HORIBA Advanced Techno Corporate Profile



HORIBA Advanced Techno, Co., Ltd.

2 Miyanohigashi-cho, Kisshoin, Minami-ku, Kyoto, 601-8551, Japan Tel +(81) 75 321 7184 Fax +(81) 75 321 7291 https://www.horiba.com/water-liquid/

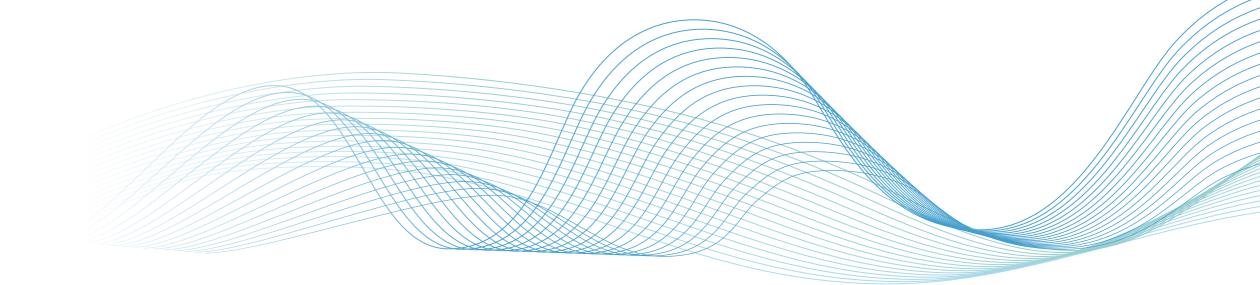


Table of contents

HORIBA Group's Core Technologies P.03

Business Domain of HORIBA Advanced Techno P.05

Businesses of HORIBA Advanced Techno P.07

Development, Production and Service System P.11

HORIBA Group's DNA/Corporate History and Development P.13

An indispensable part of human life,
the industries that support it, and the natural environment.

However, it is very difficult to understand water in its various forms

Water is the source of life.

and to control it to an optimal state.

Making the most of water means creating the future.

We have adopted as a value, "Let us communicate with water for the future".

We will continue to be an organization of water experts that uses analytical technology to find answers to whatever water issues you may face.

Horiba Advanced Techno is a specialized manufacturer of analytical and measuring instruments for water and liquids. Water plays an important role in all aspects of the global environment, living environments, and industry. We have been providing solutions to various water-related issues with our analysis and measurement technologies.

And now, needs have diversified, with people requiring our technology.

Our mission is to protect the quality of water around the world and to bring affluence to all people through water and liquid measurement.

