

LISST-Portable XR Particle Size Analyzer



Brand: Sequoia Scientific, Inc.

Product Code: 365-10

Availability: Call for availability

Lead Time: 45

Description

The LISST-PORTABLE[®] XR is the world's only portable, battery powered laser diffraction based particle size analyzer. Designed for use in the field and the laboratory, it analyzes the sample in a wet state to obtain particle size distribution and particle volume concentration.

Features

- Pumped and recirculating mixing chamber that keeps large and heavy particles suspended.
- 7" touch panel display for measuring and displaying data with no need for a PC
- Rechargeable battery allows for a full day of work without external power
- Shock mounted optics that can withstand the rigors of field use
- A built-in ultrasonic probe for complete sample dispersion
- All data are immediately processed and stored in an ASCII file on the instrument for subsequent offloading and report generating.
- Truly portable - completely self-contained with built-in data logger, processor, rechargeable battery, and 7" touch panel color display.
- Touch panel allows for easy SOP programming, sample analysis and display of data without a PC.
- Shock mounted optics block.
- Multiple Mie models as well as Fraunhofer model available for inversion, selectable from the touch panel.
- All data-processing is performed on board and stored in ASCII-format. No

post-processing necessary.

- Outputs: Total volume concentration, mean size, standard deviation, optical transmission, D_5 , D_{10} , D_{16} , D_{25} , D_{50} (median grain size), D_{60} , D_{75} , D_{84} , D_{90} , D_{95} , D_{60}/D_{10} (Hazen uniformity coefficient), particle surface area, silt fraction, silt volume, size distribution, battery voltage, sample notes.
- Built-in ultrasonic probe for complete particle dispersion.
- Based on the laser diffraction principle. Compliant with ISO-13320-1 standard.

Specifications

Size and Concentration Range

- 0.34 - 500 μm in 44 log-spaced size classes.
- 30 - 1,900 mg/L range, depending on particle size (see table). Resolution < 1 mg/L. Accuracy $\pm 20\%$.

Material	Concentration [mg/L] @ 95% Transmission	Concentration [mg/L] @ 95% Transmission	D_{10} [μm]	D_{50} [μm]	D_{90} [μm]	SMD [μm]
ISO Fine	30	170	1.5	7	41	3
ISO	95	395	4	38	99	10
Coarse						
20 - 30 μm	195	1,075	19	24	34	24
Glass						
Beads						
Sieved	345	1,925	85	122	175	112
Sand 75 - 125 μm						

Mechanical and Electrical

- Dimensions and weight of instrument: 7" H \times 11.5" D \times 17.5" W (17.7 \times 29 \times 44.3 cm); 17 lb (7.5 kg)
- Dimensions and weight in shipping box: 31" \times 21" \times 11" (78 \times 53 \times 28 cm); 49 lb. (22 kg)
- Data storage: 128 MB flash card, capable of storing at least 40,000 size distributions and associated sample information.
- Rechargeable Lithium-ion battery provides for 6 hours of sample processing.

- 25W, 40kHz ultrasonic probe with controller electronics, managed from the touch panel display.

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