



Mercury Analyzer

PE-1000

FULLY AUTOMATED PETRO-PYROLYSIS MERCURY ANALYZER

Direct Measurement of
Total Mercury in
Liquid-Hydrocarbons
Matrices

Fully Comply
to UOP 938-10
Test Method



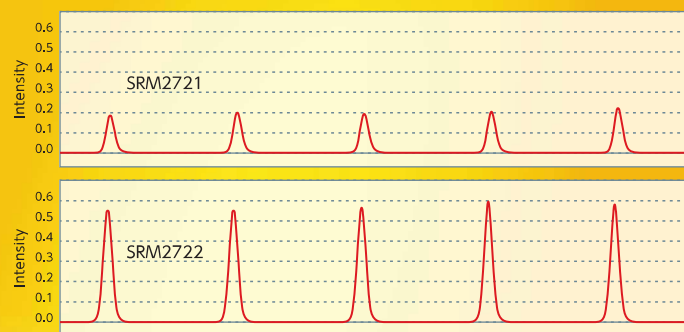
Patented Innovative Pre-Concentration / Combustion Technology

Direct injection in a closed-system flow design ensures no loss of volatile analytes, providing uncompromised precision and consistency on every single measurement. High efficiency pyrolyzer with real-time temperature control ensuring complete combustion with quick-turnover time on each analysis. Fully automated operation for high analysis throughput and lab productivity.



Patented
JP NO.4226049
USP NO.8223332

Ultra-High Sensitivity with Unmatched Precision

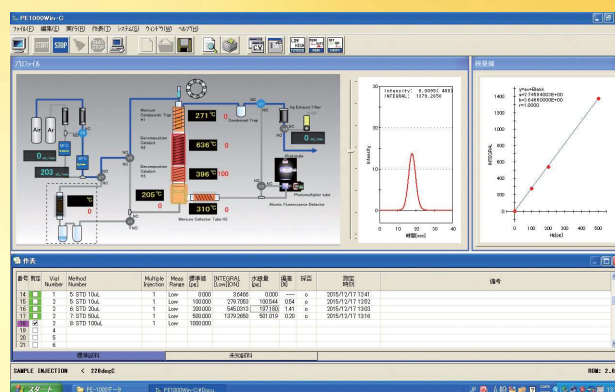


Crude Oil Matrix (NIST SRM)

Sample	N	Certified Conc (ppb)	Measured Conc (ppb)	C.V. (%)
SRM2721	5	0.0360~0.0474	0.0401	8.3
SRM2722	5	0.116~0.142	0.1209	3.1

Easy to Use / User Friendly Software

PE1000Win software is specifically designed for quick learning and easy operation. The software includes animated graphics that illustrate real time system operations (GUI), spreadsheet-style sequence tables and pre-set Heat Methods to match analysis of various sample matrices.



New function for inhomogeneous samples such as solidified crude oil

VORTEX function with heating allows to extract from inhomogeneous and viscous samples without being diluted.



Selective Configurations and Attachments

PE-1000 is available in with 110-positions liquid autosampler/injector or manual injection (PE-1) configuration, still with capability of upgrading with the autosampler whenever is needed. Compact design optimizes valuable laboratory bench-space. Other optional attachments and accessories are Gas Tube Desorption Module (RH-PE), Dual-Channel Direct Amalgam (Vaporizer) Sampler, Mercury Vapor Calibration Box (MB-1) & more.



Gas-Tube Desorption Module



RH-PE

LNG/LPG Direct Gas Sampler



Direct-Amalgam Sampler

Mercury Standard for Gas Calibration



MB-1

Manual Reducing Vaporization

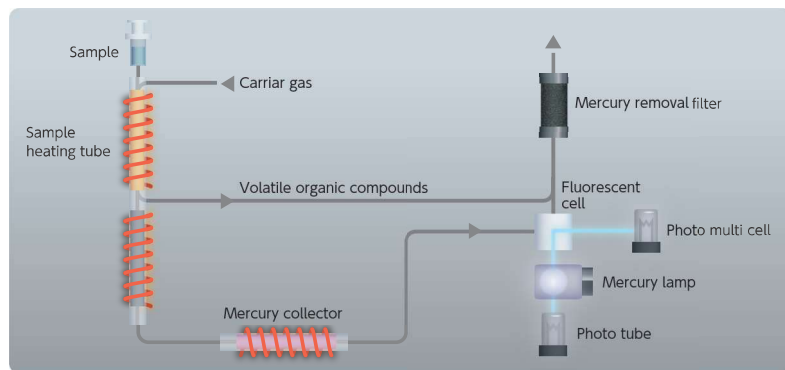


S-MA (20mL) (for use with RH-PE)

PE-1 Manual Injection Configuration



SCHEMATIC DIAGRAM



APPLICATIONS/TEST METHOD

Thermal decomposition:

Naphtha, Pygas, Gasoline, Jet fuel, Kerosene, Diesel fuel, Condensate, Crude oil, Fuel oil, Waste water & more

Methods:

UOP 938-10

Gas analysis:

LNG/LPG, Natural Gas, Propane, Butane, Shale gas, Ambient air & more

Methods:

JLPGA-S-07, ISO 6978, ASTM D-6350

SPECIFICATIONS

Mercury measurement section (PE-1)	Measurement principle	Non-dispersive double-beam CVAFS
	Light source	Low pressure mercury discharge lamp
	Wave length	253.7nm
	Detectors	Photo multiplier tube (PMT)
	Flow rate MFC controlled	0.01 ~ 1.0L/min
	Combustion tube	Quartz pre-packed with catalysts
	Maximum decomposition temperature	Up to 820°C
	Detection limit (Hg concentration)	0.01 µg/L
	Detection limit (Hg amount)	0.003ng
	Maximum measurement range	Up to 100ng (RSD < 3% @ 0.1ng)
	Mercury removal	Absorption by activated carbon
	Data processing system (PC-Win/PE-1)	OS
Communication		RS-232C
Display		Peak wave shape, Calibration curve, Measuring time and measuring result
Device control		Start/stop measuring : Controllable Pretreatment conditions : Heating conditions setup (Heating temperature & heating time), Sample volume setup (Extraction & dispensing volume & speed; Rinse volume & solutions)
Printing		Memo, Analysis condition, Calibration curve, Measured and statistical data, Peak profiles
Dimension & Utility	Dimension	430W × 610D × 490H (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

OPTION

Auto liquid injector/Changer (HT3103A)	Number of sample position	Up to 15 positions
	Sample container	2ml septum piercing vial
	Random access	Possible
	Sample delivery	Gas-tight syringe 100ul
	Dimension	310W × 323D × 637H (mm)
	Weight	9.5kg
Gas analysis attachment (RH-PE)	Heating temperature	Up to 700°C
	Dimension	150W × 180D × 350H (mm)
	Weight	6kg

ACCESSORIES

Combustion tube (pre-packed with catalysts), Mercury collector tube M-100, Gas tight syringe, Sample vial, Cap & septa, Teflon joint set, Injection port septum, Mercury lamp & etc



NIC Nippon Instruments Corporation

Identify the right mercury analyzer for you



Distributors



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Use the above details to contact us if this literature doesn't answer all your questions.

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

