

AEROCET 531S Particle Mass Profiler & Counter

The AEROCET 531S is a full-featured, battery operated, hand-held mass monitor or particle counter. This amazing unit simultaneously measures 6 mass concentration ranges or five particle count sizes (0.3 μ m, 0.5 μ m, 1.0 μ m, 5.0 μ m and 10 μ m). View sample history data in either mode.

Key Features:

Aerosol Mass and Particle Count Measurements in a Single Hand held Unit

The AEROCET 531S is a small, hand-held, battery operated, and completely portable unit. This unit provides both particle counts and mass PM measurements.

Six Mass Ranges and Five Particle Sizes

Six important mass size ranges (PM₁, PM_{2.5}, PM₄, PM₇, PM₁₀, and TSP) are displayed in mass mode as well as five popular particle sizes in count mode.

Tailored Mass Conversion

The particle counts from eight size ranges are converted to mass using a proprietary algorithm for typical-density aerosols. Accommodation for special particulate with different densities is provided through user-programmable "K - factors."

Flexible Data Interfaces

The AEROCET 531S stores over 6,000 records. These records can be viewed on the display, or transferred to a computer via USB or RS232. Our included Comet download utility makes file transfers easy. Import sample data into a spreadsheet or print hard copies using the optional G3115 printer.

Temperature and Relative Humidity Option

A plug-and-play option that immediately adds ambient temperature and relative humidity capabilities to the displayed and logged data.



Applications

- Controlled Environments
- Industrial/Occupational Hygiene
- Indoor Air Quality
- HVAC Applications
- Hospitals & Clinics
- Filter Testing

*Note: Not recommended for continuous outdoor use. Avoid sampling in rainy or foggy conditions.

Mass Mode

Mass Concentration Ranges	PM ₁ , PM _{2.5} , PM ₄ , PM ₇ , PM ₁₀ , and TSP
Sensitivity	High = 0.3µm, Low = 0.5µm
Concentration Limit Sample Time	0 – 1,000 µg/m ³ 1 minute

Particle Count Mode

Concentration Limit Sample Time	0 – 3,000,000 particles per cubic foot (105,900 particles/L) 1 minute
Size Accuracy	± 10%
Sensitivity	User selectable (0.3µm / 0.5µm)
Flow Rate	0.1 cfm (2.83 lpm)
Particle Size Ranges	High sensitivity: 0.3µm, 0.5µm, 1.0µm, 5.0µm and 10µm Low sensitivity: 0.5µm, 1.0µm, 5.0µm and 10.0µm

Electrical

Light Source	Laser diode, 90 mW, 780 nm
Battery Pack	7.4V Li-ion battery pack
AC Adapter/Charger	Li-ion battery charger, 100-240 VAC, 50/60Hz, 0.2A
Communications	RS-232, USB
Certifications	Meets or Exceeds CE and ISO 21501
Battery Life	6 hours continuous operation Up to 20 hours of typical (intermittent) operation.

Interface Display / Keyboard

16-character × 4-line LCD / 7-key membrane keypad

Physical

Weight	2.0 lbs - 32oz (0.9 kg)
Size	Height = 6.25" (15.9 cm) Width = 4.0" (10.2 cm) Thickness = 2.1" (5.4 cm)

Environmental

Operation Temperature	0° to +50°C
Relative Humidity	< 95% (non-condensing)
Storage Temperature	- 20° to +60°C

Specifications are subject to change at any time.

SUPPLIED ACCESSORIES

User Manual	Comet Communications	USB Cable
Isokinetic Sample Probe	Software Zero Particulate Filter	AC Adapter / Battery Charger
Carrying Case	Calibration Certificate	

OPTIONAL ACCESSORIES

RH & Temperature Probe
Portable Printer
Flow Meter
Custom Serial Cable
Wall/Tripod Mount