HORIBA Advanced Techno, Co., Ltd. President and CEO Kentaro Nishikata





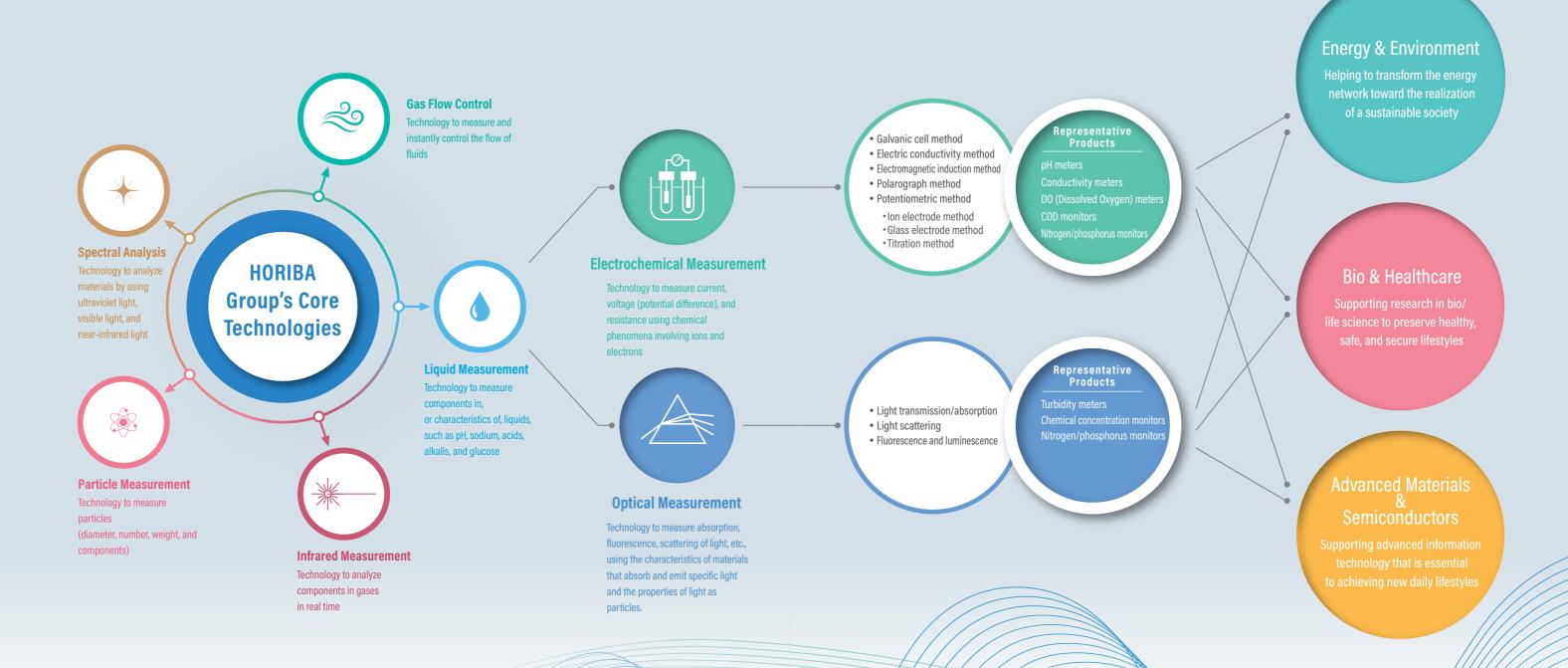
Bearing HORIBA Group's water/liquid measurement technology.

For more than 70 years, since its foundation, the HORIBA Group has accumulated a wide variety of "measurement" technologies and developed its business in a wide range of fields.

Among these, HORIBA Advanced Techno has been responsible for, and has developed, the HORIBA Group's water/liquid measurement technology.

The Group's core technologies and HORIBA Advanced Techno's core technologies in water/liquid measurement create synergy across various fields.

