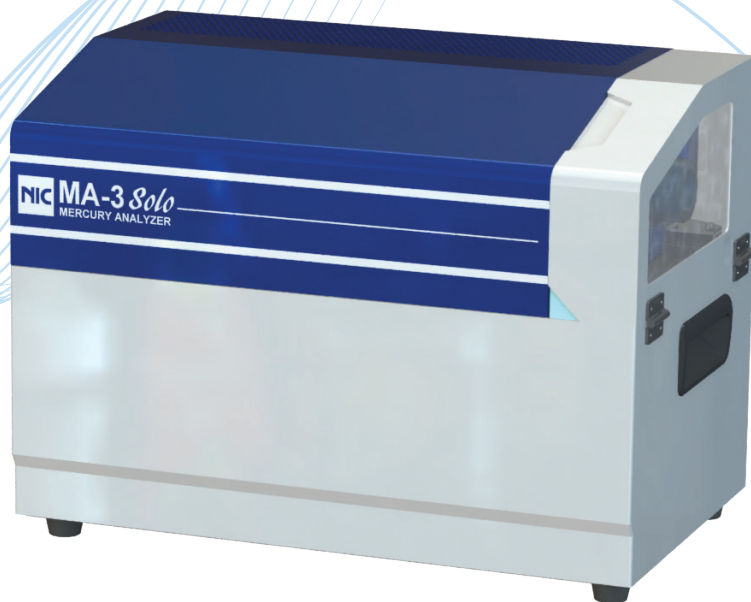


TECHNICAL SPECIFICATIONS FOR MA-3 Solo



Item	Specifications
Measurement Objects	Solid Sample; Liquid Sample; Gaseous Sample ^{*1,2}
Analysis Method	Thermal Decompositions -Gold Amalgamation Collection - Cold Vapor Atomic Absorption Spectroscopy
Measurement Principle	Non-dispersion double-beam cold atomic absorption spectrometry
Light Source	Low-Pressure Mercury Discharge Lamp
Detector	Semiconductor Detector (with 254nm bandpass filter)
Detection Limit	0.01ng
Precision	Precision: RSD 3% or better (0.1ng or greater) ^{*3}
Measuring range	0 to 10,000 ng
Analysis time	5 to 12 minutes
Flow Rate at Measurement	0.2L/min
Exhaust Has Treatment	Activated Carbon Filter For Removing Mercury
Sample Heating Temperature	Up to 850°C
Heating Control	3 Step Setting (Temperature time arbitrary setting possible)
Carrier gas	Self-purified ambient air
Sample Boat	Dedicated Ceramic Boat
Sample Boat Capacity	1.5mL
Size	403W x 252D x 300H (mm)
Weight	13KG (~28lbs)
Power Voltage	AC100-240V, 50/60Hz
Power Rating	1.1kVA
Usage Environment	Temperature 15 to 35°C Humidity: 10 to 80% RH (No Dew Condensation)
Standard Accessories of MA-3 Solo	Sample Boat (x 10 pieces); Boat Stands; Boat tongs; L-cysteine

Note:

*1 - For some samples, measurement maybe impossible.

*2 - For Measurement of gaseous samples, an optional collector tube measurement kit is required

*3 - Certain conditions are prerequisite for low concentration measurement

AQUA Kit

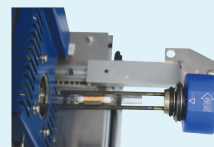
Item	Specifications
Sample Volume	Up to 20mL
Measurement Range	5ng/L - 50ug/L (For measurement of 20mL); Up to 1,000 ug/L with 1mL sample for measurement
Precision	RSD 3% or better (For 15ng/L or more)
Dimensions	465W x 370D x 176W (mm) (Carrying case)
Weight	6KG
Carrier Gas	Mercury-free air exhaust from MA-3 Solo
Standard Accessories Included	Impinger Outer Unit x 5 pieces Impinger Inner Unit x 2 pieces Reagent Container x 5 pieces Stainless Steel Impinger Stand x 1 unit Cleaning/Wash Bottle x 1 unit Joint Clamp x 2 units Mist Catcher x 2 units Plastic syringe x 10 units L-cysteine (1g) x 1 bottle Tygon tube (2m) x 1 set Mercury Collector Tube Connection Piping x 1 piece PTFE Tube (0.3m) x 6 pieces Mercury Collector Tube with Glass Container and Stopper (5 pieces) x 1 set Metal Clip Collector Tube Holder x 5 units Carrying Case x 1



*Note: For the measurement of Total Mercury in Aqueous sample, user has to perform sample wet chemical decomposition/acid digestion/extraction

Gas Analysis Kit

Specifications	
Standard Accessories	N-65 Mercury Collector Tube - (x 5 pcs) Metal Clip Tube Holder (x 5 pcs)



Other Accessories

GilAir® Plus Basic Air Sampling Pump

Item	Specification
Brand	SENSIDYNE®
Sampling Flow Rate	20 - 5000cc/min
Time Mode Setting	Available
Power Options	Removable rechargeable battery, or DC Power
Power Voltage	100-240Vac, 50/60Hz
Display	Flow Rate, Sample time, and sample volume in actual conditions
Dimensions	11.0W x 6.1H x 6.1D (cm)
Weight	580g (20.5 oz.)



