





High-Tech in the service of quality and safety



Throughout the world the demands placed by consumers on the quality and safety of products are continually increasing. In order to meet these demands, instruments and methods are necessary that allow to detect even the smallest traces of substances.

Metrohm is a worldwide leading manufacturer of precision instruments for chemical analysis. In the field of electrochemical ion analysis we have been the unchallenged world number one for many years. But we offer much more than just instruments. In our laboratories we develop tailor-made applications that help our customers to safeguard the quality of their products, to comply with regulations and to optimize processes.

Well-known companies from all industrial sectors prefer our instruments and can rely worldwide on local after-sales service and support. Our customers come from the chemical, petrochemical and pharmaceutical industries, as well as from the automotive and food sectors. The metal and electronics industries, water and environmental analysis and also research and training are further fields in which our analytical instruments provide highly accurate results.

Metrohm Applikon and Metrohm Autolab are part of the Metrohm Group. Metrohm Applikon manufactures instruments for online process analysis; Metrohm Autolab produces instruments for electrochemical research applications.

 **Metrohm**

 **Metrohm**
Applikon

 **Metrohm**
Autolab

mission

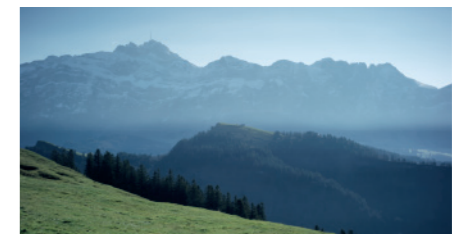
Independence is the key to free decision-making



The history of our company starts in 1943. That was when the engineer Bertold Suhner started constructing technical apparatus in Herisau, Switzerland. Bertold Suhner was a brilliant inventor. Among other things he constructed radios, oscilloscopes and teraohmmeters, i.e. instruments with which extremely high electrical resistances can be measured.

Bertold Suhner's philosophy still guides us today. Independence plays the central role in this philosophy. We have always grown from our own strength and have never surrendered our independence to banks or the stock market. This gives us the freedom to make long-term plans and decisions – in the interest of our customers, our employees and our region.

We have been just as logical in developing and manufacturing our products all by ourselves. The know-how and the technology required to do this are quite substantial. But it's well worth it. We are regarded as one of the most innovative companies in our branch. Our customers can rely on the high quality of our products. And our employees benefit from attractive and long-term secure employment.



In order to ensure our company's future autonomy, Metrohm AG has been 100 percent owned by the Metrohm foundation since 1982. Part of the profits are used for promoting social, cultural and educational projects in our own canton, Appenzell Ausserrhoden and, in exceptional cases, also in neighboring cantons.

Ideas grow where the climate is right



Whoever comes to us, stays with us: A survey conducted in 2013 by ValueQuest among our employees revealed results for job satisfaction and motivation clearly above average levels achieved by comparable corporations.

A company is only as good as its employees. Anyone who understands this will do his utmost to ensure his employees' well-being.

At Metrohm the conditions are optimal for this. Flat hierarchies and short distances encourage an open atmosphere. We place our confidence in the highly motivated people, who work for us and offer them numerous, even international opportunities for development. Our modern, flexible working conditions take the requirements of young families into account.

10 percent of our staff are apprentices; many of them stay on with us after training, or return to us with several years of professional experience or after completing their higher education with an academic degree. We try to ensure a balanced age structure and we know the proper value of the skills and experience of our older employees.

employees

The complete spectrum of electrochemical analysis – and more



Metrohm is the only company in the world that combines titration, ion chromatography and polarography, the three most important ion analytical methods. Also unique: For each of those methods, Metrohm offers instruments for laboratory as well as online and atline applications.

Metrohm instruments make work easier wherever electrochemical analyses are involved. Complicated analyses can be carried out quickly with maximum precision thanks to our instruments, and can also be fully automated if necessary. Modular design enables straightforward configuration of customized systems. Our portfolio at a glance:

- pH meters, ion meters, conductometers
- Potentiometric, thermometric and Karl Fischer titration
- Dosing of liquids – liquid handling
- Polarography, voltammetry and CVS
- Ion chromatography
- Stability measurement of fats, oils and biofuels
- Process analysis
- Capillary electrophoresis
- Near-infrared spectroscopy
- Raman spectroscopy
- Automation in titration, voltammetry, ion chromatography and process control
- TOC analyzers
- Laboratory software
- Electrochemical sensors
- Separation columns for ion chromatography
- Accessories

The future is what you make of it



«The superior usability of our laboratory software is due to the fact that our chemists took part in the design right from the start. We couldn't have developed a comparable product with an external service provider.»

