

To Protect Water Quality Around the World



HORIBA Dan

President

HORIBA Advanced Techno, Co., Ltd.,

A handwritten signature in black ink, appearing to read 'Dan Horiba'.

The history of HORIBA began with the founder Dr. Masao Horiba having completed the first Japanese glass pH electrode meter in 1950. Since it is the origin of HORIBA, water analysis is the foundation of HORIBA.

In the 1960s, the desktop pH meter was evolved into a compact design. In the 1970s, the composite electrode was developed by integrating with a glass electrode, a reference electrode and a temperature compensation electrode. In the 1980s and 1990s, we developed card-type, handy-type, and stick-type products in response to different use requirements, and extended into on-line analysis. In the 2000s, the product lineup has been expanded, and our pH products have continually evolved in all aspects of accuracy, quality, and design. In addition to using electrochemistry and conductivity for water analysis, we have developed our spectroscopy technology for liquid applications, and extended water measurements on-line. We now provide a wide range of water quality analysis equipment related to environmental regulations and industrial processes on top of those for research and development.

There are various needs for water quality analysis related to environmental regulations. For example, with the tightening of exhaust gas environmental regulations on ships (Sulfur oxide SO_x emissions in general sea areas are now 0.5% or lower), however demands for water quality monitors of exhaust gas purification equipment are increasing. Sulfur oxide in exhaust gas emissions, generated from the ship internal combustion engines, has been suppressed by sprinkling scrubber water on the exhaust gas. However, this scrubber water is itself required to be treated before it is discharged outboard of ships. Our product (EG-100) is indispensable for measuring water quality at the time of water coming into the

scrubber system and after water treatment, since water can only be discharged to the outboard of the ships if it meets the regulation values set by the International Maritime Organization (IMO).

Meanwhile, in many developed countries, there is a need for improved convenience for water use so that people can realize a high standardization of water infrastructure facilities, everyday new efforts and new facilities are created to improve efficiency and protect water quality. The supply of water is not always balanced against the demand of water use in many countries of the world, and even at this moment increased water purification and water treatment facilities, systems and measurement are needed. In addition, it is expected that more countries will step up their efforts to recycle natural and industrial wastewater, and increase activities to reduce environmental impact. In some regions like North America, the reuse of wastewater and desalination will be more prevalent in certain areas like the western and southern regions where water shortages are becoming more serious. In Latin America, it is expected that more countries such as Brazil and Argentina will promote privatization of water treatment facilities which will bring it's own challenges. Moreover, in Southeast Asian countries including China and India, regulations are becoming strengthened to reduce the environmental impact as these countries advance their capabilities. There is a demand for efficient and reliable treatment, and quantitative measurements in various water treatment processes such as drinking water, sewage and industrial wastewater. We recognize the importance of our role to take a responsibility to provide reliable measurement data for water quality attributes as these global needs grow.

With respect to the realization of a sustainable society, in relation to sustainable development goals (SDG's) set by the United Nations, HORIBA also contributes to solve many social issues by using our own technologies, products and applications to address the SDG guidelines.

In addition to the issues related to “water” that have been described so far, important social issues “related to water”, such as microplastics, are now being focused on by HORIBA today. There is a concern that microplastics will not only affect the organisms living in the hydrosphere, but also the safety of our drinking water and bottled beverages. This was also taken up as an important social issue at last year's G20. To address these issues, the HORIBA Group also contributes to expert research and problem solving, centered on our Raman spectroscopy systems, which is one of HORIBA Jobin Yvon's main product areas. It is true that plastics are essential for commercial use and our daily lives, however their disposal and removal from our ecosystem must be controlled. In order to realize a sustainable society, the HORIBA Group is dedicated to provide unique analysis and measurement solutions not only for “water” but also for “solids”, such as plastics.

HORIBA believes that “protecting water quality around the world” is our mission as a water measurement professional company. We are determined to continue to be a company that will contribute to global environmental protection and industrial development around the world, in spite of the challenges we all face this year in our family and work lives due to the spread of coronavirus.