

# SIDEPAK™ PERSONAL AEROSOL MONITOR MODEL AM520



The SidePak™ AM520 Personal Aerosol Monitor is a small, portable, battery-operated, data-logging, light-scattering laser photometer that provides real-time aerosol mass concentration readings of dusts, fumes, mists, smoke and fog within a worker breathing zone. Newly designed inlet conditioners increase the mass concentration capability and provide size fraction cut points for PM<sub>10</sub>, Respirable (PM<sub>4</sub>), PM<sub>5</sub> (China Respirable), PM<sub>2.5</sub>, PM<sub>1</sub> and 0.8µm Diesel Particulate Matter (DPM). This monitor is the perfect solution for real-time, personal aerosol sampling in a variety of workplace environments, including but not limited to general industry, foundries, construction sites, chemical plants, refineries, petrochemical, power and utilities, transportation, aerospace, maritime, confined spaces and mining.

## New Features

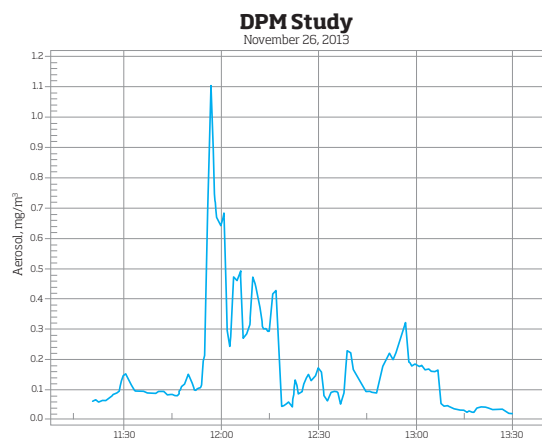
- + Robust impactors for higher mass concentration range
- + Audible and visual alarms
- + 0.8µm DPM impactor
- + PM<sub>5</sub> China respirable size fraction impactor
- + High capacity battery
- + Color OLED display

## Features and Benefits

- + Real-time mass concentration measurement and data logging for "in-the-field" data analysis
- + Push button menu operation or programmable through newly improved TrakPro™ v5 Software
- + User selectable alarm levels to alert workers to high aerosol concentrations
- + Newly designed robust impactors enable reliable size fraction measurements at higher aerosol concentrations over longer run times

## Dare to Compare!

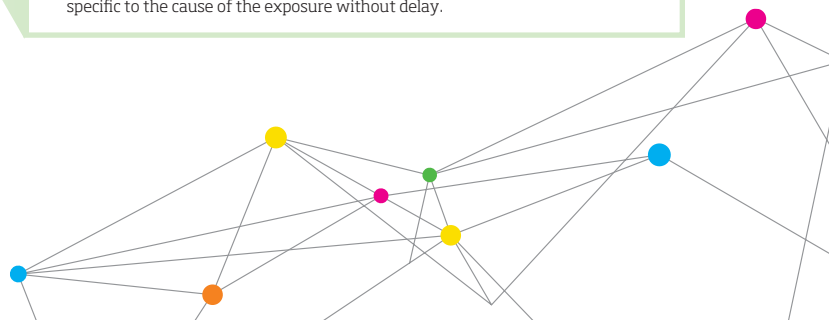
User-settable audible and visual alarms as well as newly designed impactors, for more size fraction options, make this instrument a valuable tool for workplace exposure monitoring. The new impactors provide reliable size fraction at a much higher mass concentration, allowing a longer run time with improved accuracy.



**Time History** – Graphically displayed, logged data can display high and low exposure concentrations that cannot be identified with traditional gravimetric sampling. This example of actual customer data illustrates the value of seeing what time peak exposure occurred. This enables an industrial hygienist to investigate the cause of the spike at 12:00 and recommend corrective actions specific to the cause of the exposure without delay.



