



PARIO: Particle Size Analysis

DESCRIPTION

PARIO calculates the particle size distribution by Stokes' law, with a range spanning from 63 μm to 1 μm , finally making it easy to obtain a complete particle size distribution curve, instead of just a few measurements at discrete time points.

It allows for unattended, automated operation, with no interference by lab personnel. Just set it up and come back 8 hours later to a finished measurement with all the data you need. PARIO automatically measures at an interval of ten seconds and continuously records the change of suspension pressure as well as the temperature. This results in highly accurate and continuous particle size distribution curves. The data are automatically evaluated by our new data processing algorithm called "Integral Suspension Pressure Method" (ISP).



PARIO

FEATURES

- Get complete particle size distribution curves
- Calculation of particle size distribution by Stokes's law
- Autonomous operation after measurement start
- Quasi-continuous resolution of particle size distribution
- No physical disturbance of suspension during measurement
- Avoidance of manual reading errors
- Avoidance of manual calculation errors.
- Temperature dependence automatically integrated in the calculation of particle size distribution

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PARIO comes with an easy-to-use, all-in-one software solution for automated data inquiry, visualization, evaluation and export. Plus, PARIO, as part of the LABROS system, can be combined with the HYPROP, KSAT, or WP4C to completely characterize the physical and hydraulic properties in soil. All of this serves one goal—to reduce the operating time you spend for particle size analysis, while at the same time improving accuracy.

Contact info



Monitoring MENA

Insight into instrumentations

(962) 5353-2091

PO Box 1100 Salt

Post Code 19110 JORDAN

sales@monitoring-mena.com

www.monitoring-mena.com

SPECIFICATIONS	
Particle size range	Range: 2-63 μm Resolution: 1 μm
Approximate error in mass fraction detection	$\pm 3\%$
Accuracy of pressure measurement	± 1 Pa
Typical particle mass	25–50 g per 1-L suspension
Typical duration of measurement	8 h
Measurement interval	10 s
COMMUNICATION SPECIFICATIONS	
Power requirements	USB 5 V/100 mA
Computer compatibility	Microsoft Windows 7 or newer
PHYSICAL SPECIFICATIONS	
Glass cylinder	Height: 450.0 mm (17.7 in) Diameter: Inner: 59.0 mm (2.3 in) Outer: 67.5 mm (2.7 in) Volume: 1,000 cm^3 (61.0 in^3) Material: Borosilicate glass 3.3
PARIO device	Height: 293.0 mm (9.1 in) Diameter: 80.0 mm (3.2 in) Material: Polyoxymethylene plastic (POM) and stainless steel
Volume of suspension	1,000 mL
Operating temperature	Minimum: 15 $^{\circ}\text{C}$ Typical: 20 $^{\circ}\text{C}$ Maximum: 35 $^{\circ}\text{C}$
Maximum tolerable temperature change during measurement	± 1.5 $^{\circ}\text{C}$
Required external measurements	Content of organic matter Wet sieving
Cable type	USB 2.0; 500 mA for receiving port
COMPLIANCE	Manufactured under ISO 9001:2015 EM ISO/IEC 17050:2010 (CE Mark)

This Instrument is manufactured by our principle company

METER Environment - USA