

CORPORATE PROFILE

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 expertize 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.



Isao Hamanaka 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, expertize 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.



Work environment mercury measuring equipment EMP-3



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



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



Heat-vaporization mercury measuring equipment MA-3000



Fully-automatic reducing-vaporization analyzer **RA-7000A**

Sample - Product reference list

Sample Product MAPE RA WAEMPSEM Biological objects; Blood, Urine, Hair, Internal organ, Plankton, etc. \bigcirc \bigcirc Organisms Food Rice, Fish (fish tissue), Butter, Margarine, Milk, Mother's milk, \bigcirc \cap Vegetables, Gelatin, etc. Household articles Detergents, Paints, Glues, Waxes, Sanitary goods, Cloth, etc. \bigcirc \bigcirc Medical products; Gelatin capsules, Hand creams, Lipsticks, Hair Dyes, etc. \bigcirc \bigcirc Cosmetics Reagents Various kinds of reagents \bigcirc \bigcirc Solid 1. Various kinds of coal \bigcirc \bigcirc 2. Various kinds of soil, Fertilizer \bigcirc \bigcirc (Potassium, Sulfuric acid, Organic matters), Livestock feed 3. Various kinds of ores \bigcirc \bigcirc 4. Sewage sludge, Soil of factory-demolition sites \bigcirc \bigcirc 5. Plastics (Ethylene, Polyethylene, etc.) Wood, Foliage, Paper \bigcirc Λ 6. Thimble (for particulate mercury collection) 0 \bigcirc Liquid 1. Sea water $\cap \cap$ \bigcirc \cap 2. Service water, River water, Lake water, Rain water $\bigcirc \bigcirc$ \bigcirc 3. Industrial waste water $\bigcirc \bigcirc$ ()4. Crude oil, Naphtha, Gas condensate, Heavy oil, Coal tar \bigcirc Gas 1. General environment $\bigcirc \triangle \bigcirc$ 2. Work environment, Fluorescent lamp crusher flue \bigcirc \wedge \bigcirc 3. Semi-conductor manufacturing process \bigcirc 0 4. Animal carcass and organic solvent incinerator flue \cap 0 \wedge 5. Waste incineration plant flue \bigcirc \bigcirc 6. Coal-fired power station flue Λ \bigcirc Λ 7. Nonferrous metal refining ore roasting gas \triangle 0 \wedge / Sulfuric acid manufacturing plant flue 8. Natural gas, LPG 00 \bigcirc (General specification type, Explosion protection type) 9. Ground gas, LPG (Resource mapping) $\Delta \Delta$ 0 Substance WEEE、RoHS、ELV 0 ()regulations Standard sample \bigcirc Standard sample \bigcirc







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



Heat-vaporization mercury

measuring equipment



MA-3000 Heat-vaporization mercury measuring equipment



RA-7000A Fully-automatic reducing-vaporization analyzer



PE-1000 Fully-automatic petro pyrolysis mercury analyzer



History of products

Reducing-vaporization mercury measuring equipment Work environment mercury measuring equipment Heat-vaporization mercury measuring equipment Reducing-vaporization mercury measuring equipment The world's first Field Portable Battery Operated Gold-Amalgam Gas Monitor	RA-7000A EMP-3 MA-3 Solo RA-5A EMP-Gold+	2023 2019 2018 2017	The Minamata Convention on Mercury entered into force (Aug 16, 2017)
Reducing-vaporization mercury measuring equipment Portable Monitor for Mercury in Stack Gas Reducing-vaporization mercury measuring equipment Mercury analyzer for gaseous matrices	RA-5 SGM-8 RA-4300FG+ WA-5A/5F	2016	MA-3000 / certified for UOP1009-15
Reducing-vaporization mercury measuring equipment Fully-automatic mercury measuring equipment Work environment mercury measuring equipment Heat-vaporization mercury measuring equipment The world's first fully-automatic petro pyrolysis mercury analyzer	RA-4300 RA-4500 EMP-2 MA-3000 PE-1000	2010	EMP-2 honored for INSTRUMENT BUSINESS OUTLOOK Gold award (U.S.A.) PE1000 / SP-3D certified for UOP938-10
The world's first fully-automatic peaks provide provide and pro	RA-3420 MA-2000	2002	TM series awarded for The 32nd "Prize for New Machine Developed by Small and Medium Enterprises"
Mercury analyzer for gaseous matrices Continuous measuring equipment for mercury in various forms in waste gas Continuous-measuring equipment for mercury in liquid	WA series DM series ARA series	2000	SP-3D certified for UOP938-00
 Mercury gas monitor Heat-vaporization mercury analyzer The world's first fluorescent lamp mercury measuring equipment Heat-vaporization mercury measuring equipment 	EM series SP-3D TM series MA series	1995	SP-3D certified for UOP938-95
Field-portable high-performance mercury measuring equipment Unattended continuous-measuring monitor for mercury in the air and gasses Measuring equipment for oil in water	PM series AM series Oil series		
Work environment mercury measuring equipment Reducing-vaporization mercury measuring equipment Heat-vaporization mercury analyzer	EMP series RA-2 series SP series		~ ~ ^ ^ ^ ^ ^ ^

Company overview

Company name	Nippon Instruments Corporation
Established in	1978
Company representative	Isao Hamanaka
Address	14-8, Akaojicho, Takatsuki, Osaka, 569-1146, Japan
Businesses	Development, manufacture, and sale of mercury measuring equipment and measurement services
URL	https://www.hg-nic.com

Business sites

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Oversea sales agencies / Service centers

Algeria, Australia, Belgium, Brazil, Canada, China, Egypt, France, Germany, Hungary, India, Indonesia, Kazakhstan, Korea, Malaysia, Mexico, Morocco, Myanmar, Netherlands, Oman, Philippines, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sri Lanka, Switzerland, Thailand, U.A.E., U.K., U.S.A., Vietnam

Affiliated company

Rigaku Corporation

Member organizations

Japan Analytical Instruments Manufacturer's Association





Nippon Instruments Corporation