



Know the mercury.

Mercury is, nowadays, used far less frequently than ever before but can still be present in familiar products such as fluorescent lights and clinical thermometers because of its advantageous properties. However, mercury is a highly-poisonous, dangerous metal that vaporizes at room temperature and then remains present in the atmosphere, oceans, and soil, or basically anywhere.

Mercury is also present in large fish that are eaten by humans, a popular example being tuna.

In response to the global movement towards better mercury management as revealed by the 'UNEP Mercury Programme' within the United Nations Environment Programme (UNEP), the 'Minamata Convention on Mercury' was adopted at Minamata City in Kumamoto in October 2013, thereby representative of the global aim to restrict use of mercury. The fact is, however, that mercury will very probably remain present throughout the world forever.

Which is exactly why we need to measure, control and monitor mercury. We will continue to need to control mercury in ensuring the mutual prosperity of all the human beings based on this planet, which we believe NIC's technology can make a significant contribution to.



Analyze the mercury.

Measurement technology

The established principles for measuring mercury, both Cold-Vapor Atomic Absorption Spectroscopy and Atomic Fluorescence Spectroscopy, are fairly straight-forward, but actual measurements can be difficult since Mercury exists in matrices of all forms (solid, liquid and gas) and tends to adhere to almost anything that comes contact with.

We, NIC, as a manufacturer that specializes in development of Mercury analyzers, have extensively researched in mercury measurements, sample handling and preparation techniques, with accumulated knowledge and expertise in this field. Additionally, one of our efforts has been utilize to measuring techniques which can be applied to predict occurrence of earthquakes or disasters from volcanoes, which, we feel, is all possible too.

Our intention is to continue to offer a better solution to all the needs of our customers with all the peripheral knowledge and measuring technology we have, relating to Mercury.



Corporate Philosophy

We are a group that continues to advance in the pursuit of truth via both theory and experiments.

NIC is a unique enterprise that commenced business by specializing in a single element, i.e. mercury, and which consists of professionals who wish to “analyze mercury as precisely as possible.”

Mercury is ubiquitous in the human living environment and harmful to the human body, therefore requiring it be measured, monitored, and tracked, which requires mercury analyzers. However, the analyzers involved cannot be considered complete merely through understanding the analysis theory but also require original expertise and point of view.

We conduct research and development and maintain a good balance between theory and experiments using the experience we have amassed over the years.

We consider our mission to be to contribute to society by making use of the knowledge and expertise we have accumulated as an expert in mercury analysis, and by then making analyzers that utilize such knowledge and expertise available.



Yoshiaki Yoshioka
President



Mercury measuring equipment

NIC constantly endeavors to develop and manufacture mercury analyzers with sensitivity and precision enabling measurements to be made precisely down to ppt level, thereby allowing customers to use them as reference instruments to satisfy the stringent limits and regulations.

NIC started our business and operation with just one single model Mercury analyzer. Since then, over the years, with the accumulated wide range of technical knowledge, expertise and knowhow coupled with rapid and numerous close collaborations with customers, various different models of Mercury analyzers are progressively developed to fulfill the requirements of each customers and applications. Most of these products are world-1st, incorporating our unique ingenuity.

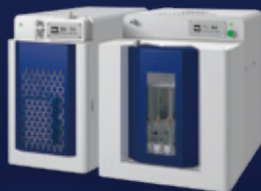
Lately, NIC again excels and succeeded in the development of the world's first fully-automatic digestion reducing vaporization mercury analyzer, offering a better solution for ease and accurate measurement of Mercury in water and waste water.



Reducing-vaporization mercury measuring equipment
RA-5A



Work environment mercury measuring equipment
EMP-3



Mercury analyzer for gaseous matrices
WA-5A/5F



Heat-vaporization mercury measuring equipment
MA-3000



Fully-automatic reducing-vaporization analyzer
RA-4500



Fully-automatic analyzer for mercury in petroleum oil
PE-1000

Sample - Product reference list

Sample		Product				
		MA	PE	RA	WA-AM	EM-EMP-SGM
Biological objects; Organisms	Blood, Urine, Hair, Internal organ, Plankton, etc.	⊙	○			
Food	Rice, Fish (fish tissue), Butter, Margarine, Milk, Mother's milk, Vegetables, Gelatin, etc.	⊙	○			
Household articles	Detergents, Paints, Glues, Waxes, Sanitary goods, Cloth, etc.	⊙	○			
Medical products; Cosmetics	Gelatin capsules, Hand creams, Lipsticks, Hair Dyes, etc.	⊙	○			
Reagents	Various kinds of reagents	⊙	○			
Solid	1. Various kinds of coal	⊙	○			
	2. Various kinds of soil, Fertilizer (Potassium, Sulfuric acid, Organic matters), Livestock feed	⊙	○			
	3. Various kinds of ores	⊙	○			
	4. Sewage sludge, Soil of factory-demolition sites	⊙	○			
	5. Plastics (Ethylene, Polyethylene, etc.) Wood, Foliage, Paper	⊙	△			
	6. Thimble (for particulate mercury collection)	⊙	○			
Liquid	1. Sea water	○	○	⊙	○	
	2. Service water, River water, Lake water, Rain water	○	○	⊙	○	
	3. Industrial waste water	○	○	⊙	○	
	4. Crude oil, Naphtha, Gas condensate, Heavy oil, Coal tar	○	⊙			
Gas	1. General environment	○	○	△	⊙	○
	2. Work environment, Fluorescent lamp crusher flue	○		△	⊙	⊙
	3. Semi-conductor manufacturing process	○			○	⊙
	4. Animal carcass and organic solvent incinerator flue	○		△	⊙	
	5. Waste incineration plant flue	○		○	○	○
	6. Coal-fired power station flue	△		△	⊙	○
	7. Nonferrous metal refining ore roasting gas / Sulfuric acid manufacturing plant flue	△		△	⊙	○
	8. Natural gas, LPG (General specification type, Explosion protection type)	○	○		⊙	○
	9. Ground gas, LPG (Resource mapping)	△	△		⊙	
Substance regulations	WEEE, RoHS, ELV	⊙	○			
Standard sample	Standard sample	⊙	⊙			





