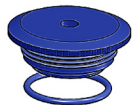


# Sensidyne Deluxe Nephelometer

## Real-Time Handheld Aerosol/Dust Monitor

The Sensidyne Deluxe Nephelometer is an advanced real-time particulate monitor accurately measuring aerosol and dust concentrations using proven light scatter technology. This portable instrument accurately measures and records particulate from 0.1-10,000 µg/m<sup>3</sup> with resolution to 1 µg/m<sup>3</sup>. Sample modes are selectable between 60 second sample, 15 minute STEL, or continuous sampling.

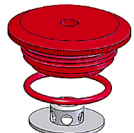


**TSP**

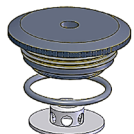
The Deluxe Nephelometer offers 4 different Impactor sizes for measurements



**PM10 Impactor**



**PM 4.0 Impactor**



**PM 2.5 Impactor**

The Deluxe Nephelometer has an internal pump drawing samples into the iso-kinetic sampling inlet at 1 liter per minute, where they meet sheath air that guides samples past the particle sensor. The sensor is a photo detector that measures laser light scattered by particulates in the sample stream. The Deluxe Model is capable of sampling selective sized particles with interchangeable impactor heads. The Deluxe Model comes standard with the total suspended particulate (TSP) head. Additional impactor heads are available in specific kits; the PM-2.5µ impactor head, the PM-4.0µ impactor head, and the PM-10µ impactor head.

The instrument multiplies each measurement by a K-factor and displays the real-time reading on the display of the instrument. After each sample the K-factor, Impactor Size, STEL, maximum, minimum, and average readings write to the instrument's data log. When connected to a computer the instrument uploads up to 4,000 data-log records in spreadsheet format.

In addition to high sensitivity and ease-of-use the Sensidyne Deluxe Nephelometer offers a low cost of ownership, automatic power save, long-life, data-logging, facility monitoring features, and user-replaceable filters.

Description	Part Number
Charger	298-0027-01
Zero Cap	385-0014-01
Sheath Air Filter	385-0012-01
USB Communication Cable	297-0012-01
PC App/Manual CD	390-0048-01
Rubber Boot	375-0008-01
Carrying Case	375-0009-01
Tri-pod Mount	385-0017-01
TSP Inlet Head	811-1004-03-R
PM-2.5 Impactor	811-1004-01
PM-4.0 Impactor	811-1004-04-R
PM-10 Impactor	811-1004-02
Deluxe Kit (US)*	810-1003-US-R
Deluxe Kit (EU)*	810-1003-EU-R
Deluxe Kit (UK)*	810-1003-UK-R

\*All Deluxe Kits come with TSP, PM-2.5, PM-4, and PM-10 impactor heads, Charger, Zero Cap, Replacement Filter, Communication Cable and Software.



### Accurate Aerosol/Dust Concentration

Proprietary algorithm provides accurate aerosol and dust concentration. The sheath air feature prevents internal contamination and improves accuracy.

### Reliable and Easy-to-Use

Temperature compensated, durable housing and minimal moving parts ensure reliability. Two-button user-interface ensures easy monitoring.

### Field Portable

All-in-one handheld instrument with long-life batteries that fully charge in less than 3 hours.

### Environment Profiling

Easy to use software allows programming unique environmental profiles and recording sample data.

### Surveying Tool

The Nephelometer is commonly used as a survey tool to collect objective data on dust and silica exposures. Additional uses are evaluating the effectiveness of dust and silica controls.

### Common Applications

- Industrial/Occupational Hygiene Area Surveys
- Particulate Matter or Aerosol Research Studies
- Immediate Spot Measurement
- Validating Silica Exposure Controls
- Emergency Response Measurements

Specifications	
Measurement Method:	Light scatter
Particle Size Screening:	TSP, PM 2.5, PM 4.0 or PM 10 (Selective Heads)
Sample Method:	Pump sample draw at 1.0 LPM
Range:	0.1 – 10,000 µg/m <sup>3</sup> (0.0001 to 10 mg/m <sup>3</sup> )
Sample Options:	1 minute, Continuous, or 15 min STEL
Resolution:	1 µg/m <sup>3</sup> (0.001 mg/m <sup>3</sup> )
Sensitivity:	1 µg/m <sup>3</sup> (0.001 mg/m <sup>3</sup> )
Accuracy:	± 5% traceable standard with 0.6 µm (0.0006 mg) PSL
Data logging:	4000 records of STEL, Max, Min, Avg, and k-factor
Operating Temp:	32°F to 122°F (0°C to 50°C)
Storage Temp:	-4°F to 140°F (-20°C to 60°C)
Display:	2 line, 16-character LCD
Controls:	2-button
Dimensions:	3.75W x 6.75H x 2.0D inches (9.5W x 17.2H x 5.1D cm)
Weight:	24 oz. (0.67 kg)
Light Source:	Laser diode
Power:	7.2V Lithium Ion self-contained battery pack providing 30 hours of typical intermittent operation and up to 12 hours continuous use.
Charger:	100-240VAC Lithium Ion Charger 8.4VDC @ 1500mA typical.
Charging Time:	Less than 3 hours
Communications:	USB Mini B-Type
Standard Calibration:	Arizona Road Dust. K-factors allow direct reading of other substances.
Safety Conformity:	IEC 60825-1 Ed.1.1 (1998-01) • EN 60825-1 W/A11 (1996) • US 21 CFR 1040.10 • FDA / CDRH This product is tested and complies with 21 CFR, Subchapter J, of the health and Safety Act of 1968. European Community (CE) Directive 89/336/EEC EN 55011 Group 1, Class B (Emissions) and EN 55082-1 (Immunity)
Supplied:	Operation manual, charger with power cord, zero cap, spare filter, software and USB cable.
Optional:	Carrying case and Rubber Protective Boot
Warranty:	One year from date of shipment.