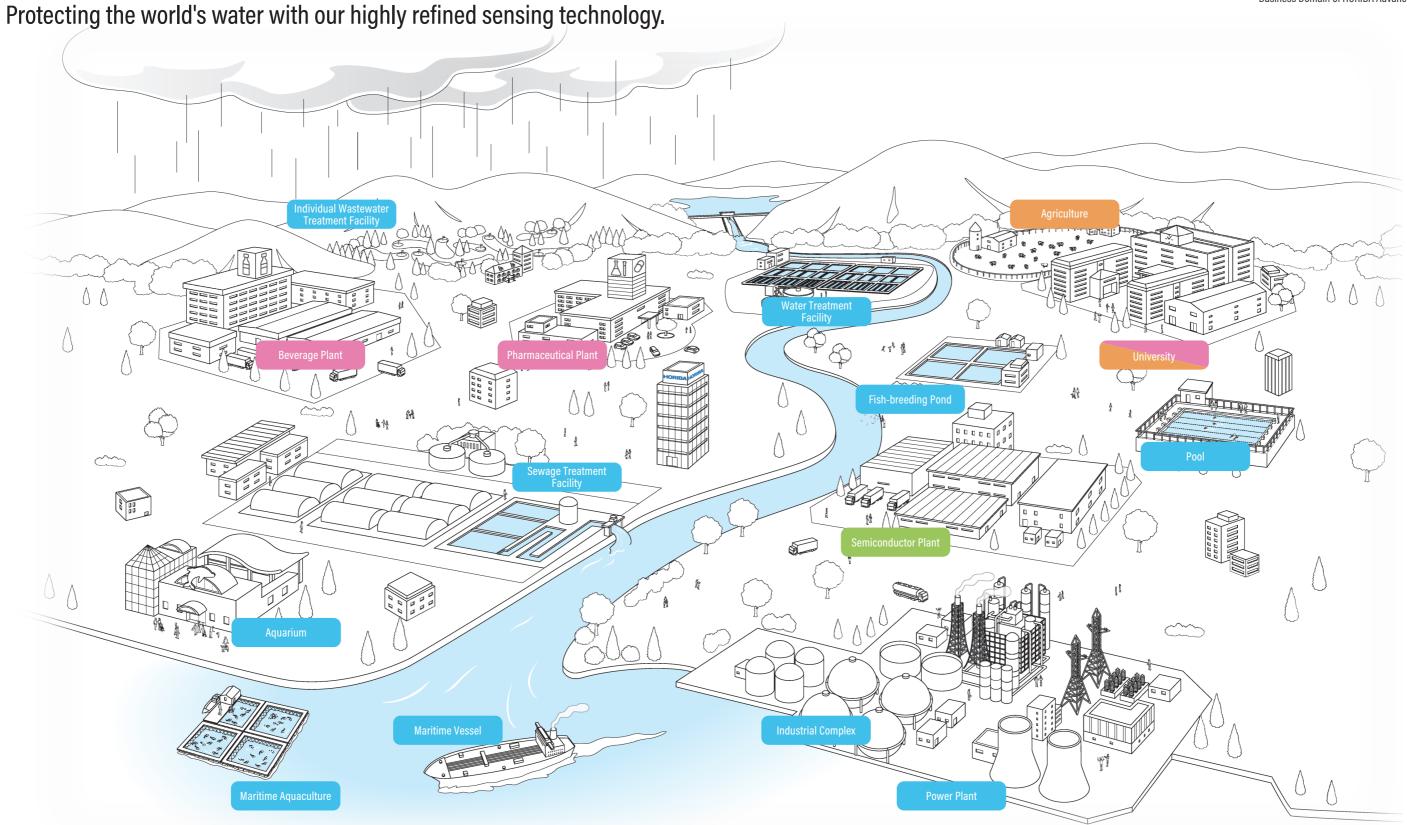
We will continue to take on the challenge of solving all issues related to water/liquid measurement.



Three Areas Challenged by the HORIBA Group

3

4



"Measuring" technologies, supporting our lives and creating the future

Our daily lives consist of a variety of "measuring" activities.

For example, measuring ambient temperature and body temperature, quantifying the situation around us can help guide our actions and solve problems.

The process of measurement is also indispensable in industries that enrich our lives, with a variety of analytical and measuring instruments in use.

Professionals in water and liquid measurement, HORIBA Advanced Techno

HORIBA Advanced Techno is a team of experts in water and liquid measurement within the HORIBA Group.

We offer a wide variety of services and solutions in the field of water/liquid measurement, operating in the four business fields of environmental solutions, semiconductor process solutions, bio industry, and lab and field solutions.

The HORIBA Group has integrated over 70 years of expertise in water/liquid measurement technology into HORIBA Advanced Techno, and is expanding its business field into the rapidly growing water market, especially in emerging nations. In addition to its existing installed systems, new solutions proposed by HORIBA Advanced Techno, such as a subscription business using Internet of Things (IoT), are gaining attention as a trump card for solving problems in developed nations as well.

Businesses of HORIBA Advanced Techno

Environmental Solutions Business

Semiconductor Process Solutions Business

Bio Industry Business

Lah and Field Solutions Business



Environmental Solutions Business

Contributing to solving issues related to limited water resources and making the world a better place.

