.

Applicable Standards

- EN 1430
- ASTM D244

Working Principle

The Particle Charge Tester measures the electrical behavior of dispersed particles suspended in a liquid medium. A pair of copper electrodes is immersed in the test sample, and the electrical response is observed using a sensitive milliammeter. The measured current and particle movement indicate the ionic nature of the particles, allowing determination of whether the dispersion is cationic, anionic, or non-ionic.

Key Features

High-Sensitivity Measurement

- Equipped with a digital milliammeter for precise charge indication.
- Measurement scale up to 10 mA.

Front Panel Operation

- Easy-to-read front-facing control panel.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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- Convenient monitoring of test parameters and results.

Integrated Variable Resistance Control

- Built-in variable resistor circuit for controlled adjustment during testing.
- Enhances measurement accuracy and repeatability.

Robust Electrode Assembly

- Supplied with precision copper electrodes.
- Optimized dimensions for reliable charge determination.

Laboratory-Ready Design

- Simple operation and minimal maintenance.
- Suitable for routine quality control and research applications.

Versatile Application

- Water treatment chemical optimization.
- Asphalt and bitumen emulsion evaluation.
- Emulsion compatibility testing with aggregates.
- Research and educational laboratories.

Technical Specifications

Parameter	Specification
Instrument Type	Particle Charge Tester
Measurement Indicator	Digital Milliammeter
Measurement Range	Up to 10 mA
Control Circuit	Built-in Variable Resistor
Test Beaker Capacity	600 mL
Electrode Material	Copper
Number of Electrodes	2 Pieces
Electrode Length	100 mm
Electrode Width	10 mm
Electrode Thickness	1 mm
Stirring Element	Glass Rod
Power Supply	AC 220 V \pm 10%, 50 Hz
Application	Ionic Charge Determination of Dispersed Particles

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