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# SPECIFICATIONS

## SIDEPAK™ PERSONAL AEROSOL MONITOR MODEL AM520

### Sensitivity

Sensor Type 90° light scattering, 650 nm laser diode  
Calibration Calibrated against a gravimetric reference using the respirable fraction of standard ISO 12103-1, A1 Test Dust

Aerosol Concentration Range 0.001 to 100 mg/m<sup>3</sup>  
Particle Size Range 0.1 to 10 µm  
Minimum Resolution 0.001 mg/m<sup>3</sup>  
Zero Stability ±0.001 mg/m<sup>3</sup> over 24 hours using 10 second time constant

Temperature Coefficient Approximately +0.0005 mg/m<sup>3</sup> per °C (for variations from temperature at which instrument was last zeroed)

### Flow Rate

Range User-adjustable, 0 to 1.8 liters/min (L/min) Note: Upper range is dependent on impactor or cyclone attached to the SidePak AM520 Monitor

### Temperature Range

Operating Range 32° F to 120° F (0° C to 50° C)  
Storage Range -4° F to 140° F (-20° C to 60° C)  
Operational Humidity 0 to 95% RH, non-condensing

### Time Constant (OLED Display)

Range User-adjustable, from 1 to 60 seconds

### Built-in Inlets

Standard inlet Not size-specific  
PM<sub>1.0</sub> impactor 50% cut-off at 1.0 µm  
PM<sub>2.5</sub> impactor 50% cut-off at 2.5 µm  
PM<sub>5.0</sub> impactor 50% cut-off at 5.0 µm  
PM<sub>10</sub> impactor 50% cut-off at 10.0 µm

### Attachable Cyclones

4 µm Dorr-Oliver 50% cut-off at 4.0 µm  
0.8 µm DPM 50% cut-off at 0.8 µm

### Alarms

Alarm Types General, STEL  
Default Settings 0.5 mg/m<sup>3</sup>, 1 mg/m<sup>3</sup>, 3 mg/m<sup>3</sup>, 5 mg/m<sup>3</sup>, 15 mg/m<sup>3</sup>, Off  
Programmable from 0.001 to 999 mg/m<sup>3</sup> through TrakPro Software

Alarm Indicator 95 dBA (at one foot) audible horn, blinking red LED, flashing red OLED display  
Ringback Delay 30 sec, 1 min, 3 min, 5 min, 10 min, Off

### Data Logging

Data Points Approx. 80,000 (55 days logging once per minute)  
Logging Interval User-adjustable, from 1 second to 60 minutes

### User-Select Calibration Factors

Factory Setting 1.0 (non-adjustable)  
Ambient Setting 0.38 (non-adjustable)  
User-Defined Settings 5, with user-defined labels via TrakPro Software  
Range 0.1 to 10.0, user-adjustable

### Physical

External Dimensions 5.1 x 3.7 x 3.1 inch  
129.5 mm x 94 mm x 78.4 mm with 803300 battery  
Weight 22 oz (0.62 kg) with 803300 battery  
Display 160 x 128 resolution color OLED display  
Tripod Mounting Nut ¼-20 female thread

### Battery

Rating 5400 mAh Li-Ion Pack  
Run Time Greater than 20 hours at 1.7Lpm with a PM<sub>2.5</sub> impactor  
Charge Time 4.0 hours (typical with a fully depleted battery)

### Power Supply (p/n 803302)

Input Voltage Range 100 to 240 VAC, 50 to 60 Hz  
Output Voltage 12 VDC @ 3.0A

### Maintenance

Factory Clean/Calibrate Recommended annually  
User Zero Calibration Before each use  
User Flow Calibration As needed with use of inlet conditioner

### Communications Interface

Type USB 2.0  
Connector, Instrument USB Micro-B (socket)

### Minimum Computer Requirements for TrakPro Software

Communications Port Universal Serial Bus (USB) v2.0 or higher  
Operating System Microsoft Windows® 7, 8, or 10 (32-bit or 64-bit) operating systems

### Approvals

AM520 with TSI Battery Pack P/N 803300



Immunity EN61326-1:2013  
Emissions EN61326-1:2013 Class B  
Safety IEC 61010-1:2010  
IEC 60825-1:2014

### SAVE TIME AND MONEY

Real-time aerosol monitoring instruments like the SidePak AM520 Personal Aerosol Monitor can be used to measure and evaluate workplace exposures without delay, facilitating immediate feedback and corrective action. This means no more waiting for sampling data to be returned from the analytical lab.



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