Dieter Strohm
CTO Metrohm Group

We develop all our instruments, software, and accessories ourselves. This is because we are convinced that only if we keep our know-how inhouse will we be capable to produce innovations in the future and retain our competitive edge.

A couple of figures illustrate the high priority that we give to the development of new instruments and applications. One third of the about 400 employees at our headquarters in Herisau work in R&D. And our development department runs up to 40 projects in parallel.

The knowledge used here is complex. Alongside chemists, highly qualified electronics engineers, software developers, and designers work together in close collaboration on our project teams. Some people say that Metrohm consists of 300 PhDs. Actually, this is exaggerated – at least by a little.

research & development

We set standards



If there is a single secret behind Metrohm's success then it is our ability to produce pioneering innovations. Our name stands for technical solutions that are often more than one step ahead of those of our competitors.

We have always been known for innovations that make a difference in the laboratories of our customers. One example from titration is the 855 Robotic Titrosampler. At the time when it was introduced, it was the first instrument integrating a titrator and an autosampler in a single, space saving unit. Metrohm Inline Sample Preparation (MISP) is another good example. Integrating automated sample preparation into our ion chromatographs saves time and costs while increasing reliability of the results produced.

The list of our innovations can easily be continued. Here are the most important in chronological sequence:

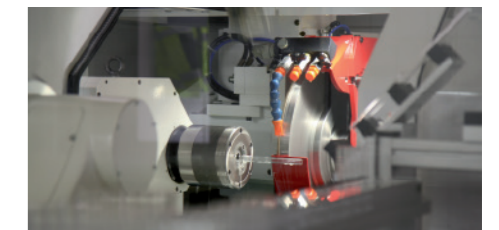
- 1949 First recording pH meter
- 1950 First combined pH electrode
- 1955 First piston buret
- 1962 First automatic polarograph
- 1968 First digital titrator
- 1973 First electronic Dosimat
- 1977 First 16-bit microprocessor titrator
- 1981 First 16-bit microprocessor polarograph
- 1989 First microprocessor compact titrator
- 1992 First Dosino
- 1995 First Compact IC
- 2004 Launch of **tiamo**[™], the world's number one titration software
- 2005 First sample changer with integrated titrator
- 2006 First intelligent pH sensors («ITrodes»)
- 2007 First intelligent ion chromatograph with integrated Inline Sample Preparation
- 2012 First fully integrated glass sensor for photometric titrations (Optrode)



«In 1985 we ventured into completely new territory with our first ion chromatograph. Meanwhile we are setting the standards in ion chromatography too. Since 1995 we have been the only company offering a chemical suppressor with a 10-year warranty.»

*Dr. Markus Läubli
Manager Marketing Support IC*

Outsourcing? For us only the second-best solution



Since our foundation more than 70 years ago, we have been manufacturing exclusively at our headquarters in Herisau. In times in which whole industries are shifting production to supposedly cheaper locations abroad, we are still producing here with a unique manufacturing depth: We turn and mill all the components for our instruments ourselves. We manufacture our own printed circuit boards for the control electronics, the columns for our ion chromatographs, and the glass membranes for our electrodes. We even have our own state-of-the-art printing facility where the technical documentation for our instruments is printed. Of course, the entire assembly operation is also located in Herisau.

How can we afford to do this and why do we do it? As a matter of course, we take advantage of automation and optimal process design. However, other criteria are decisive. Product quality is paramount, and keeping production here in Herisau allows us to control it right down to the most tiny little bolt. Add to this the fact that we are largely independent of suppliers. And finally the lead in knowledge that we have over our competitors in many fields – and naturally want to retain.

Many years of experience lie behind the grinding technique used in the production of diaphragms for our glass electrodes. The result: Measurements whose precision is unique throughout the world.

1600 applications for every need



Metrohm instruments and applications can be found in almost every industry. In the electronics industry, for instance, our CVS systems are used for the monitoring of copper bath constituents that largely determine the quality of the plating process in PCB production. Another example is environmental analysis. In this field, one of the major issues is to ensure drinking water quality. With our instruments it is possible to determine, for example, contents of toxic heavy metals down to the lower ppt level. Dimensions become clearer if one considers that one ppt is the equivalent of a little cube of sugar dissolved in a reservoir containing 2.7 billion liters of water.

