



## Mercury Analyzer

RA-5

Simple, Powerful & Multi-Configurable  
New Full Color Touch Panel  
Reducing Vaporization CVAAS  
Mercury Analyzer RA-5



# Simple, yet Powerful !

The RA-5 delivers Ultra-High Sensitivity and Excellent Precision while only requiring 5mL of sample. Its simple to operate design includes a full-color 8-inch liquid crystal display and is nearly maintenance free. The RA-5 is also Environmentally-friendly through its direct purge design that reduces reagent consumption and waste production by over 80% versus comparable models without any need for compressed gases.



## Excellent Operability with Touch Panel

Intuitive operation is realized through the inclusion of a full color, multi-touch display, Mercury analysis is simplified by integrating the operating procedure and results into a user-friendly touch screen.

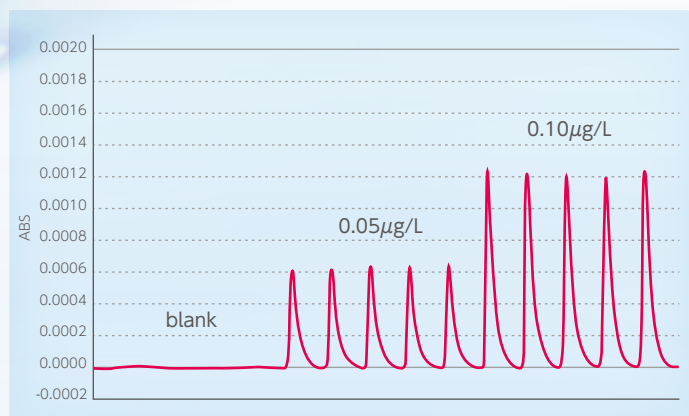




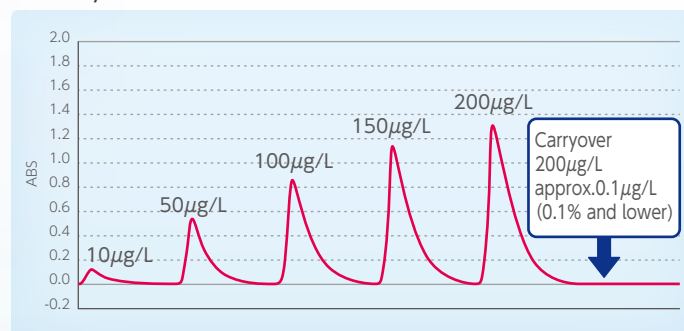
# Best Sensitivity, Accuracy & Excellent Repeatability

RA-5 has achieved the highest level of Sensitivity and Accuracy with new innovatory-crafted detector optics.

Sample	N	Average	C.V.
0.05 $\mu\text{g/L}$	5	0.052 $\mu\text{g/L}$	2.2%
0.10 $\mu\text{g/L}$	5	0.101 $\mu\text{g/L}$	1.7%



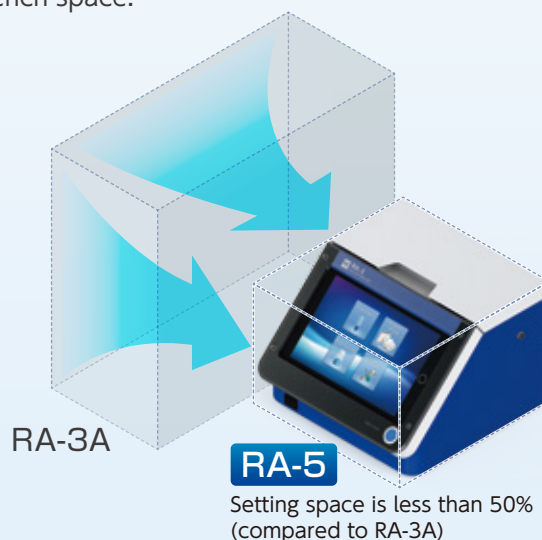
Memory effect from high mercury concentration is virtually unnoticeable.



## Super Compact

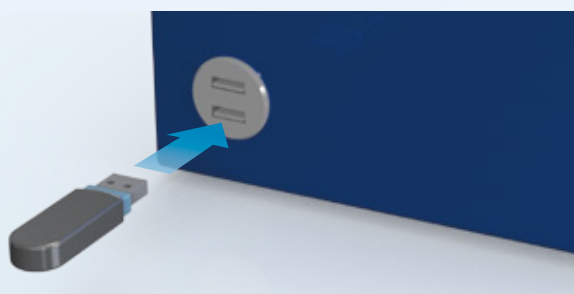
The RA-5 takes up about as much bench space as a sheet of A4-sized paper.

Compare to our previous models, both the overall size and weight have been reduced by over 50%. No PC is required for operation, further reducing the occupied bench space.



## Built-In USB Interface

Easy handling of measurement data and the ability to connect to an optional printer, keyboard and mouse through an included USB interface.



