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AMMS-100

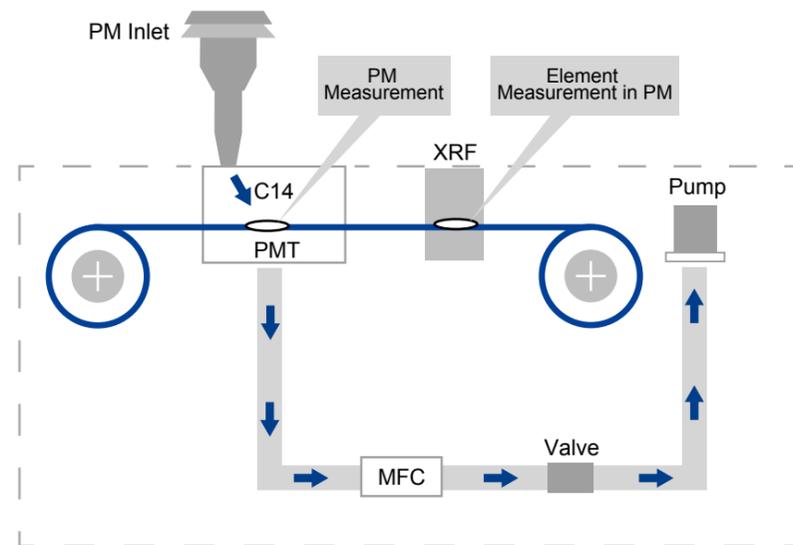
Atmospheric Heavy Metal Online Analyzer

01/

AMMS-100 adopts beta-ray absorption technology, X-ray fluorescence (XRF) technology, and filter membrane sampling technology, it can conduct nondestructive and rapid qualitative and quantitative analysis of particulate matter and heavy metal pollutants such as mercury (Hg), plumbum (Pb), cadmium (Cd), arsenic, chromium (Cr) and other 30 heavy metal elements in the atmosphere.

Principle

The apparatus works in such a way that particles with an aerodynamic equivalent diameter of less than 100/10/2.5 μm in ambient air are collected by cutting head. Adopt beta-ray absorption principle to enrich the particulate matter on the filter membrane, and then adopt XRF principle to measure the heavy elements in the particulate matter. The analysis results include the volume concentration of particulate matter, the volume concentration of more than twenty heavy metals and the mass concentration of heavy metals ($\mu\text{g/g}$). During the measurement, the particles size less than 100 μm will be deposited on the filter membrane first and then detected by beta-ray in-situ detection technology.



02/

Features

- Works at any time of the day or under any meteorological conditions.
- With the capability of measuring 30 toxic metals (expandable available) simultaneously.
- Allows for continuous monitoring of results in a large database.
- The integrity of the sample is not compromised and the membrane sample is preserved as well.
- Only the filter replacement is consumed, no laboratory analysis is required.

03/

Specification

Measurement Method of Particulate Matter	Beta-Ray attenuation
Measurement Method of Heavy Metal Element	X-Ray fluorescence
Measurement Range of Particulate Matter	0~1,2,5,10 mg/m^3
Measurement Range of Heavy Metal Element	0~100 $\mu\text{g}/\text{m}^3$
Detection Limit of Particulate Matter	5 $\mu\text{g}/\text{m}^3$
Repeatability of Particulate Matter	Reproducibility of calibration filter < 2%
Sampling Flow Rate	4~20L/min (Adjustable)
Linearity	$\pm 1\%$ F.S.
Filter Replacement Lifetime	1~3 months
Analyzing Time	10~300min (Adjustable)
Operating Temperature	-30~50 $^{\circ}\text{C}$
Output	RS232, RS485, Ethernet, GPRS
Power Supply	220V AC, 50Hz