The Environmental Solutions business covers all areas, including water supply and sewage infrastructure, industrial water and wastewater, production processes, rivers and lakes, and is characterized by the wide variety of water quality measurement equipment it handles.

We are not only compliant with laws and regulations, but also help improve production efficiency and reduce costs.

We respond to various challenges with our technology and network.

The water/liquid measurement technology which HORIBA Advanced Techno is involved in has grown along with the expansion of Japanese industry and the accompanying measures against pollution, and the technologies and experience we have accumulated are being used to solve problems in developing countries, which are growing markets. At the same time, as environmental awareness increases, attention is increasingly focused on advanced water treatment processes that make effective use of water as a resource and reduce the energy required for water treatment. In Japan, maintenance and management of facilities has become a social issue due to a shortage of human resources, with automation as well as streamlining through measurement devices helping to solve this problem.

Challenges vary depending on the era, country, region, and industry, the HORIBA Group's unique strength lies in its adaptability, handling everything from R&D to engineering in an integrated manner, leveraging its global network, embodying our mission to grow our business while contributing to society.

Reducing the burden in the field is highly rewarding.

Wastewater treatment and water quality control sites are often dangerous and harsh. We find pleasure in generating happiness for people by reducing their workload through measurement. We believe that if we can bring joy to people through the safety and security of water, it will lead to happiness around the world.

Semiconductor Process Solutions Business

Multifaceted response to advanced process control

The Semiconductor Process Solutions business provides a variety of measuring instruments to control the cleaning solutions used in the semiconductor manufacturing cleaning process.

The cleaning process is an important part of the semiconductor manufacturing process, as even the tiniest particles can affect the manufacturing process of semiconductors. Due to the fact that the cleaning abilities of cleaning solutions used vary with temperature and concentration, accurate concentration control becomes a necessity. Additionally, in today's semiconductor industry, there is a great need to reduce environmental impact by improving efficiency, such as proper use of cleaning solutions and reduction of waste, making concentration monitors an indispensable item in the manufacturing process. In this advanced process control, our main product, the chemical concentration monitor, has established the top share in the global market, contributing to the quality of semiconductor devices and the management of chemical solutions. Additionally, from 2021 to 2022, the production capacity of chemical concentration monitors have been increased by approximately four times (compared to 2020) in anticipation of future demand increase.

Overseas, a Wet-Lab, an application development base near end-users, has been established and at the same time, a technical support team within the Development Department has been set up at the headquarters to organically link with each base to respond quickly and flexibly to requests.

Our mission is to contribute to a prosperous future.

Our mission is to contribute to a convenient and prosperous future society made possible by semiconductors, through water and the effects of our products. It is rewarding to know that the smartphones and PCs used in the world are also made through the cleaning process that we have been involved in.



Products



pH Meter HP-200 Self-cleaning pH Electrode





Field-installation Type Ammonia Nitrogen Meter HC-200NH Ammonia Nitrogen Sensor AM-2000





はかるEXpress >

Subscription Service of Water Quality Management System

Products





HF Concentration Monitor HF series





Bio Industry Business

Giving form to HORIBA Group's accumulated technologies

The Bio Industry business was launched in 2017 as a new business of HORIBA Advanced Techno in order to take charge of product development and commercialization of rapid microorganism detection systems. By combining the HORIBA Group's advanced technologies cultivated over the years with teamwork, the Rapica, a rapid microbiological analyzer that can rapidly detect microorganisms in samples such as pharmaceutical water with high sensitivity (single viable organism level), where microorganisms are almost non-existent or need to be controlled at a low level, was developed.

Our daily efforts have provided results that go beyond what has been achieved "until now".

Traditionally, the culture method of detecting microorganisms has been widely used in microbiological testing. In the medical and pharmaceutical fields, where it is not always possible to wait for the results of microorganism detection, a device that can reduce the time required by the culture method from several days or several weeks to only a few hours, is a groundbreaking development.

