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\textsubscript{10}, Respirable (PM\textsubscript{4}), PM\textsubscript{5} (China Respirable), PM\textsubscript{2.5}, PM\textsubscript{1} 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\textsubscript{5}, 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.

**DPM Study**
November 26, 2013

**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.
### 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/m³
- Particle Size Range: 0.1 to 10 µm
- Minimum Resolution: 0.001 mg/m³
- Zero Stability: ±0.001 mg/m³ over 24 hours using 10 second time constant
- Temperature Coefficient: Approximately +0.0005 mg/m³ 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

#### Built-in Inlets
- Standard inlet: Not size-specific
- PM₁₀ Impactor: 50% cut-off at 1.0 µm
- PM₂.₅ Impactor: 50% cut-off at 2.5 µm
- PM₁₀ Impactor: 50% cut-off at 5.0 µm
- PM₁₀ 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/m³, 1 mg/m³, 3 mg/m³, 5 mg/m³, 15 mg/m³, Off
- Programmable from 0.001 to 999 mg/m³ 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

#### 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

#### Power Supply (p/n 803302)
- Input Voltage Range: 100 to 240 VAC, 50 to 60 Hz
- Output Voltage: 12 VDC @ 3.0A

#### Battery
- Rating: 5400 mAH Li-Ion Pack
- Run Time: Greater than 20 hours at 1.7Lpm with a PM₂.₅ impactor
- Charge Time: 4.0 hours (typical with a fully depleted battery)

#### 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
- CE 0344

#### 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.

Specifications are subject to change without notice.

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