Micrometrix™

Model PCA
PARTICLE CHARGE ANALYZER

Features

- Digital Display
- LED Indicators
- milli-Volt Output
- Zero Offset
- Sensitivity Adjustment
- Portable

Charge Measurement and Charge Demand Analysis

The Micrometrix™ Particle Charge Analyzer measures ionic and colloidal charge in liquid samples. Optimum chemical dosage can be determined much quicker than with standard “jar testing”. Anionic or cationic Charge demand is determined by titration. The digital display indicates the zero charge endpoint value when titrating.

Applications

- Water Treatment
- Paper Industry
- Wastewater
- Chemical Industry
- Ceramics
- Minerals
- Remediation

Benefits

- Establish Chemical Dose
- Optimize Process Performance
- Quality Control
- Replace Jar Tests
- Minimize Chemical Cost
- Reduce Residuals
- Quick and Easy to Use

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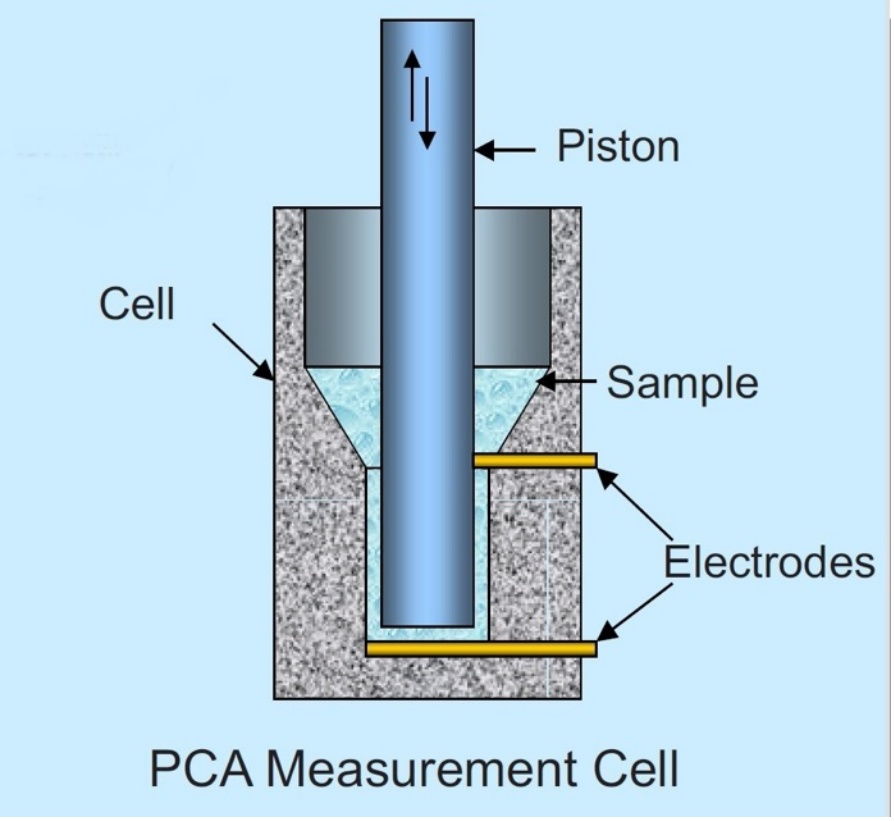
Engineering Specifications

The Streaming Current cell (SC cell) determines the charge of the sample and the end point of the titration. The measurement cell consists of a precision bore cylinder closed at the bottom end and containing two electrodes, one at the bottom, and an upper electrode. The electrodes are connected to the contacts extending from the lower front portion of the instrument housing. The measurement cell is designed as a container to allow sample to be poured in from the top. The typical sample volume is 100ml. A precision piston oscillates up and down in the cylinder with a frequency of approximately 4hz. Polyelectrolyte (polymer) or coagulants are used as titrants to determine the charge demand of the sample. Colloidal particle are temporarily attached to the piston and cylinder walls. The mobile counterions of the fixed electrolyte move through the liquid stream creating an electric current due to the partial charge distribution measured between the two electrodes. This streaming current is measured by the electronics in the main unit.

The instrument shall be a Particle Charge Analyzer Model PCA manufactured by Micrometrix Corporation.

Specifications	Model PCA
Measurement	Streaming Current
Power	110 Vac / 230 Vac (Optional)
Range	-1000 to +1000 mV
Accuracy	0.1%
Display Type	LED - Digital
Sample Size	10 ~ 100 ml
Connection Type	Piston connected magnetically
Response Time	1 Second
Self Diagnostic	LED
Electrode and Cell Materials	316 SS, PTFE
Outputs	-1000 to +1000 mV
Options	Endpoint Titrator, Carrying Case, Data Logger
LED Indicators	Anionic and Cationic
Zero Adjust	Full Range
Type / Use	Portable/ Benchtop
Dimensions	7” x 7” x 14”
Weight	20 lbs , 9 kg



PCA Measurement Cell

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