



EXPERTS IN ANALYSIS



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Experts in Analysis

ECH Elektrochemie Halle GmbH is a developing and manufacturing company. Besides standard products, we develop individual solutions in the field of analysis for our customers.

"Experts in analysis" is not only our company's slogan, but also the foundation of maximum quality in research area and the principle of our products assembling at an excellent level.

The main focuses of our company are:

- Assembling and marketing the scientific devices for laboratory analysis, factory process control and on-site mobile analysis
- Developing and working out individual analytical methods
- Developing and manufacturing customized hardware and software modules as original equipment manufacturer (OEM)
- Developing new analytical measuring methods and application of measuring devices for controlling complex and technical industrial facilities
- Services relating to analysis

Solving customers' issues is our daily job.



In 2006, we received the IQ Innovation Award of Central Germany in the cluster Energy/Environment for our achievements in online determination of H₂S in industrial and municipal waste water.

Our gas-in-oil analyzer OnlineDGA for online monitoring of oil-filled power transformers was awarded with the IQ Innovation Award in 2010. In addition, we were honored with the Grand Prize of the Medium-Sized Business by the Oskar Patzelt Foundation for our successful business development.

Our quality management is certified to the ISO 9001.



Innovation and Experience

ECH Elektrochemie Halle GmbH is an independent enterprise founded in 1992. Our head office is located in the technology park “weinberg campus” in Halle (Saale). We are a medium-sized, owner-managed company.

Every staff member is part of our success. They shape the company and each product with their knowledge and individuality. We are available for our customers at all times and are working jointly on solutions for analytical tasks.



- Managing director Dr. Michael Hahn with over 30 years of experience in the field of analysis
- Worldwide distribution and sale of our products
- In-house departments for research, development, programming, production and service
- Highly qualified, motivated employees and a flat hierarchy within the company
- Cooperation partner for universities and research institutes, polytechnics as well as industries
- Apprenticing company



Benefit from our experience and expertise.

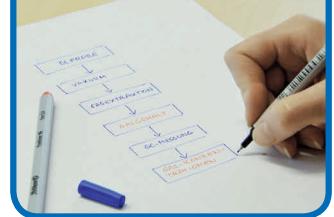


Our company offers training courses regarding analytical procedures and our equipment handling - if requested in your company or at your on-site monitoring station.

Practical-Oriented and Individual

We develop and produce standard analytical instruments as well as individual measurement methods for your analytical issues. We will be at your side developing the optimal solutions that meet your designated requirements.

- Detailed and professional advice on your analytical tasks
- New, customer-specific analysis methods and suitable measurement techniques according to your development orders
- Realization of analytical methods into modern measuring technologies
- Manufacturing prototypes and serial production
- Developing and programming customized software
- Production under continuous quality control according to DIN ISO 9001
- Adaptation and further development of analytical methods
- Order-based research on analytical issues
- Professional business partner for research institutes
- Analysis of your samples



We solve your analytical issues.

Good for You and the Environment

The environmental friendliness of our devices results from their low chemical consumption and long-life cycle. You can rely on accurate, precise and repeatable measurement results combined with an easy-to-use operation.

- Modular principle - a combination of device components as required
- Robust construction
- Long-lasting instruments
- Field application
- Closed systems - no spills of dangerous substances
- Low chemical consumption
- Remote access for controlling and maintenance on request, including alarm systems
- On-site emergency service on demand
- Worldwide service – cost-saving maintenance contracts
- Spare part service for minimum 10 years



Reliable and Satisfying Measuring Devices

In the process of developing new analytical methods and instruments, we set high value on practicality and user-friendly handling. Our instruments are rugged, long-lasting and ready to operate even under difficult climate conditions. With their modular design, they can be adapted to various tasks.



AQUA 40.00
POCKET-TITRATOR
H₂S-ANALYSATOR
MOBIL-GC
GASEXTRAKTOR
TOGA-GC
SN-LAYER
ONLINE-NH₃
ONLINE-H₂S
S-ONLINE
BIOLUMINO
GLOVE-BOX
PHYTOLABELBOX

- Water determination in solids, paste-like materials, liquids and gases
- Water determination and other coulometric titrations
- Fast/rapid analysis of hydrogen sulfide in liquids and gases
- Portable gas chromatograph with internal gas supply
- Automated vacuum degassing unit for extracting gas from liquids
- Fully automated and contamination-free dissolved gas-in-oil analysis
- Analyzer for measuring of tin layer on wires
- Online measurement of ammonia in gases
- Device for online H₂S-control in gases
- Online determination of sulfides directly in water samples
- Toxicity test based on the bioluminescence of algae
- Weighing, metering and measuring by the exclusion of air
- Plant incubation box including a device for measuring and controlling the composition of air inside

You can rely on our products.



The Suitable Device for each Sample

As our instruments for laboratory analysis are closed systems, working under hoods is not required. A low chemical consumption leads to cost savings in their application. Due to the modular principle of our devices, they can be individually adapted to your sample matrix.

Special solutions are also technically feasible, such as individual heating modules, contamination-free sampling, variable dosage and expert systems. Measurement reports can be individually modified according to your requirements. Furthermore, our instruments can be embedded in your quality management system; they meet the requirements of GLP and FDA.