### Options

SC-5 auto sample changer  
(Sample vessel for 5mL)



SC-5 auto sample changer  
(Sample vessel for 20mL)



SC-5 auto sample changer  
(Sample vessel for 100/250mL)



RD-5 auto dispenser



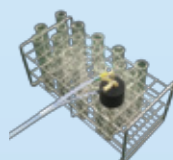
Bottle stand for 5mL  
(Standard accessory of RD-5)



Bottle stand for 20~250mL



Impinger unit(5mL)  
(Standard accessory of RA-5)



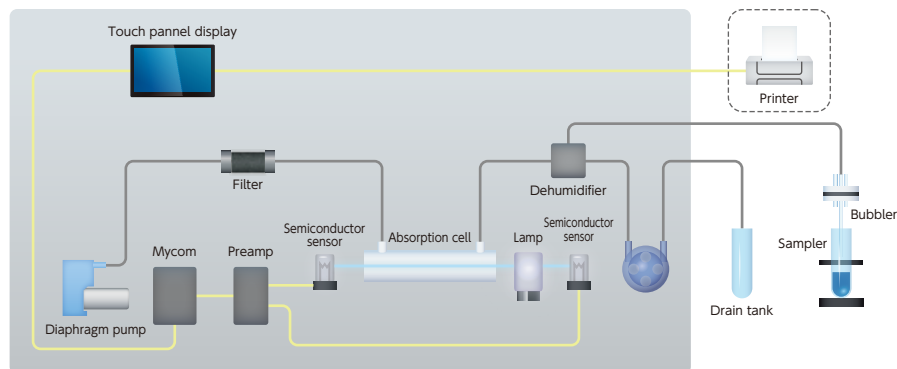
Impinger unit(20mL)



Impinger unit(100/250mL)



## SCHEMATIC DIAGRAM



## APPLICATIONS

The RA-5 is suitable for a wide variety of aqueous samples, including digested solids. It can be used for mercury analysis in drinking waters, industrial wastewaters, fresh water sources, seawater, soils, sludges, tissues & more.

### TEST METHODS

USEPA 245.1, 245.2, 245.5, 7470A, 7471B, ASTM D 3223-02, EN-1483, APHA 3112, JIS K0102 and more

## SPECIFICATIONS

<b>Mercury detecting section</b>	Measurement Principle	Non-dispersive double-beam cold vapor atomic absorption spectrometry <b>Patent-pending</b>
	Measurement method	Reducing Vaporization with open air-supply (Peak height measuring and integration measuring selectable)
	Light source	Low pressure mercury discharge lamp
	Wave length	253.7nm
	Detector	Semiconductor sensor (w/254nm bandpass filter)
	Detection Limit	0.0025ng/5mL(0.5ppt) ※5ppt in case of including chemical treatment
	Maximum range	2,000ng/5mL(400 ppb)
	Carrier gas required	No Compressed Purified Gas required
	Measuring flow rate	Adjustable (0.1 ~ 1.0 L/min) (just operate with ambient air)
	Measuring time	90sec ~ 999sec
	Dehumidifier	Peltier device
	Mercury removal	Removal by activataed carbon
<b>Data processing system (PC-Win / RA-5)</b>	Software	RA5 data processing system
	Display screen	8 inch color liquid crystal display
	Display	Peak wave shape, Calibration curve, Measuring time and measuring result
	Control	Touch panel key control
	Data processing software	Selectable from 6 formulas (3 linear and 3 3rd Order fits) , Correlation coefficient is automatically calculated. Statistic calculation : Mean value, standard deviation, Coefficient of variation (All values are automatically calculated.), Self-check function
	Print	Measuring conditions, Calibration curve, Measured values, Statistical calculations, Peak wave shape and Measuring time
<b>Data output</b>	Quality control	Check standard, Avoid abnormally high mercury etc
		USB enabled printer & LIMS
<b>Installation requirements</b>	Installation dimensions	248W × 253D × 175H (mm)
	Weight	6 (kg)
	Installation environment	5℃~ 35℃, < 85%RH (Non condensing environment is allowed)
<b>Power supply</b>		AC, single phase, 100 ~ 240V 50/60 Hz (AC adaptor included)

## SPECIFICATIONS (OPTIONS)

<b>SC-5</b>	Sample vessel : Number	[Standard] : Sample vessel for 5mL : 30 (with vessel sensor function) [Option] : Sample vessel for 20mL : 12 (with vessel sensor function) Sample vessel for 20mL, 100mL and 250mL : 5 (with vessel sensor function)
	Sample access	Random access
	Bubbler tube	PEEK tube (for sample 5mL) / Glass Frit (for sample 20, 100 and 250mL)
	Power supply	DC24V (AC adaptor included)
	Measurement	180Wx250Dx490H
<b>RD-5</b>	Weight	Approx. 7kg
	Dispensing	Tube pump (3 lines)
	Dispensing volume	Adjustable (Minimum 0.1mL ~)
	Dispensed reagents	• Sulfuric acid • Tin (II) chloride solution • Hydroxylamine hydrochloride solution
	Control · Power supply	Direct pump driving from RA-5
	Measurement	250Wx230Dx80H (with RA-5 connection)
	Weight	Approx. 2kg (Stand inclusive)

## STANDARD ACCESSORIES

USB memory [Qty 1] / Sample bottle [Qty 10]  
/ Bottle stand [Qty 1] / Impinger [Qty 1]  
/ Bubbler [Qty 1] / Filter unit [Qty 2]

★RA-5 is available to equip with optional attachment accessories, auto sample changer SC-5 and auto dispenser RD-5.  
Reagent tube [Qty 1] and reaction tube [Qty 1]  
for Optional attachment: SC  
Reagent bottle [Qty 1] and Reagent tube [Qty 1]  
for Optional attachment :RD

USB Terminal (2 terminals) : Possible to connect to the Printer, Keyboard and Mouse via Bluetooth

### RA-5 series Configurations

RA-5100 — RA-5  
RA-5200 — RA-5, RD-5  
RA-5300 — RA-5, RD-5, SC-5

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ISO 9001 : 2008 CERTIFIED Tech-center, Factory & Osaka office/2003. 1. 30  
ISO 14001 : 2004 CERTIFIED Tech-center, Factory & Osaka office/2007. 6. 8

Identify the right mercury analyzer for you  
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