

INDUSTRIAL



LAB



PRECISION, FLEXIBILITY AND SPEED

YOUR ACCREDITED TESTING LABORATORIES
IN THE INDUSTRIAL LAB NETWORK

www.industrial-lab.de





Your accredited and analytical competence center:

INDUSTRIAL LAB

At **INDUSTRIAL LAB**, we stand for analytical excellence and customer-oriented solutions. Our experienced team of experts looks forward to opening the door to a world where every analysis is tailored to your needs.

We combine our accredited procedures and modern technologies to create tailor-made services that take on all challenges and leave no questions unanswered. Whether in materials testing, environmental analysis or microbiology - we set the necessary standards to successfully support your projects.

Discover with us how we meet analytical challenges in partnership and with our “everything is possible” approach.

Our departments

- ✓ Surfaces & coatings
- ✓ Materials
- ✓ Environmental & disposal
- ✓ Microbiology & hygiene
- ✓ Sampling & sample preparation
- ✓ Service and consulting

Customer-oriented

Our value proposition for you

One Laboratory Network – Many Solutions

In today's fast-paced and complicated world, we help you maintain an analytical overview. As your reliable partner, we assist with routine tests – which can also involve complex correlations if needed – structure your entire analytical requirements individually upon request, or take over your internal laboratory tasks after a thorough examination if time demands it.

This allows you to focus on your core competencies without compromising quality, often with significant cost savings.



Routine Testing

Take advantage of our routine for fast and precise laboratory analyses based on our many years of experience.

This includes, among others, the following areas:

- ✓ DepV, EBV
- ✓ Drinking water
- ✓ 42nd BlmschV
- ✓ Corrosion & climate testing
- ✓ Coating thickness
- ✓ Microstructure, grain sizes
- ✓ Steel, Alloys
- ✓ Contaminants like Asbestos



ROUTINE TESTING



CUSTOMIZED ANALYTICS



ON-SITE LABORATORY

Customized Analytics

You Have a Problem, We Have The Possible Solution

We offer you a customized analysis concept and professional consulting specifically tailored to your comprehensive analytical needs. This includes

- ✓ On-site process recording,
- ✓ Development of customer-specific analytical strategies,
- ✓ If necessary, process optimization & upon request,
- ✓ Extended result documentation & expert reports.

Or we support you with time-limited individual projects, for example, in the R&D sector with "competence on demand."



**Processes can thus be optimized,
costs saved, and time gained!**

On-Site Laboratory

Know-How On-Site

Not every company finds it worthwhile to set up its own laboratory for research or process-accompanying analytics. Operating an in-house laboratory incurs many costs that might not be offset by the sale of its own products.

Therefore, we offer you the possibility of becoming part of your production process. In this case, we perform the analysis services at your location and integrate into your operational process.

Your customer benefit is an independent, accredited laboratory service, cost flexibility, risk transfer and security guarantee, as well as know-how retention on-site.

A thorough feasibility study in advance provides an overview of possible implementation.

Services

Where can we support you with our services?

Administration buildings / common areas

- Indoor air quality testing
- Hygiene inspection of air conditioning systems
- Drinking water dispensers
- Tests in accordance with the Drinking Water Ordinance (Trinkwasservorschrift), e.g., lead

Automated analysis for control

- On-site analysis
- Real-time quality control
- Continuous process control

Structural diagnostics

- Chloride in concrete
- Sulfate and pH analysis
- Pore structure analysis via microscopy

Incoming goods inspection

- Material testing
- Examination of input materials
- Control of supplier analyses

