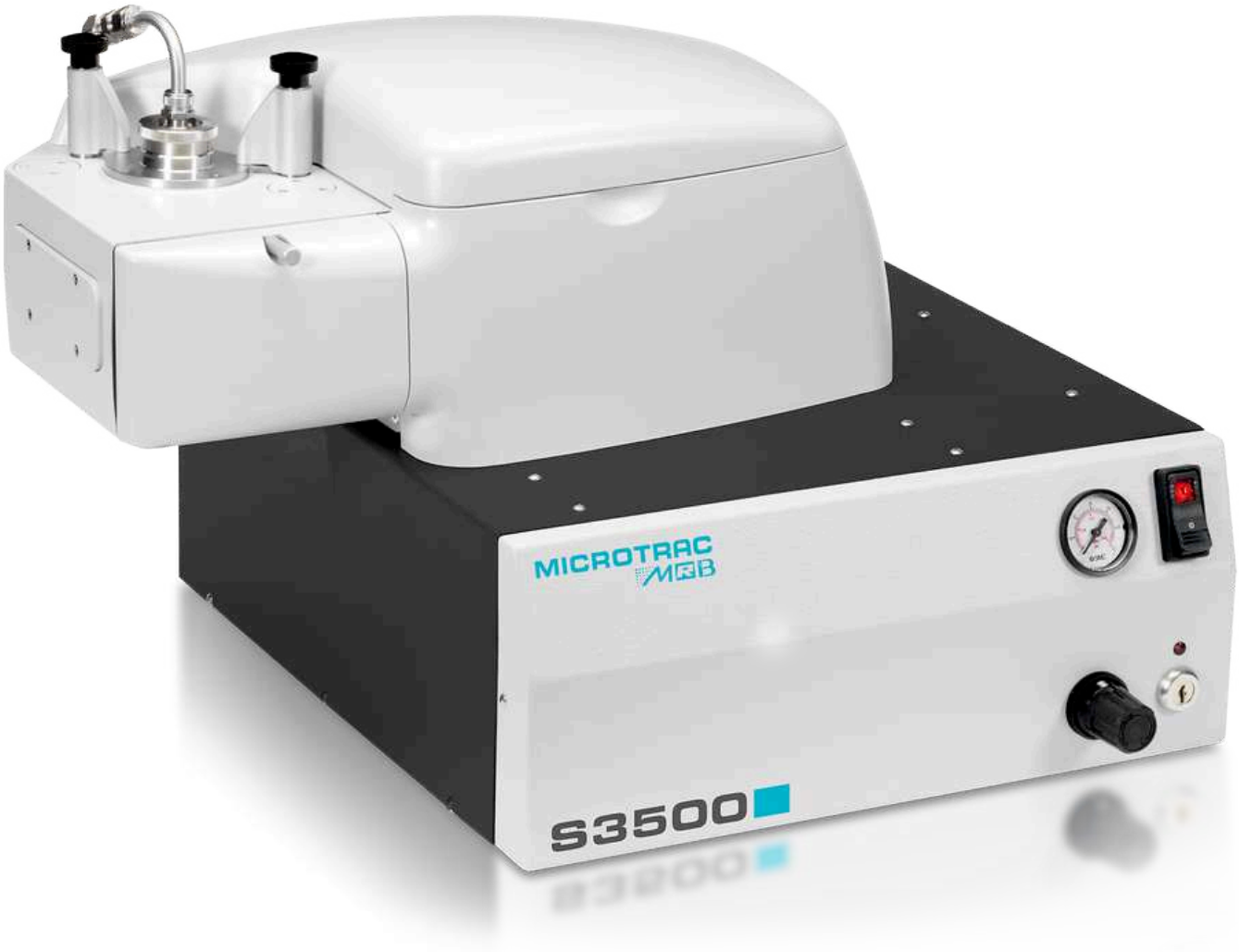



PARTICLE SIZE ANALYZER

# S3500

**The Microtrac S3500 is a industry-preferred Laser Diffraction (LD) analyzer, ideally suited for various particle characterization tasks. It is the first particle size analyzer that uses three precisely placed red laser diodes to accurately characterize particles like never before.**

The patented Tri-Laser System provides accurate, reliable and repeatable particle size analysis for a diverse range of applications by utilizing the proven theory of Mie compensation for spherical particles and the proprietary principle of Modified Mie calculations for non-spherical particles. The S3500 measures particle size from 0.02 to 2,800 µm.