WA-5A/5F

Mercury analyzer for gaseous matrices



RA-5A

Reducing-vaporization mercury measuring equipment



SGM-9

Portable monitor for mercury in stack gas



EMP-3

Portable/handheld mercury measuring equipment

Exploration of volcanic activity and geothermal heat

Coal, Ore

Semi-conductor manufacturing processes, Work environment, Waste incineration plant flue

Industrial waste water, River water

Rice, Vegetables

NIC's analyzers enable mercury measurement to be made in any environment

Our mercury analyzers have widened their range of application from in analysis laboratories through to production floors, and from indoors to outdoors. We can assist a customer's mercury measurement needs through the deep and wide range of experience we have with mercury analysis that we have accumulated over a period of more than quarter of a century.



Geo-Thermo Research Activity



Exploration of volcanic activity



Contamination investigation above a gold mining site



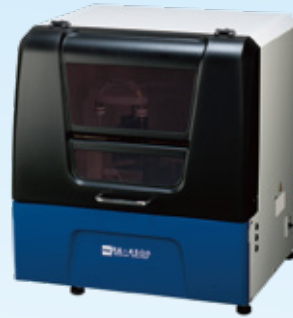
MA-3 Solo

Heat-vaporization mercury measuring equipment



MA-3000

Heat-vaporization mercury measuring equipment



RA-4500

Reducing-vaporization mercury measuring equipment



PE-1000

Fully-automatic petro pyrolysis mercury analyzer

Butter, Milk, Detergents, Paints, Lipsticks, Hairdressings



Fish (fish tissue),
Sea water

- Water
- Air
- Soil



Environment



Energy

- Food
- Household articles
- Medical products, Cosmetics

**Food/
household
articles**

- Petroleum oil, Natural gas
- Exploration of underground resources

Industry



- Nonferrous metal refining
- Electronics and electric industries



Crude oil, Naphtha,
Gas condensate,
Heavy oil, Coal tar

History of products

	Work environment mercury measuring equipment	EMP-3	2019	
	Heat-vaporization mercury measuring equipment	MA-3 Solo		
	Reducing-vaporization mercury measuring equipment	RA-5A	2018	
▶ The world's first	Field Portable Battery Operated Gold-Amalgam Gas Monitor	EMP-Gold+	2017	The Minamata Convention on Mercury entered into force (Aug 16, 2017)
			2016	MA-3000 / certified for UOP1009-15
	Reducing-vaporization mercury measuring equipment	RA-5		
	Portable Monitor for Mercury in Stack Gas	SGM-8		
	Reducing-vaporization mercury measuring equipment	RA-4300FG+		
	Mercury analyzer for gaseous matrices	WA-5A/5F		
	Reducing-vaporization mercury measuring equipment	RA-4300		
	Fully-automatic mercury measuring equipment	RA-4500		
	Work environment mercury measuring equipment	EMP-2		EMP-2 honored for INSTRUMENT BUSINESS OUTLOOK Gold award (U.S.A.)
			2010	PE1000 / SP-3D certified for UOP938-10
▶ The world's first	Heat-vaporization mercury measuring equipment	MA-3000		
	fully-automatic petro pyrolysis mercury analyzer	PE-1000		
▶ The world's first	fully-automatic reducing-vaporization mercury measuring equipment	RA-3420		
			2002	TM series awarded for The 32nd "Prize for New Machine Developed by Small and Medium Enterprises"
	Heat-vaporization mercury measuring equipment	MA-2000		
			2000	SP-3D certified for UOP938-00
	Reducing-vaporization mercury measuring equipment	RA-3 series		
	Mercury analyzer for gaseous matrices	WA series		
	Continuous measuring equipment for mercury in various forms in waste gas	DM series		
	Continuous-measuring equipment for mercury in liquid	ARA series		
	Mercury gas monitor	EM series		
	Heat-vaporization mercury analyzer	SP-3D		
			1995	SP-3D certified for UOP938-95
▶ The world's first	fluorescent lamp mercury measuring equipment	TM series		
	Heat-vaporization mercury measuring equipment	MA series		
	Field-portable high-performance mercury measuring equipment	PM series		
	Unattended continuous-measuring monitor for mercury in the air and gasses	AM series		
	Measuring equipment for oil in water	Oil series		
	Work environment mercury measuring equipment	EMP series		
	Reducing-vaporization mercury measuring equipment	RA-2 series		
	Heat-vaporization mercury analyzer	SP series		

Company overview

Company name	Nippon Instruments Corporation	
Established in	1978	
Company representative	Yoshiaki Yoshioka	
Address	4-14-4, Sendagaya, Shibuya, Tokyo, 151-0051, Japan	
Businesses	Development, manufacture, and sale of mercury measuring equipment and measurement services	
URL	https://www.hg-nic.biz	

Business sites

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Factory	TEL : +81-72-694-5195	
Technical center	FAX : +81-72-694-0663	
Singapore office	10 Science Park Road, #03-24A, Singapore 117684	
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Affiliated company

Rigaku Corporation

Member organizations

Japan Analytical Instruments Manufacturer's Association



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