Our experts in the laboratory:

- **AQUA 40.00** – Water determination in solids, paste-like materials, liquids and gases, e. g., in chemical industry, pharmaceutical industry, petroleum industry and refinery
- **H₂S-ANALYSATOR** – H₂S-Analysis in gases and liquids, e. g., in waste water laboratories, process monitoring, pharmaceutical industry and petroleum industry
- **POCKET-TITRATOR** – The versatile coulometer for easiest determination of water content in traces, bromine index and iodine number, e. g., for supervision of solvents, solid extracts and refinery products
- **BIOLUMINO** – Toxicity test for plants, microalgae, environmental analysis, chemicals testing and agricultural applications

Keep an Eye on Processes

Continuous monitoring of process cycles is essential in various industries in order to guarantee high quality standard.

Our measuring devices produce quick results through short analysis time. This allows real-time monitoring and adjustment in the production process.

After completing a short training, our instruments can also be used by operating plant staff.

Expertise in the operating analysis:

- **H2S-ANALYSATOR** – H₂S-analysis in liquids and gases, suitable for waste water pipes and sewage control
- **TOGA-GC** – Dissolved gas analysis for supervision of power transformers, tap-changers and switch gears
- **Sn-LAYER** – Determination of tin layer thickness of copper wires, e. g. at conductor board manufactures, wire and cable as well as solar modules manufactures, supervision of galvanic wire plating lines
- **AQUA 40.00** – Determination of water content in gases, e. g. natural gas, and oils, e. g. mineral oil, transformer oil or crude oil



Our measurement technique will assist you in quality assurance and cost-efficient production.



On-Site Competence

Our compact and portable instruments facilitate your measurements even at difficult sampling points. The evaluation of data points takes place automatically. The results can be saved as different data files and exported subsequently into your measuring stations.

Our specialists for on-site monitoring:



- **AQUA 40.00** with gas sampling module – Water determination of pressurized gas, natural gas fields and gas processing, e. g., for controlling natural gas filling stations
- **MOBIL-GC** – Analysis of gaseous samples (for example, biogas) and emission control of technical plants
- **ONLINE-NH3/H2S** – Continuous measurement of ammonia and hydrogen sulfide in gases, e. g., for air monitoring in animal husbandry
- **Submersible Device** – Analysis of organic contaminations in water, for example, determination of polycyclical aromatic hydrocarbons in surface water, e. g., ocean, river and dam

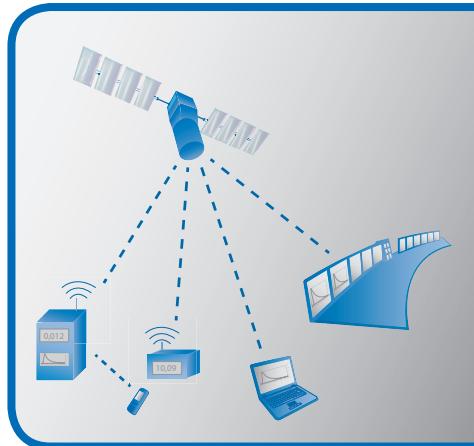
Measuring 24/7

When sample points or manual samplings are facing difficulty in access, at great risks, taking exceeding time or effort, remote control will facilitate your monitoring. We can initiate measuring methods, automatic sampling, maintenance, data evaluation and calibration through an online access.

An on-board alert system is activated in the event of exceeded threshold values or deviant gradients. Then, our device will transmit various output signals to switch external modules which control pumps, valves, etc.

Independent through remote control:

- **ONLINE-DGA** – Online dissolved gas-in-oil-analysis of oil filled transformers in power stations
- **ONLINE-NH₃** – Determination of ammonia in aqueous samples from agriculture, in biogas plants, digesters, and sewage plants
- **ONLINE-H₂S** – Monitoring of H₂S in sewage treatment plants, waste water channels, pressure pipe lines and pump sumps combined with waste water treatment for reducing odor and corrosion



Operation through manual or remote control
as you request.



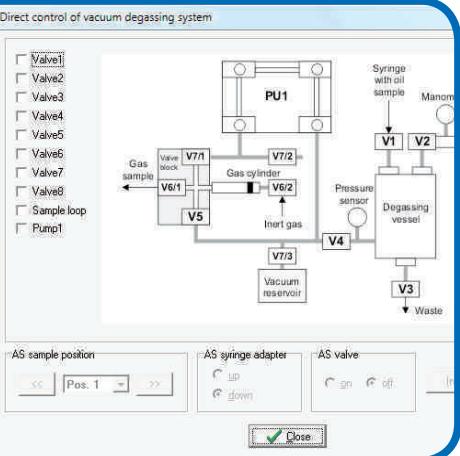
Simply Comfortable

Our user software features high operating convenience, appealing visualization of the measurements, simple data export, secure data storage and a variety of languages.

Modifications that meet your requirements will be quickly and reliably realized by our software engineers.

Advantages of our user software:

- Fully-automated measurements according to your specifications
- Conversion of measuring data to intelligent, self-learning control procedures
- Alert system installation for process monitoring and device controlling in combination with data transfer in your process control system
- Location-independent, global monitoring and control of industrial processes





Reputable Companies Trust our Instruments

ECH-made instruments are used by customers in every different sector from all over the world.

Our devices are used by following companies, such as ABB, Alstom, AREVA, BASF, Bayer, BMW, DOW, Deutsche Bahn, DuPont, E.ON, Glaxo, KNPC, RWE, Shell, SKW, TNB, VATTENFALL, VW, ZF Sachs.

We are on a worldwide mission in order to take care of your analytical issues. Benefit from our expertise and years of experience in the field of analytics.

How can we assist you?



www.ECH.de

We are here for you!

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