However, the Rapica is not only capable of detecting 24 samples simultaneously, but is also superior in that it automates all operations, including divided injections, and can contribute to reducing the risk of contamination and increasing work efficiency, resulting in high expectations for its future.

While there was an immense amount of insight required for commercialization, it is thought that this accomplishment was achieved through the steady and persistent efforts of individual learning and teamwork. The Blackjack Project* and other activities outside the company have also been opportunities to learn and share knowledge.

We hope to bring safety to the world as quickly as possible.

It takes time for new, unprecedented products to penetrate the market, but it is a great pleasure to listen carefully to the voices of customers who are willing to consider our products and to work together with them to achieve results. With this as one of our driving forces, we aim to respond with safety and speed to businesses that supply therapeutic drugs and other products, and to patients who await them, and to expand our business globally in the future.

*In-house project started with the aim of changing employee awareness and behavior. Employees decide on their own themes and work toward their desired goals.

Products



Lab and Field Solutions Business

Connecting sensor and measurement technologies to customer experience

The products handled by the Laboratory and Field Solutions business can be broadly categorized into laboratory products, such as pH meters, which are the HORIBA Group's original products, and off-line water/liquid measurement instruments used in laboratories and out in the field, which are used in a wide range of fields including pharmaceuticals, food, cosmetics, universities, water and sewage treatment, as well as agriculture. The company's strength lies in its ability to develop and manufacture in-house the response membranes of sensors that ensure the accuracy of water quality measurements, and it has continued to improve its core technologies to meet the needs of its customers. The pocket water quality meter LAQUAtwin, in particular, has been highly praised for its usability, which sets it apart from other products, and is especially appreciated in the agricultural market.

We provide full support through both "Monozukuri" (Crafting) and "Koto-Zukuri" (Fact building).

Along with sensor technology itself, another element that determines water quality analysis is measurement technology. The interface between the response membrane and the sample is difficult to control, making sensor maintenance an essential matter. Efforts are being taken to enhance customer support by setting up a contact point for inquiries and distributing videos of our know-how so that we can respond to problems while simultaneously demonstrating the capabilities of our sensors.

We are also aiming to develop new businesses with the desire to improve the health of people around the world.

Around the world, every company is expanding their business activities based on their own characteristics and strengths, resulting in balanced market shares. In this environment, Horiba Advanced Techno aims to become No. 1 in the world, using the technology and position it has established domestically as a foothold to improve the reliability of its measurements and instruments as well as customer experience. At the same time, to contribute to Sustainable Development Goals (SDGs) through our business, we are taking on the challenge of promoting recycling and efficiency, developing environmentally friendly electrodes, and taking other initiatives with an eye to the future. Recently, in addition to expanding our product lineup and pursuing services, we have been expanding our business into new markets such as life sciences and healthcare in order to take our business to the next level. We want to become the world's most trusted and chosen provider of water quality analysis and help people around the world feel safe and secure. With this dream and goal in mind, we continue to strive for the improvement of our quality and technology, building up our know-how.

Pocket Water Quality Meter

LAOUAtwin

Products



Multi Digital Water Quality Meter WQ-300 Series



Quality Checker U-50 Series







Product specialist



Benchtop Water Quality Meter LAQUA F Series

Supporting manufacturing through development, production, and service collaboration with overseas bases.

Sales Rase

France

Developing and manufacturing gas/water online analyzers for environmental and industrial process applications. Our own technology based on UV spectroscopy offers unparalleled reliability and the creation of systems which realizes very low operation cost.

ormony

Possesses high-temperature non-catalytic combustion technology and is responsible for the development and production of quantitative systems for waterborne organisms and TOC monitors.

Korea

Produces Water Quality Monitoring Systems (WQMS) locally. The system has contributed greatly to the improvement of water quality and water environment in Korea, and is actively expanding the system to other countries. A fully equipped development laboratory for semiconductor manufacturing is also in place.

China

Providing development and production of environmental control equipment for the local market. The company is fully equipped with the structure to quickly approach the rapidly changing market.

