Airtec™

WEARABLE, REAL-TIME

Diesel Particulate/Elemental Carbon Monitor

REPLICATES NIOSH 5040

Improve safety, compliance, and workplace health in real-time.

airmet
Work with Confidence

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FLIR®

www.flir.com/airtec

BENEFITS

- Real-time results
- No more waiting days or weeks for results
- Increased miner safety
- High DPM level alarms

BEFORE AIRTEC

Industrial sites and mines relied on a labor- and time-intensive procedure regulated by the National Institute for Occupational Safety and Health (NIOSH) Method 5040.

Sending samples to an outside lab can take days or weeks before results are delivered making it impossible to implement real-time corrective changes to ventilation effectiveness or workplace procedures that improve breathing conditions.

WORLD HEALTH ORGANIZATION DECLARES DIESEL A CARCINOGEN

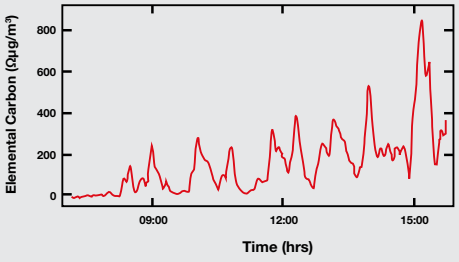
"…the World Health Organization (WHO), …classified diesel engine exhaust as carcinogenic to humans (Group 1), based on sufficient evidence that exposure is associated with an increased risk for lung cancer.

—WHO press release, June 12, 2012

WHAT THIS MEANS FOR YOU

Diesel engines are well-regarded workhorses with a myriad of applications, known for durability, reliability, relatively low-cost maintenance, and long service life.

With diesel engines everywhere in the workplace, the WHO's finding has significant ramifications for health and safety industrial hygiene professionals. And the scope is not limited to mining or transportation and logistics.



The new WHO findings will invariably set into motion measures to put pressure on government agencies and employers to protect workers who are exposed to diesel exhaust while on the job in mining and beyond.

Airtec

Diesel Particulate/Elemental Carbon Monitor

- *Decreased DPM monitoring costs*
- *Helps prevent MSHA non-compliance*
- *Enables ventilation on demand (VOD) and engineering control evaluation*
- *Bolsters confidence in a healthy environment*

REAL-TIME RESULTS, IMPROVED COMPLIANCE FOR LESS

As the only personal exposure monitor to accurately measure diesel particulate material (DPM), Airtec leverages elemental carbon measurement technology developed by the diesel particulate group at the NIOSH Pittsburgh Research Laboratory.

Airtec diesel particulate monitors precisely replicate results from the NIOSH Method 5040 laboratory test but with the advantage of anytime/anywhere flexibility. By replacing lab tests, Airtec can significantly decrease DPM monitoring costs while making it easier to prevent MSHA non-compliance.

COMPARE	LAB TESTING	AIRTEC
Accuracy	Yes	Yes
Real-Time Data	No, ~2 week results	Yes
Long-term Costs	$$$	$$
Anytime/ Anywhere	No	Yes

With lightweight, wearable monitors and real-time alarms for high DPM levels, mine operators can dramatically transform their overexposure monitoring policies to enable a responsive, proactive approach to reducing DPM.

- Designed for harsh environments
- As rugged as they are sensitive
- Large, bright, backlit LCD
- Download readings via USB
- Added flexibility of installation on a miner's belt or on vehicles, mine walls or ventilation equipment (An available output enables device networking and ventilation on demand.)
- Plus, the Lithium-ion battery provides power for more than a full shift

Specifications	
Sensitivity	< 15 µg/m³ elemental carbon (EC)
Dynamic Range	9-600 µg/m³ (8 hr TWA EC)
Data Archive	2.75 to 66.6 days (1 min. to 1 hr sample intervals)
Output	LCD display with user-controlled backlight; User selectable 1, 5, 15 min. averaging EC and TC data logged 8 hr TWA DPM levels; Mini-USB connection.
Alarms	LCD alerts user of Low battery, Filter change, and Pump flow
Power	7.4 VDC (built-in Li-ion rechargeable battery); 100 - 240 V AC adaptor
Battery Life	>12 hrs (continuous use)
System Weight	1.5 lbs (681 g)
Dimensions	4.75" (H) x 5.25" (W) x 2.5" (D) / 12.1 cm (H) x 13.3 cm (W) x 6.4 cm (D)

AIRTEC SOFTWARE

- Windows compatibility
- Sorting of multiple recorded sessions
- Full Graphing capabilities for both Elemental and Total Carbon measurements:
  - 8 hour TWA
  - Shift-weighted TWA
  - 5, 10, and 15 sample point Average
- Adjustable Mine Conversion Factor for converting Elemental Carbon measurements to Total Carbon (NIOSH 5040 test required to determine Conversion Factor)
- Adjustable Flow Rate

8 Hour Time Weighted Average

5, 10 and 15 point Running Averages

Sorts Multiple Sessions

Ordering Information	
350-10595	Airtec Elemental Carbon Monitor
ATC-01-A	Airtec Filter Cassette
ATC-02-B	Airtec Prefilter Cartridge
ATC-03-KIT	Airtec Filter/Prefilter Kit (3 Filter Cassettes and 1 Prefilter Cartridge)
ATC-04	Airtec Inlet Prefilter Assembly
ATC-03-KIT-1MO	Airtec Consumable Kit* (1 Month Supply) - 30 Cassettes & 10 Cartridges
ATC-03-KIT-3MO	Airtec Consumable Kit* (3 Month Supply) - 90 Cassettes & 30 Cartridges

Includes Airtec monitor, inlet prefilter assembly, five filter cassettes, two prefilter cartridges, USB to mini-USB PC cable, rechargeable battery with 9 V / 2 A Universal AC adaptor (100-240V AC)

FLIR® | The World's Sixth Sense®

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