

Santacary iP2 PM2.5 Meter User Manual

Santacary iP2 is a high precise instrument mainly used to measure the fine particles PM2.5 using the laser technology. iP2 can continuously display the ambient concentration of fine particles in micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$).

Fine particles PM2.5 refers to fine particulate matter in ambient air aerodynamic equivalent diameter less than or equal to 2.5 micron particles. It was suspended for a long time in the air, the higher its content concentration in the air, the more serious air pollution. Outdoor fine particles PM2.5 primarily come from car, truck, bus and off-road vehicle exhausts, the burning of fuels such as wood, heating oil or coal and natural sources such as forest and grass fires. Indoor fine particles PM2.5 come from tobacco smoke, cooking, burning candles, and operating fireplaces and fuel-burning space heaters. Studies suggest that long term exposure to fine particulate matter may be associated with increased rates of chronic bronchitis, reduced lung function and increased mortality from lung cancer and heart disease.

iP2 PM2.5 Meter can be widely used in the car, burning plants, petrochemical facilities, thermal power plants, restaurants, hospitals, mining facilities, metal refineries, commercial and public buildings, and other confined spaces for personal health.

Please read this manual carefully before use. This user manual will provide you with all the necessary information for the correct use of your iP2 PM2.5 Meter.

FEATURES

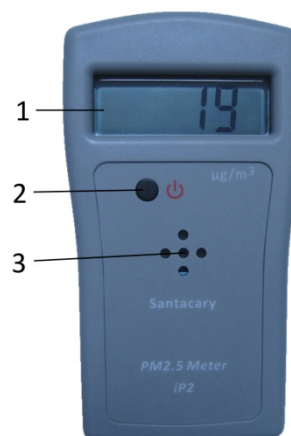
- ✧ Detect atmospheric PM2.5 with laser scattering theory
- ✧ High-precision detection, rapid response and operation
- ✧ Particulate measurement range: 0.3 ~ 2.5 μm
- ✧ Six sides shield, superior anti-interference performance
- ✧ Only one power button and easy to operate
- ✧ Two AAA Alkaline Batteries

THEORY OF OPERATION

This PM2.5 meter uses a laser scattering theory to obtain the number of particles in the equivalent particle size and volume units of different size through the algorithms based on MIE theory.

INSTRUMENT

1. LCD display
2. Power button
3. Air vent



OPERATION

When the instrument is turned off, press Power button to turn on the unit. Press Power button again to turn off the unit. When the unit is first turned on, it performs 10 seconds countdown for instrument warm up, then enters normal display. The instrument updates readings every 2 seconds. The PM2.5 Unit is $\mu\text{g}/\text{m}^3$.

SPECIFICATIONS

PM2.5 Specification:

Measurement range of particles	0.3 to 2.5 μm
Particle count efficiency	50% @ 0.3 μm ; 98% @ $\geq 0.5 \mu\text{m}$;
Measurement range	0 to 1000 $\mu\text{g}/\text{m}^3$
Resolution	1.0 $\mu\text{g}/\text{m}^3$
Consistency of mass concentration of particles	$\pm 10 \mu\text{g}/\text{m}^3$ @ 0~100 $\mu\text{g}/\text{m}^3$; $\pm 10\%$ @ 100~500 $\mu\text{g}/\text{m}^3$
Temperature Range	-10 to 50°C (14 to 122°F)
Humidity Range	0 to 90%RH
Response Time	≤ 10 Seconds

General:

Operating	-10°C to 50°C (14°F to 122°F), 0~90% RH non-condensing
Storage	-10°C to 60°C (14°F to 140°F), <99% RH non-condensing
Power Supply	Two AAA Alkaline Batteries
Dimensions	67x124x25 mm (2.64x4.88x0.98")
Weight	143 grams (5.04oz.) with batteries

CLEANING AND STORAGE

The front panel and case can be cleaned carefully with a soft wet cloth. Allow drying completely before using. Do not use aromatic hydrocarbons or chlorinated solvents for cleaning.

WARRANTY

The iP2 is warranted to be free from defects in material and workmanship for a period of two year from the date of purchase. This warranty covers normal operation and does not cover misuse, abuse, alteration, neglect, improper maintenance.

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