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. To ensure maximum portability and complete freedom from a laboratory environment, it features an integrated mixing chamber, touch panel display, rechargeable battery, shock mounted optics, built-in ultrasonic probe and onboard data processing and storage.
FEATURES

- Truly portable: Completely self-contained with built-in data logger, processor, rechargeable battery, ultrasonic probe and 7” touch panel color display
- No PC needed: Touch panel color display allows for easy programming, sample analysis and data display
- Rugged design: Sealed enclosure and shock mounted optics block
- Simplicity: On-screen step-by-step instructions walks the operator through a measurement
- Versatility: Multiple Mie models as well as Fraunhofer model available for inversion, selectable from the touch panel
- All data-processing performed on board and stored in ASCII format. No post-processing
- Outputs: Total volume concentration, mean size, standard deviation, optical transmission, D5, D10, D16, D25, D50 (median grain size), D60, D75, D84, D90, D95, D60/D10 (Hazen uniformity coefficient), particle surface area, silt fraction, silt volume, size distribution, battery voltage, sample notes, operator name and instrument configuration
- Compatible with water and IPA based fluids
- Laser-diffraction based

SPECIFICATIONS

Operating Concentration Range

- Size range 0.34 μm - 500 μm in 44 log-spaced size classes
- Concentration range 30 mg·L⁻¹ - 1,900 mg·L⁻¹. Note: Dependent on particle size (see table)

<table>
<thead>
<tr>
<th>Material</th>
<th>Concentration [mg/L] @ 95% transmission</th>
<th>Concentration [mg/L] @ 75% transmission</th>
<th>D10 [μm]</th>
<th>D50 [μm]</th>
<th>D90 [μm]</th>
<th>SMD [μm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO Fine</td>
<td>30</td>
<td>170</td>
<td>1.5</td>
<td>7</td>
<td>41</td>
<td>3</td>
</tr>
<tr>
<td>ISO Coarse</td>
<td>95</td>
<td>395</td>
<td>4</td>
<td>38</td>
<td>99</td>
<td>10</td>
</tr>
<tr>
<td>20-30 μm glass beads</td>
<td>195</td>
<td>1,075</td>
<td>19</td>
<td>24</td>
<td>34</td>
<td>24</td>
</tr>
<tr>
<td>Sieved sand 75-125 μm</td>
<td>345</td>
<td>1,925</td>
<td>85</td>
<td>122</td>
<td>175</td>
<td>112</td>
</tr>
</tbody>
</table>

Mechanical and Electrical

- Dimensions: [H × D × W] 17.7 cm × 29 cm × 44.3 cm (7” × 11.5” × 17.5”)
- Weight: 7.5 kg (17 lbs)
- Shipping box dimensions: [H × D × W] 78 cm × 53 cm × 28 cm (31” × 21” × 11”)
- Gross weight: 22 kg (49 lbs)
- Data storage: 1 GB flash card (~100,000 size distributions and associated sample information)
- Rechargeable Lithium-ion batteries provide six hours of sample processing. Batteries classified as non-hazardous for air shipment
- 25 W, 40 kHz ultrasonic probe with controller electronics, managed from the touch panel display

Touch panel Screenshot of Main Menu

Sequoia Scientific, Inc.
2700 Richards Road, Suite 107, Bellevue, WA 98005 USA
Tel +1 (855) 753-3313
e-mail info@SequoiaSci.com
www.SequoiaSci.com