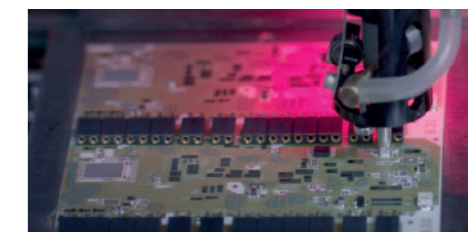
From decades of experience, we have gained the expertise to provide an application for virtually any analytical problem. We regularly make this expertise available to our customers and to the scientific community via databases, in monographs, papers, and in application bulletins. We are also a respected partner for the elaboration of international testing regulations and are always pleased to give our advice.

- Automobile manufacture
- Coatings and electroplating industry
- Biochemistry and biology
- Biofuels
- Building materials
- Fertilizers, minerals and explosives
- Energy and power plants
- Paints, lacquers and solvents
- Photography and the optical industries
- Semiconductor and electronics industries
- Plastics
- Metal production and processing
- Food and beverages
- Organic chemistry
- Paper and cellulose
- Petrochemistry
- Pharmaceutical industry
- Trace analysis
- Textiles, leather and ceramics
- Toxicology
- Environmental analysis
- Water
- Detergents and cosmetics



The pharmaceutical industry is subject to particularly rigorous regulations. Metrohm instruments are designed to help customers meet even the toughest hygiene and quality standards.

We don't make the cheaper instruments but the better ones



In a competition driven solely by price, quality will inevitably suffer. Therefore, we don't even get involved in this type of competition. However, our products and services are the first choice for all those, who demand uncompromising quality at a reasonable price.

It starts with the fact that we have not outsourced our production, but keep it at our headquarters in Herisau. On top of this comes our manufacturing depth. Our customers can rely on the fact that virtually 100 percent of the components of a Metrohm instrument have been developed and manufactured in Herisau.

Ultimately, it is our employees who make the crucial difference. Responsibility for quality is not delegated at Metrohm, but is regarded the personal responsibility of each individual throughout each production step. This culture of care and self-responsibility pays for itself. An ever increasing number of customers rely on Swiss quality from Herisau and many have been loyal to our brand for decades.

Miniaturizing electronic circuits is a particular strength of ours. We have our own cleanrooms where we produce such circuits using thick-film hybrid technology.

quality

Our most valuable asset is the confidence of our customers

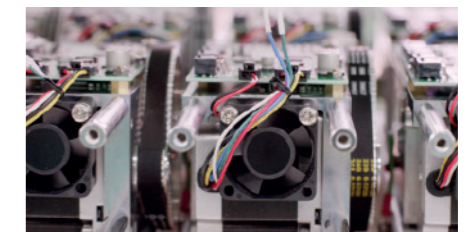


We offer our customers the best in service. Actually, this goes without saying, because we only market our equipment directly, and we therefore know every customer personally.

We guarantee fast, professional maintenance and repair service through our Support Centers and Sales Agencies. Our decentralized warehouses ensure that spare parts are available worldwide within the shortest possible time. We also guarantee that all parts will continue to be available for at least ten years after the instrument itself is taken from the market.

For many years now our whole service documentation has been digitally available via the Internet to our field service technicians on site – and also in the customers' labs.

Practical know-how of our instruments and applications is passed on at the Metrohm Academy in Herisau and in our own training centers that we maintain throughout the world. We are always ready to listen to the questions and wishes of our customers and use our application know-how to help them meet their particular analytical challenges at any time. Calibration of instruments as well as validation and certification of applications complete our service portfolio.



Long-term spare parts availability without any ifs and buts: If we learn that a supplier is about to stop production of a component we use, then we immediately order our whole requirements for a service period of ten years and store these components in our own high-bay warehouse in Herisau.

Quality from Metrohm is in demand – worldwide



We do not just attempt to be as independent as possible in the development and production of our instruments – we also keep sales and distribution in our own hands. Metrohm is exclusively represented in more than 80 countries, in more than 40 of which we have our own subsidiaries. This guarantees a close network for sales and service. A total of 1900 employees are working for us outside Switzerland and achieve more than 90 percent of our turnover there.

«When in Rome, do as the Romans do.» Good advice, particularly in sales. We follow the consequences of this proverb with our own particular logic – and use local employees in our subsidiaries right from the start. They know their markets and are perfectly familiar with the culture of their country.

