Technical Note 141

Laboratory Based and Portable Analysers

Introduction

Process Instruments (Pi) are known for making the best online Water Quality Analysers on the market, however, Pi also supplies stand-alone laboratory based analysers for determining coagulant dose in as few as 5 minutes as well as portable versions of some of our online water analysers.

LabSense5 Analyser

LabSense5

Pi's LabSense Laboratory Charge Analyser is an essential coagulation optimisation tool for water treatment. LabSense allows the user to determine the ideal coagulant dosage needed to achieve optimum NTU and TOC reduction in typically less than 5 minutes, earning it the description "5 minute jar tester".

How does it work?

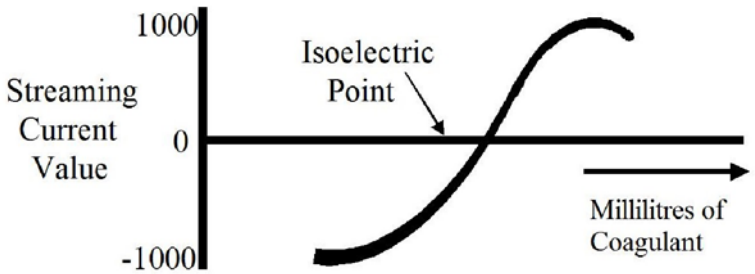
Based on streaming current technology, the LabSense titrates a sample of raw water to determine the dose of coagulant required to achieve charge neutralisation. The LabSense reading which has been shown to be an accurate approximation for coagulant dosage, is proving an invaluable tool for a Water Process Scientist with the responsibility to optimise coagulant dosage often on rapidly changing water sources where jar testing can just take too long. For more details about Pi's LabSense Laboratory Charge Analysers, visit https://www.processinstruments.co.uk/products/laboratory-charge-analyser/.

ChargeSense

Pi's ChargeSense Laboratory Charge Analyser is an essential tool for papermaking allowing fast determination of wet end charge demand.

How does it work?

ChargeSense measures the streaming current produced by colloidal/dissolved species in a sample taken from various points on the wet end of the papermaking process, and allows for a titration with a poly-electrolyte titrant to bring the sample's charge to zero. The charge demand result is then expressed as either microequivalents per litre (µeq/L) or parts per million (ppm). For more details about Pi's ChargeSense Laboratory Charge Analyser, visit https://www.processinstruments.co.uk/products/charge-analyser/.



UV254 Portable

With the UV254 Portable range of UV254 handheld meters you get a simple and reliable means of testing any water for UV transmittance (UVT) and UV absorbance (UVA). Used to provide quick (<1 min) information on site, the UV254 Portable provides an invaluable tool to water treatment engineers, essential for verifying an online analyser reading or as an independent measurement.

How does it work?

The Pi UV254 Portable measures UV254 absorbance and UV254 transmission, can provide testing in both units of UVT and UVA and can be equipped with our optional battery pack feature, allowing the meter to truly go anywhere, anytime.

The patented Split-Sensor technology also allows for the unique ability to remember the meter's calibration, eliminating the need to calibrate (zero) the meter to a known pure (DI) water source before taking a measurement. This improves ease of use in the field for performing rapid grab sample testing of various water sources. For more details about Pi's UV254 meters, visit https://www.processinstruments.co.uk/products/uv254-analyser/.

UV254 Portable

ParticleSense Portable

The Portable Particle Counter (ParticleSense Portable) combines simplicity of operation, advanced electronics, and powerful performance to set the standard for particle counting in liquids.

How does it work?

This portable unit has the capability to operate as both a grab sample particle counter (lab or field use) and an online particle counter, which makes it ideal for particle size and concentration analysis in a variety of municipal and industrial applications.

ParticleSense Portable

The Pi ParticleSense Portable can size particles from 2 to 125 microns and count particles from 2 to 750 microns. With the ability to detect particles at low parts-per-trillion (ppt) concentrations, the ParticleSense Portable offers superior analytical performance at an economical price compared to most other laboratory particle counters. For more details about Pi's ParticleSense Particle Counters, visit https://www.processinstruments.co.uk/products/particle-counter/.