

U.S. EPA Automated Equivalent  
PM<sub>10</sub> Method: EQPM-1102-150

CARB California Approved  
Sampler (CAS) for PM<sub>10</sub> and  
PM<sub>2.5</sub>

True "Continuous Real-Time"  
Measurement

## FH 62 C14 Series

Continuous Ambient Particulate Monitor

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#### Key Features:

New technology that provides continuous "real-time" measurement by a C14 monitor

Radon gas activity measurement eliminates interference of natural airborne radioactivity

Control and data exchange over two serial interfaces possible

Storage of half-hour average concentrations over a whole year

User selectable reporting of mass concentration based on standard or actual flow rate

Processor controlled calibration of all sensors

Insensitive to vibration and diurnal temperatures



#### Refined Sensitivity

The FH 62 C14 Continuous Ambient Particulate Monitor measures the mass concentration of suspended particulate matter (e.g., TSP, PM<sub>10</sub>, PM<sub>2.5</sub>, PM<sub>C</sub> and PM<sub>1</sub>) by use of beta attenuation. In addition, the ambient radioactive influence of natural Radon (Rn-222) gas is measured as a refinement step toward better sensitivity at lower ambient particulate concentrations.

#### Accurate Results

The FH 62 C14 particulate sample collection area is located between both the C14 source and the proportional detector. While ambient particulate matter is being deposited onto a filter tape sample spot, the dynamic filter loading is measured continuously by the attenuation of the C14 source beta rays. As a result, a continuous "real-time" measurement of airborne particulate is provided. It is not necessary to move the filter spot from the sample position to the detector position for zero and mass determination.

## FH 62 C14 Series Specifications

Measuring Principle	Continuous & simultaneous particulate collection coupled with beta ray attenuation
Source	Carbonium-14 (C14), <3.7 MBq (<100µCi)
Ranges	0 to 5,000 µg/m <sup>3</sup> or 0 to 10,000 µg/m <sup>3</sup>
Minimum Detection Limit	<1 µg/m <sup>3</sup> (24-hour average); <4 µg/m <sup>3</sup> (1-hour average)
Precision of Two Monitors	± 2 µg/m <sup>3</sup> (24-hour)
Resolution	± 1 µg/m <sup>3</sup> (instantaneous)
Correlation Coefficient	R > 0.98
Measurement Cycle	Single filter spot in position for 24 hours (default); user selectable 30-minutes to 24-hours
Data Averages	Each full 1/2, and 24 hour values automatically stored; each full 1/2, 1, 3 and 24 hour values displayed
Air Flow Rate	1 m <sup>3</sup> /h (16.67 lpm) measured across an internal subsonic orifice; user selectable from 0 to 20 lpm
Output	Serial interface RS 232 Analog output: 4-20mA or 0-10V output of concentration (µg/m <sup>3</sup> )
Operating Temperature	-22 to 140°F (-30 to 60°C)
Power Supply	Instrument: 100-240V, 50/60Hz, 330W max., 15W without pump or heater Pump: 100-110/100-120V, 50/60Hz or 220/240V, 50/60Hz, 100W
Dimensions	Instrument: 19" (W) x 12.25" (H) x 13" (D) / 483mm (W) x 311mm (H) x 330mm (D) Pump: 8.25" (W) x 8.75" (H) x 4.25" (D) / 210mm (W) x 222mm (H) x 108mm (D)

## Available Options

**Adjustable Tube Heaters**

**TSP or PM<sub>10</sub> Inlets**

**Analog I/O Expansion Board**

**Mass & Flow Rate Calibration Kits**

**Filter Tape Printer**

**WINS Impactor, Sharp-Cut Cyclone & Very Sharp-Cut Cyclone for PM<sub>2.5</sub>**

**Foil Separation**



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