Taiwan

Established a laboratory for wet processes in semiconductor manufacturing. Working closely with customers dealing with cutting-edge technologies, contributing to the promotion of application development and the streamlining of production processes.

Singapore

To respond quickly to global needs, we are promoting the development and production of water quality meters for laboratory and field use locally. Also striving for cost

Research & Development

Aiming to become the world's de facto standard in water/liquid measurement through advanced technological development capabilities



As a group of exper in water/liquid measurement, our development department, which has a full staff of specialists in both basic research and application development,

customers by creating products and providing quality that meet their needs. For the global market, we strive to customize our products in accordance with national and regional laws and regulations as well as with the purposes and applications of use, having established a cooperative system with our overseas bases to deliver new value to the world through manufacturing that brings together the technologies and expertise of our headquarters and bases. With the rapid pace of technological innovation and rapidly changing customer and market needs, we are promoting Internet of Things (IoT) and digitalization and providing new solutions such as environmental monitoring using remote monitoring systems. In order to further streamline and speed up development as a technology development and proposal-oriented company, we are promoting the networking of technological innovation resources and design tools of the HORIBA Group, and promoting exchanges within the Group to strengthen our technological development capabilities.

Customer Service

Focusing on improving global customer satisfaction through a meticulous support system



The Customer Support
Center, established in
1993 at the HORIBA
Group's headquarters in
Kyoto, Japan, handles
approximately 30,000
inquiries a year via a
toll-free telephone
number and website. Th
greatest strength of the
Customer Support Cente

its close cooperation with group companies to provide detailed support. A ast amount of past inquiries are accumulated and shared within the ORIBA Group to further improve product knowledge and provide courteous esponses.

U.S.A.

Established a laboratory for wet process semiconductor manufacturing. Working closely with customers dealing with cutting-edge technologies, supporting research and development, application development, and production process efficiency.

Japan

Headquarters for supporting water/liquid measurement technology. Proposing new values for manufacturing by bringing together technology and knowledge in collaboration with overseas bases.

U.S.A

Developing on-line fluorescence analyzers at state-of-the-art research facilities. Actively expanding into water quality analysis in the scientific and research fields.

Production & Quality

Bringing the unwavering skills of our craftsmen to the world an



The first glass electrode pH meter, made in Japan, which has become synonymous with the HORIBA Group, was born in 1951. Since then, the HORIBA Group has continuously produced high-precision, high-quality products at

Its head office and factory. The foundation of the HORIBA Group's business is still based on manual glass processing by skilled artisans, and this technology is constantly evolving and being passed on to the next generation. At the same time, we are working to further improve productivity through the synergistic effects of human skills and robots that leverage state-of-the-art technology for standardization. In addition, we have established a production and quality system on a global scale, providing products that meet the needs not only in Japan but also in other parts of the world. With pride in our delicate and advanced technologies and strong teamwork, we will continue to protect water around the world through manufacturing that transcends national borders.

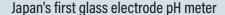
11

HORIBA Group's DNA

HORIBA Group's corporate motto is "Joy and Fun".

This simple phrase expresses our deep desire for our employees to make their lives fruitful by engaging in their work with a sense of fulfillment and taking the initiative.

HORIBA ADVANCED TECHNO is a stage where each and every one of us can play a leading role.



It was the pH meter created in 1951 that made the term "pH meter by HORIBA" widely known.

At that time, Masao Horiba, the founder of HORIBA, was forced to abandon the mass production of electrolytic capacitors due to changes in social conditions, and instead focused on the commercialization of the pH meter he had used in

The completed pH meter, the first glass electrode pH meter made in Japan, became a huge hit and was a milestone in the establishment of Horiba Ltd. The spirit of the founder, who aimed to be the one-and-only, is still alive and well in the HORIBA Group today.





