



Met One Instruments, Inc.

# AEROCET 531 Handheld Particle Mass Profiler & Counter

2-in-1 performance!

## Particle Mass Profiler and Counter in a Single Handheld Unit

The Aerocet 531 is a small, handheld, battery-operated, and completely portable unit. This unit provides both particle counts or mass PM measurements as stored datalogged values, real-time networked data, or printed results.

## Five Mass Ranges and Two Particle Sizes

All five important mass size ranges (PM1, PM2.5, PM7, PM10, and TSP) are displayed in mass mode as well as two popular cumulative particle sizes (>0.5 and >5.0 microns) in particle 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 531 stores up to 4,000 records for printer output, Excel® formatted output, or networked datalogging through the included single computer software (AeroComm).

## 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.



Whatever your particular needs,  
the right choice is only natural.

### Applications:

- |                            |                         |
|----------------------------|-------------------------|
| Controlled Environments    | HVAC Applications       |
| Indoor/Outdoor Air Quality | Filter Testing          |
| Hospitals & Clinics        | Mining & Ore Processing |
| Process Control            | Emission Sourcing       |
|                            | Remote Sampling         |

## OPERATING PRINCIPLE

Counts individual particles using scattered laser light and calculates the equivalent mass concentration using a proprietary algorithm

## PERFORMANCE

### Mass Mode

Mass Concentration Ranges PM1, PM2.5, PM7, PM10, and TSP  
 Concentration Range 0–1 mg/m<sup>3</sup>  
 Sample Time - Mass Mode 2 minutes

### Particle Mode

Particle Size Range Two channels—0.5 and 5.0 µm  
 Concentration Range 0–3,000,000 particles per cubic foot (105,900 particles/L)  
 Sample Time - Particle Mode 1 minute  
 Accuracy ± 10%, to calibration aerosol  
 Sensitivity 0.5 µm @ 2 to 1 peak to valley (JIS), 2 to 1 S/N  
 Flow Rate 0.1 cfm (2.83 lpm)

## ELECTRICAL

Light Source Laser diode, 5 mW, 780 nm  
 Power 6V Ni-MH self-contained battery pack—provides 8 hours of typical intermittent operation, up to 5 hours continuous use  
 AC Adapter/Charger AC to DC module, 100–240 VAC to 9 VDC @ 350 mA typical  
 Communications RS-232  
 Particle Certifications Meets or exceeds CE, ISO, ASTM, and JIS international certifications  
 Mass Certifications Requires proper use of appropriate K-factors for material being measured

## INTERFACE

Display 16-character × 4-line LCD  
 Keyboard 7-key membrane type

## PHYSICAL

Size Height = 6.25" (15.9 cm) Width = 4.0" (10.2 cm)  
 Thickness = 2.1" (5.4 cm)  
 Weight 1.94 lb - 31 oz (0.88 kg)

## ENVIRONMENTAL

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

## ACCESSORIES

Supplied Operation Manual  
 Custom Serial Cable  
 Communications Software (AeroComm)  
 AC to DC Converter Module with IEC AC Power Cord  
 Isokinetic Sample Probe  
 Screwdriver  
 Carrying Case  
 Zero Particulate Filter

Optional RH & Temperature Probe (Met One Part Number G3120)  
 Flow Meter (Met One Part Number 9801)  
 Portable Printer (Met One Part Number G3115)



 **Met One Instruments, Inc.**

1600 Washington Blvd., Grants Pass, OR 97526

Tel: 541.471.7111 | Fax: 541.471.7116

E-mail: sales@metone.com | www.metone.com