



Elvatech

Advanced XRF equipment and solutions

CONTINUOUS PARTICULATE MATTER XRF ANALYZER

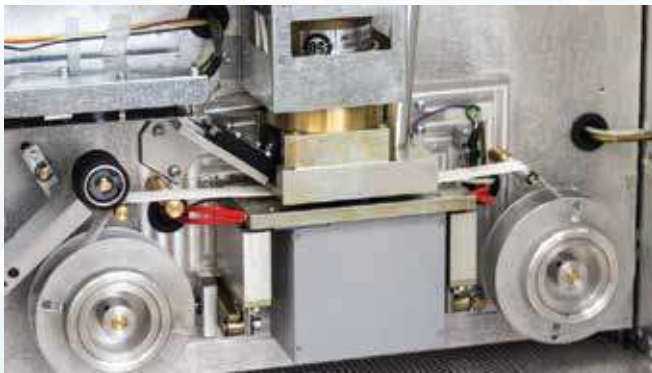
PmX-5050



PmX-5050 is a Continuous Particulate Matter XRF Analyzer intended for online elemental analysis of heavy metals in the ambient air.

Previous solutions for PM monitoring were able to analyze only the total amount of particles in the air. But for a complete understanding of health impact and air pollution source elemental analysis of PM is necessary.

PmX-5050 is a fully stand-alone device for continuous analysis of particulate matter elemental composition.



ACCURACY

With powerful hardware and comprehensive software algorithms, the ElvaX PmX-5050 offers the highest precision and accuracy of PM analysis for a wide range of elements.

AUTOMATION

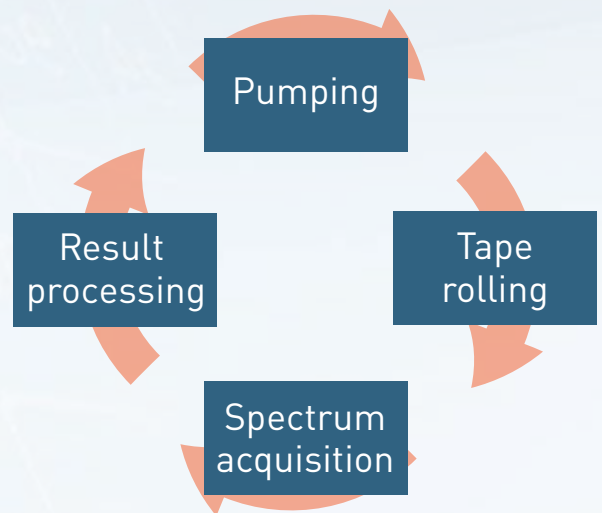
Up to 3 months of stand-alone continuous analysis of PM 2.5 or PM 10 elemental concentration in ambient air

STABILITY

Thanks to the automatic correction of ambient temperature, humidity and pressure influence, and automatic calibration adjustment, ElvaX PmX-5050 offers the highest long-term stability of the analysis

- ✓ Continuous analysis of PM elemental concentration
- ✓ Full compliance with the US EPA IO-3.3 standard
- ✓ Up to 3 months of stand-alone continuous operation
- ✓ Automatic correction of ambient temperature, humidity and pressure influence n Heated operating plate for prevention of condensing
- ✓ Simple calibration procedure and tape replacement
- ✓ Intuitive software interface

SCHEME AND WORKFLOW



Sampling unit

PM cutter
Pump
Flow meter

Tape scrolling

Scrolling reels
Operating plate

XRF unit

X-Ray tube
X-Ray detector
Digital Pulse Processor

Software

Spectrum decomposition
Regression algorithm
Calculation of PM concentration

General

Applicable standard: USA EPA IO-3.3

Flow rate: (0~20) L/min

Filter tape: PTFE

Tape replacement interval: up to 3 months

Power supply: AC 100V~240V, 50/60 Hz

Power consumption: 200 W

Dimensions (w/o sampling inlet): 500mm * 500mm * 450mm

Weight (w/o sampling inlet): 40 kg

External connection: USB, Ethernet

XRF unit

X-Ray tube: 50W, 50kV, 3mA

Primary beam filter changer: 5 positions, automatic

X-Ray detector: SDD

Sampling and analysis times: 3 ~ 1440 min

Measurement range: 0 ~ 200 μ g/m³

Detection limit: 0.1 ng/m³ for most elements

Calibration samples: SS316 for energy calibration, NIST 2783 for concentration calibration, other samples (optional)

Environmental Conditions

Ambient temperature: 0 °C ~ 40 °C

Humidity: 0 ~ 80%

Altitude: up to 1000m

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