

Portable Zeeman Mercury Analyzer

RA-915M

For mercury detection in ambient air, solids and liquids, complex matrices

Method of Measurement and Principle of Operation

- ▶ Atomic absorption spectrometry Zeeman background correction
 - ▶ Methods: ASTM D7622-10, SW846 series 245, 1631, 7473, NIOSH 6009 performance-based methods

Applications

- ▶ Emergency response to mercury spills
- ▶ Mercury spill cleanup verification
- ▶ Industrial hygiene monitoring
- ▶ Environmental inspection and site remediation
- ▶ Interference free determination of mercury in ambient air, natural gas, stack gases, soil, coal, sorbent traps, crude oil, food, pharmaceuticals, water, wastewater, and more

Features and Benefits

- ▶ Real-time measurements in air and gases
- ▶ Listed on the US EPA recommended Emergency Response Equipment List
- ▶ NIST traceable calibration
- ▶ Lowest detection limit and highest selectivity on the market
- ▶ Fully automated, simple to operate
- ▶ Controlled by keypad or computer via USB interface
- ▶ Rechargeable lithium battery, up to 12 hours of operation
- ▶ Rugged design for laboratory and field
- ▶ Built-in datalogger (122 h), performance verification test cell and auto zero function
- ▶ Direct determination of mercury in solids and liquids within 60 sec
- ▶ Wide dynamic measurement range (Four orders of magnitude)
- ▶ No sample prep or conditioning
- ▶ Catalyst and carrier gases-free operation





Application Examples

Matrix	Detection Limit	Sampling	Attachments
Ambient Air	0.5 ng/m ³	10 l/min	-
Natural and Other Gases	2 - 500 ng/m ³	1 - 10 l/min	RP-91NG
Water	0.5 ng/l	1 - 20 ml	RP-92 (Cold Vapor)
Urine	1 ng/l	1 - 5 ml	RP-92 (Cold Vapor)
Solid Samples (Solids, Rocks, Sediments)	0.5 ug/kg	10 - 400 mg	PYRO-915
Water and Solutions	1 ug/l	10 - 200 ul	PYRO-915
Coal	1 ug/kg	10 - 300 mg	PYRO-915
Sorbent Traps for Stack Gases*	0.5 ng	-	PYRO-915
Biological Samples (Tissues, Liver, Blood, Hair, etc.)	1 - 5 ug/kg	10 - 300 mg	PYRO-915
Oil and Oil Products	1 - 5 ug/kg	10 - 200 mg	PYRO-915
Food, Plants	0.5 - 3 ug/kg	10 - 400 mg	PYRO-915

* Range 0.5 - 50,000 ng



**RA-915M with RP-91G
Natural Gas Analysis**



**RA-915M with RP-92
Liquid Analysis**



**RA-915M with PYRO-915
Solid/Liquid Analysis**

Specifications

Analyzer/Attachment	Dimensions (L x W x H)	Weight	Power Supply	Power Consumption	Analysis Time
RA-915M Air and Gas Analysis	470 x 110 x 210 mm	7 kg / 15 lbs	90 - 240 VAC, 50/60 Hz, 12 VDC	40 W	Direct On-Line
RP-92 Attachment Liquid Analysis	360 x 225 x 125 mm	7 kg / 15 lbs	100 - 240 VAC, 50/60 Hz	20 W	40 - 80 sec
PYRO-915 Attachment Solid/Liquid Analysis	430 x 340 x 135 mm (pyrolyzer) 400 x 280 x 135 mm (power supply unit)	17.5 kg / 38 lbs	100 - 240 VAC, 50/60 Hz	700 W	60 - 180 sec
RP-91NG Attachment Natural Gas Analysis	320 x 290 x 160 mm	6.5 kg / 14 lbs	100 - 240 VAC, 50/60 Hz	35 W	-