Laser Diffraction with red and blue lasers: BLUEWAVE

## FEATURES

- Tri–laser, red, multi-detector, multi-angle optical system
- Algorithms that utilize Mie compensation and Modified Mie calculations for non-spherical particles
- Measurement capability from 0.02 to 2,800 µm
- Wet and dry measurements
- Enclosed optical path ensures complete protection of the optical components leading to little or no operator intervention

## PRODUCT ADVANTAGES

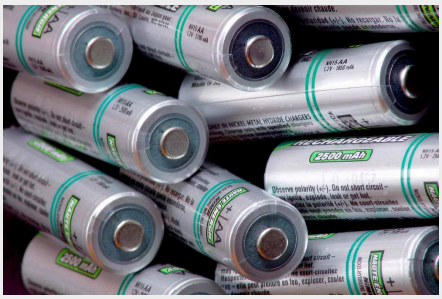
- Utilizing three red lasers, increases the range of measurement, giving you the flexibility to conduct analysis on a wide range of samples
- Proprietary Modified Mie calculations allow users to accurately measure complex particles that other particle analyzer struggle to accurately characterize
- Seamless transition from wet to dry measurement reduces down time
- Fixed detectors provide rugged durability and assure proper positioning
- Small bench footprint reduces demand on valuable laboratory space

*Trusted reviews provided by*

## TYPICAL APPLICATIONS

Used in various fields such as: beverages, biotechnology, chemicals, food, medicine / pharmaceuticals, metal powders, metals, pigments, geology / metallurgy, ...

*chemicals*



*battery materials*

*powders*

To find the best solution for your particle characterization needs, visit our application database

# TECHNICAL DATA

| | |
|---|---|
| **Measuring range** | 0.02 µm - 2.8 mm |
| **Measuring principle** | Laser diffraction |
| **Lasers** | 3x Red 780 nm |
| **Laser power** | 3 mW nominal |
| **Detection system** | Two fixed photo-electric detectors with logarithmically spaced segments placed at correct angles for optimal scattered light detection from 0.02 to 165 degrees using 151 detector segments. |
| **Data** | Volume, number and area distributions as well as percentile and other summary data |
| **Data format** | Stored in ODBC format in encrypted Microsoft Access Databases to ensure compatibility with external statistical software applications. |
| **Data integrity** | Data integrity may be ensured using FDA 21 CFR Part 11 compliant security features including password protection, electronic signatures and assignable permissions |
| **Measuring time** | ~ 10 to 30 seconds |
| **Power requirements** | AC input: 90 - 132 VAC, 47 - 63 Hz, single phase<br>200 to 265 VAC, 47 - 63 Hz, single phase |
| **Power consumption** | 25 W nominal, 50 W max. (depending on options installed) |
| **Environmental conditions** | Temperature: 5° to 40° Celsius (50° to 95° Fahrenheit)<br>Humidity: 90% RH, non- condensing maximum<br>Storage temperature: -10° to 50° Celsius (14° to 122° Fahrenheit) (dry only)<br>Pollution: Degree 2 |
| **Physical specifications** | Case Material: Steel and impact resistant plastic<br>Exterior surfaces are finished with corrosion resistant paint or plating |
| **Dimensions (W x H x D)** | ~ 560 x 360 x 460 mm (22 x 14 x 18 in) |
| **Weight** | ~ 27 kg (60 lbs ) |
| **Eductor air supply** | 100 psi (689 kPa) maximum pressure<br>5 CFM (8,5 m3/h) at 50 psi (345 kPa) minimum flow rate<br>Free of dry contaminants, moisture and oil |
| **Vacuum** | Vacuum must exceed 50 CFM |