Tedlar Bag

Item	Specification
Size/Volume	5L, 10L, 20L, 50L

Dry gas Meter

Item	Specification
Usage	For the Sampling of Natural Gas onto Mercury Collector Tube



Standard (Hg) Gas Box Set

Item	Specification
Standard (Hg) gas Box	MB-1
Gas-tight Syringe	Hamilton Gas-tight Syringe of 500uL

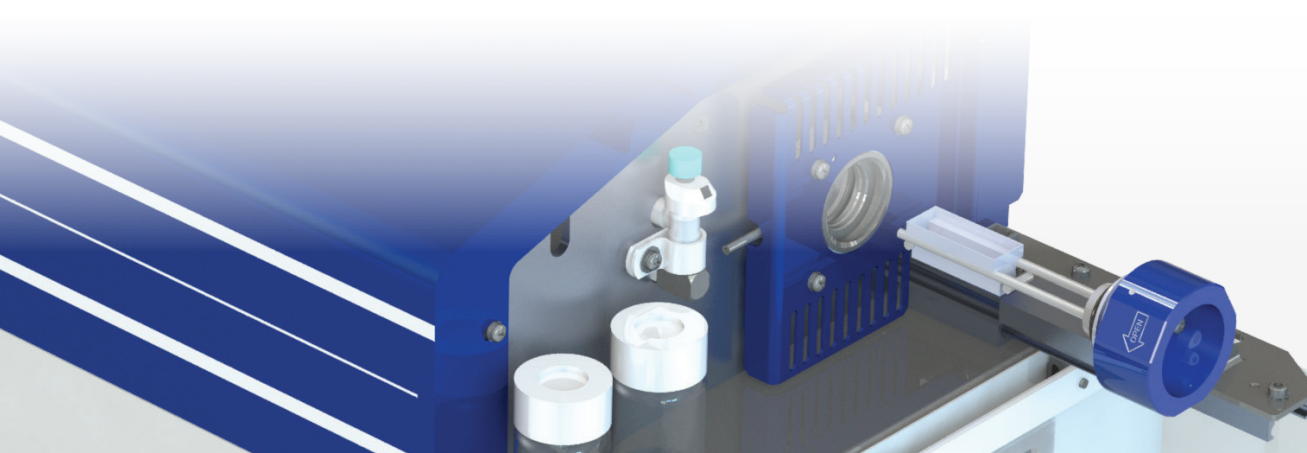


Sample Heating Tube Appendix K

Item	Specification
Usage	For Special Application Please contact info-nic@rigaku.co.jp or local distributor for more information

Additive Activated Charcoal

Item	Specification
Usage	For Crude Oil Application. Other application please confirm with local distributor or NIC at info-nic@rigaku.co.jp

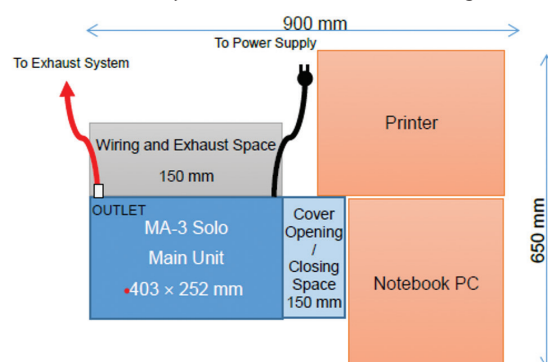


Control and Data Proceeding Unit

Item	Specification
OS	Windows 10 Pro or Windows 11 Pro
Communication	USB (between PC and MA-3 Solo)
Display (Japanese/English)	Peak waveform, calibration curve graph, measurement progress, measurement result, equipment status
Data Processing	Calibration curve (linear formula x 3 types ; cubic formula - 3 types), concentration units setup, concentration computation, baseline correction, statistical calculation (mean value, standard deviation, CV%), Peak shape judgement, Self check
Precision Control	Equipment Check; Evaluation of calibration curve; blank check; recovery calculation
Printing	Memo, calibration curve formula and graph, measurement value table, statistical calculation, peak waveform, measurement date and time, result of equipment check

Installation Environment

Item	Specification
Temperature	15 - 35°C The instrument shall be used in an air conditioned room in which there is no abrupt temperature change.
Humidity	10 - 80% RH (There shall be no condensation.)
Other Atmospheric Requirements	The instrument shall not be used in dusty environment The instrument shall not be exposed to the wind of an air-conditioner or direct sunlight No corrosive gas or volatile organic solvent shall be detected The indoor mercury concentration shall not be high.*
Installation Layout & Space Requirement	



*Note: When the indoor mercury concentration is high, the operation blank becomes high.

Specifications may subject to change without prior notice.



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