

RA-915M

Multifunctional Zeeman mercury analyzer



RA-915M is a supersensitive and highly selective portable analyzer that allows real-time mercury measurement in ambient and indoor air. Being combined with dedicated attachments, the analyzer is used for mercury determination in a wide range of objects, such as solid and liquid samples, biological materials, and various gases. RA-915M-based sets can be used in stationary and field laboratories.

PRINCIPLE OF OPERATION

Differential Zeeman atomic absorption spectrometry with high frequency modulation of light polarization (ZAAS-HFM).

APPLICATIONS

RA-915M is used for background air monitoring, mercury surveys including continuous measurements from vehicles, indoor and outdoor pollution detection and mapping, demercurization control, occupational health and safety, geochemical exploration, etc. Direct measurements comply with EN 15852 standard for the determination of total gaseous mercury in the air.

FEATURES AND ADVANTAGES

- Direct continuous measurement; no gold traps, no compressed gases
- Ultra-low detection limit and highest selectivity
- Real-time operation mode for air and gases with 1 s response time
- Attachments for direct mercury determination in liquids, solids, and hydrocarbon gases
- Wide dynamic measuring range (six orders of magnitude)
- Auto zero drift correction
- Self-diagnostic with a built-in test cell
- Controlled by a keypad or a PC via USB interface
- Data logger for 122 hours of data acquisition, averaging, and storage
- Rechargeable battery for up to 8 hours operation

APPLICATION EXAMPLES

Matrix	Detection limit	Sampling	Attachments
Ambient air	0.5 ng/m ³	10 L/min	Direct
Natural hydrocarbon gases	0.5 ng/m ³	2–5 L/min	RP-91NG
Water and solutions	0.1 ppt (ng/L)	0.5–20 ml	RP-92 (Cold vapor)
Urine	0.1 ppb (µg/L)	1–5 ml	RP-92 (Cold vapor)
Sorbent traps for stack gases*	0.5 ng		PYRO-915+
Soils, rocks, sediments	0.5 ppb (µg/kg)	20–400 mg	PYRO-915+
Water and solutions	1 ppb (µg/L)	20–200 µl	PYRO-915+
Coal	1 ppb (µg/kg)	20–300 mg	PYRO-915+
Biological samples (tissues, hair, blood, etc.)	0.5 ppb (µg/kg)	10–300 mg	PYRO-915+
Crude oil, gas condensate	1 ppb (µg/kg)	20–150 mg	PYRO-915+
Naphtha (direct)	1 ppb (µg/kg)	20–150 mg	PYRO-915+
Naphtha (preconcentration)	0.05 ppb (µg/kg)	1–5 g	PYRO-915+
Foodstuff, plants	0.5 ppb (µg/kg)	20–400 mg	PYRO-915+

* range 0.5 – 50,0000 ng

DELIVERY SET

RA-915M portable Zeeman mercury analyzer is supplied with the RAPID software, charger, shoulder bag, air intake hose, spare filters, interface cable, manuals. Attachments are available on request.

SPECIFICATIONS

	Dimensions (L×W×H)	Weight	Power supply	Power consumption	Analysis time
RA-915M Air and gas analysis	470×110×220 mm	7 kg	100–240 VAC, 50/60 Hz 12 VDC	35 W	Direct on-line
RP-91NG attachment	320×290×160 mm	6.5 kg	100–240 VAC, 50/60 Hz	35 W	Direct on-line
RP-92 attachment	360×225×125 mm	7 kg	100–240 VAC, 50/60 Hz	20 W	40–80 s
PYRO-915+ attachment	430×340×135 mm (pyrolyzer) 400×280×135 mm (power supply unit)	17.5 kg	100–240 VAC, 50/60 Hz	700 W	60–180 s

WARRANTY

RA-915M analyzer and attachments are covered by a full 1-year warranty.

SERVICE

Installation and commissioning of Lumex Instruments' mercury analyzers can be carried out at a customer site by our service engineers or by certified distributor.



Find your local Lumex Instruments distributor:
www.lumexinstruments.com | sales@lumexinstruments.com