

# AEROCET 831 Aerosol Mass Monitor

Small - Reliable - Affordable

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## Key Features:

### Five Mass Ranges

(PM1, PM2.5, PM4, PM10 and TSP)

A mass monitor that simultaneously provides five important mass ranges in one minute.

### Handheld Operation

Survey the environment with this extremely portable, size selective mass monitor. This small lightweight instrument is only 28 ounces and is the perfect survey tool for a wide range of applications.

### Simple Operation

Only two front-panel buttons accompany the multifunction rotary scroll wheel to provide simple and efficient operation. Just press and rotate to scroll through the menu driven platform.

### Sample History

View sample history easily on the display or export data via the USB port using the included software. Unit stores up to 2500 sample events. USB interface provides quick data download and field firmware upgrades.

### Battery Powered

24 hours of typical intermittent operation and up to 8 hours of continuous use. Recharge time is only 2.5 hours. The included AC charger / adapter operates the counter even when the battery pack is discharged.



Figure 1 – AEROCET 831 with optional protective boot

## Applications:

- Indoor Air Quality
- Industrial / Occupational Hygiene
- HVAC Applications

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

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## Specifications:

### Operating Principle

Particle count to mass conversion

### Features

Sample Duration	1 minute
Sample Modes	Manual and Continuous
Data storage	2,500 records
Display	2-line by 16-character LCD
Controls	2 button keypad with rotary dial

### Performance

PM Ranges	PM1, PM2.5, PM4, PM10, TSP
Concentration Range	0 – 1,000 $\mu\text{g}/\text{m}^3$
Resolution	0.1 $\mu\text{g}/\text{m}^3$ (display / serial output)
Sensitivity	High = 0.3 $\mu\text{m}$ , Low = 0.5 $\mu\text{m}$
Accuracy	$\pm 10\%$ to calibration aerosol
Flow rate	0.1 CFM (2.83 lpm)

### Electrical

Light Source	Laser Diode, 780 nm, 40 mW typical
AC Adapter/Charger	AC to DC module, 100 – 240 VAC to 8.4 VDC
Battery Type	Li-ion rechargeable Battery
Battery Operating Time	8 hours continuous operation. Up to 24 hours intermittent operation.
Battery Recharge Time	2.5 hours typical
Communication	USB Mini B Type

### Physical

Size	Height: 6.25" (15.9 cm) Width: 3.63" (9.22 cm) Thickness: 2.00" (5.08 cm)
Weight	1.74 lbs – 28 ounces – (0.79 kg)

### Environmental

Operating Temperature	0° C to +50° C
Storage Temperature	-20° C to +60° C

### Accessories

Supplied	Battery charger / adapter
	USB Cable
	Operation manual
	Comet software
Optional	Carrying Case (PN 8517)
	Protective Boot (PN 80450)
	Zero Filter Kit (PN 80846)
	Flow Meter Kit (PN 80530)

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