



TECHNICAL SPECIFICATIONS FOR PE-1000



Specifications

Mercury Measurement Section

Measurement Principle	Non-dispersive double-beam CVAFS
Light source	Low pressure mercury discharge lamp
Wavelength	253.7 nm
Detectors	Photo multiplier tube (PMT)
Flow rate MFC controlled	0.01~1.0L/min
Sample heating tube	Quartz pre-packed with catalysts
Maximum decomposition temperature	Up to 820°C
Detection limit (Hg amount)	0.003ng
Detection limit (Hg concentration)	0.01 µg/L (ppb) (Based on 300µl of sample volume)
Maximum measurement range	Up to 100ng
Maximum Concentration Range	10 mg/L (ppm) (Based on 10µl of sample volume)
Precision	RSD < 3% @ 0.1ng
Mercury removal	Absorption by activated carbon

Data processing system

OS	Windows 10 Pro
Communication	RS-232C
Display	Peak wave shape, Calibration curve, Measuring time and measuring result
Device control	Start/stop measuring : Controllable Pretreatment conditions : <ul style="list-style-type: none"> - Heating conditions setup (Heating temperature & heating time), - Sample volume setup (Extraction & dispensing volume & speed; Rinse volume & solutions)
Printing	Measurement Sequence Log File Memo, Analysis condition, Calibration curve, Measured and statistical data, Peak profiles

Dimension & Utility

Dimension	417W x 590H x 490D (mm)
Weight	40kg
Power Supply	AC100~240V, 50 / 60Hz, 1.5kVA Grounding : Grounding terminal with ground resistance of 100Ω or less
Gas requirements	Argon 0.2~0.8MPa, >99.995% purity Compressed purified air 0.2~0.8MPa

Autosampler

Auto liquid injector/Changer (HT3003A)



Specifications

Number of sample position	Up to 121 Positions
Sample container	2ml septum piercing vial
Random access	Possible
Sample mixing	Vortex action
Sample delivery	Gas-tight syringe 100ul
Dimension	277W x 316D x 555H (mm) - Closed Tray 277W x 520D x 555H (mm) - Opened Tray 417W x 590D x 1045H (mm) - PE-1 + HT3003A
Weight	8.6 kg (HT3003A) only 50.5 kg (PE-1 + HT3003A)
Power supply	From PE-1000
Communication port	Ethernet

Auto liquid injector/Changer (HT3103A)



Specifications

Number of sample position	Up to 15 Positions
Sample container	2ml septum piercing vial
Random access	Possible
Sample mixing	Vortex action
Sample delivery	Gas-tight syringe 100ul
Dimension	277W x 316D x 555H (mm) 417W x 590D x 1045H (mm) - PE-1 + HT3103A
Weight	7.0 kg (HT3103A) 49.0 kg (PE-1 + HT3103A)
Power supply	From PE-1000
Communication port	Ethernet

Options

Gas analysis attachment RH - PE



RH-PE

Specifications - RH-PE

Principle	Thermal Tube Desorption
Measuring concentration range	Minimum < 1.0 ng/Nm ³ (based on 30L volume) Maximum > 1,000 ug/Nm ³ (based on 0.1L volume)
Sampling Tube	Mercury Collector Tube, N-160
Heating Temperature	Max 700°C
Carrier Gas	Purified Air (supplied from PE-1)
Gas Scrubbing / Dehumidification	Phosphate buffer solution / Electronic Peltier cooling
Dimension	150W x 180D x 350H (mm)
Weight	6kg
Power supply	AC100~240V, 50 / 60Hz, 300VA

MB-1 for Calibration

MB-1 Specifications:

Mercury Source	Metallic Mercury droplet (triple-distilled grade)
Principle	Mercury vapor pressure
Temperature Readout	Digital - 0 to 50°C @ 0.1°C resolution
Mercury Extraction Point	Capillary Orifice
Mercury Extraction Device	Gas-Tight Syringe
Casing	Polypropylene Copolymer (protective; waterproof; shockproof)
Dimension / Weight	218W x 165D x 82H / 0.9kg
Power supply (Battery)	Dry-Cell 9VDC



MB-1

Operating Consumables & Accessories

For PE-1

Sample heating tube (pre-packed with catalysts) | Mercury collector tube N-100 | Gas-tight syringe | Sample vial, cap & septa | Teflon joint set | Injection port septa |

For RH-PE

Mercury collector tube N-160, 5 pcs per box | Gas Port Septa | Mercury Vapor Calibration Box MB-1 | Sampling Pump GilAir | Dry Gas Meter DC-1C-M | Tedlar Bag |

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Specifications may subject to change without prior notice.

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