Venture Spirit

The HORIBA Group's origins can be traced back to a student venture in Kyoto. As a pioneer of venture companies in Japan, the HORIBA Group has demonstrated its spirit of challenge in its business activities, boldly taking on the challenges of new fields without the fear of failure. This approach has led to the formation of a wide range of business domains, and even today, the company continues to take on challenges in new areas such as biotechnology, life sciences, and new energy sources.

Environmental Management (Sustainability Management)

Delivering safe water when and where it is needed enriches people's lives and stabilizes social infrastructure. We launched "Project Colors"* in 2020 to continue our efforts to protect the global environment and the future of limited water resources through our business. Measuring and monitoring means listening to the "voice" of water and the changes in the environment surrounding the world. "For the future, communicate with water". This is not only what we can do to contribute to sustainability, but it is also our

*In-house project to think about what can be done to contribute to SDGs. Divided into teams, each theme is advanced while holding workshops.

Diversity Management

The HORIBA Group combines the individuality and talent of each employee like a stained glass window, allowing them to shine through.

By creating a workplace environment where employees can work more comfortably and feel fulfilled, such as by introducing a remote working system in 2019 under the title of "Good Place Work System", we will realize a Super Dream Team with diverse human resources and accelerate the transformation of existing businesses and the creation

Communication

We value teamwork and proactively provide opportunities for communication among employees through internal

Events such as company-wide trips and barbecues organized by the HAT Association, which stands for "HORIBA Advanced Techno", are good opportunities to deepen ties among employees. The teamwork fostered in this manner is used to intensify monozukuri (crafting).

Corporate History and Development

In 1975, COS Corporation was established by HORIBA Ltd.

COS, named after "Component Supply & Service", has been meeting all kinds of water/liquid measurement needs in agriculture, aquaculture, industrial wastewater, domestic wastewater, rivers, etc. COS was a company filled with exploration, and HORIBA had overwhelming technical capabilities and monozukuri (crafting) know-how. HORIBA ADVANCED TECHNO was born out of the strong desire of both companies to "protect water through analytical measurement technology".

We will continue to take on challenges as a group of experts in water and liquid analysis.



COS Co. at the time of establishment

Sales Office

Sales Office

Sales Office

HORIBA Advanced Techno Co. Head Office

"One Water" logo is created and a new start is made as the headquaters of the water/liquid measurement business.

Released "EG-100",

Japan's first*

Continuing the water/liquid measurement business of HORIBA Ltd.

Beyond Water with You

Advanced Techno France SAS established

Topics

Products & Services

*December 2022 In-house research

Launched Japan's first* DIN 48x96 size Panel-mount type water quality analyzer



Released a chemical monitor for the semiconductor



Developed the world's first* carbon sensor resistivity meter "GC-96R

Developed the Released 17 models of world's first* "H-1 Series" field-installead-free pH lation type industrial electrode water quality meters.



"LAQUA F-70 Series" Benchtop pH/water quality analyzers receive Good Design Award



"LAQUA F-70 Series" desktop pH/water quality meters and "LAQUAtwin" pocket water quality meters receive Universal Design Award 2014



solution "Hakaru EXpress" "LAQUAtwin" selected for JIDA Design Museum Selection vol. 20

management

Launches Japan's

first* water quality

washwater monitoring system for ship exhaust gas purifiers



Launched Launched rapid microorganism TOCADERO ONE, an detection system "Rapica" on-line TOC Released the world's first* analyzer. self-cleaning pH electrode "6122







- All brand names, product names and service names in this corporate profile are trademarks or registered trademarks
- · Products and services listed in this corporate profile may not be available in some regions
- © HORIBA Advanced Techno 2023

• The specifications, appearance or other aspects of products in this corporate profile are subject to change without notice. · Please contact us for enquiries concerning further details on the products in this corporate profile • The color of the actual products may differ from the color pictured in this corporate profile due to printing limitations

• It is strictly forbidden to copy the content of this corporate profile in part or in full.

• The screen displays shown on products in this corporate profile have been inserted into the photographs through

13