Deconstruction & restoration

- Hazardous materials
- Asbestos / man-made fibres
- Heavy metals
- PAH analysis

Construction projects

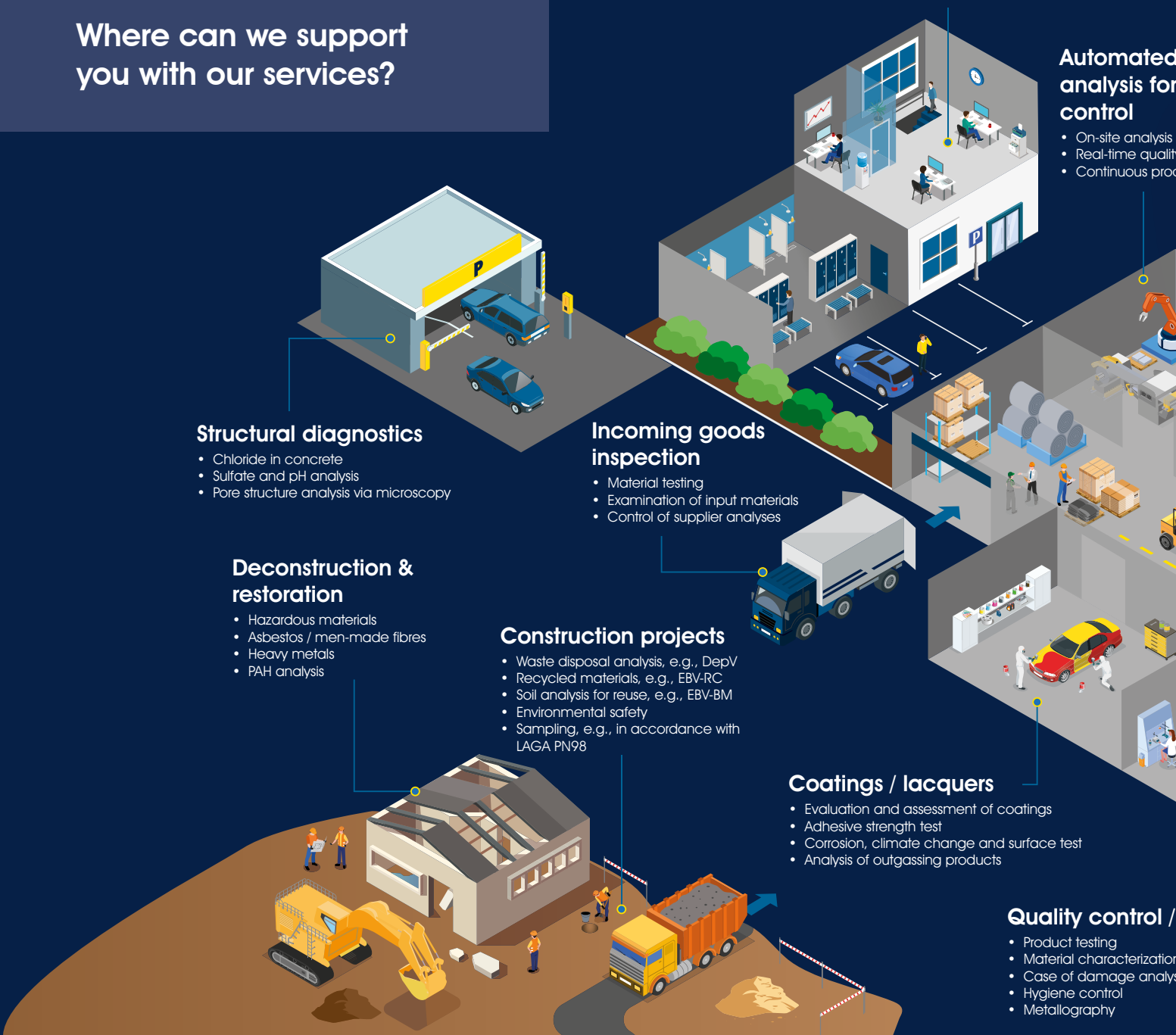
- Waste disposal analysis, e.g., DepV
- Recycled materials, e.g., EBV-RC
- Soil analysis for reuse, e.g., EBV-BM
- Environmental safety
- Sampling, e.g., in accordance with LAGA PN98

Coatings / lacquers

- Evaluation and assessment of coatings
- Adhesive strength test
- Corrosion, climate change and surface test
- Analysis of outgassing products

Quality control /

- Product testing
- Material characterization
- Case of damage analysis
- Hygiene control
- Metallography



systems
water
Legionella

Waste water & process water

- Microbiological examination
- Chemical analysis
- Self-monitoring of discharge permits

Real-time production

Control
process monitoring

Incoming goods inspection

- (Ferrous) alloys
- Superalloys
- Additives
- Coal, coke
- Scrap, steel
- Refractory raw materials
- Slag
- Ores
- Ceramic / oxide materials

Sampling

- Bulk carriers
- Container ships
- Big Bags, barrels
- Dump trucks
- Inlet flow
- Conducted in accordance with current standards: ISO 4552-1 and ISO 4552-2

Production

- Analysis of electroplating baths
- Evaluation and assessment of coatings
- Adhesion tests
- Corrosion, climate change and surface test
- Determination of dezincification resistance
- Evaluation of stress corrosion cracking
- Alloy analysis
- Steel and material analysis
- Workplace measurement (e.g., dust particles)

Process waste

- Waste disposal analysis
- Hazard classification

Cooling towers / cooling devices / wet separators

- Analysis according to 42nd BImSchV

R&D

- Accompanying analytics
- Support for analytical problem solving
- Knowledge transfer
- Process consulting

Facades & attachments

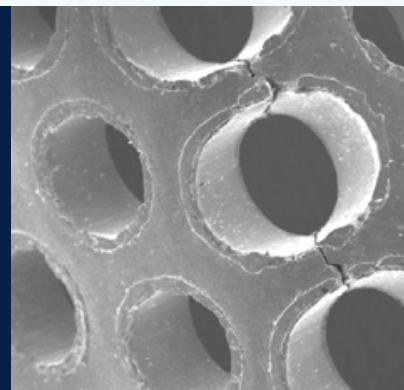
- Fillform corrosion of steel and aluminum components
- Weathering resistance
- Long-term durability testing
- Corrosive gas tests

Outgoing goods inspection

- Analysis according to specified requirements
- Factory test report
- Substance evaluation according to CLP and REACH
- Product data sheet, certificate

Analytics

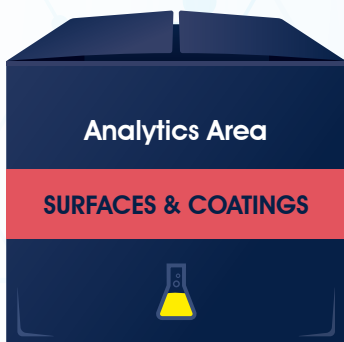
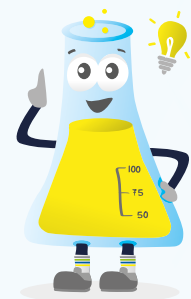
Accredited Laboratory Services



Getting to the bottom of a sample's composition

Analysis is the heart of our laboratories. With enthusiasm and passion, we examine samples for their properties, and we get to the root of any issues. We tackle every task – whether it's a routine test or an analysis tailored to the customer's specific needs.

Our team years of experience and is happy to assist you in the areas of **Surfaces & Coatings, Materials & Substances, Environment & Disposal**, as well as **Microbiology & Hygiene**.



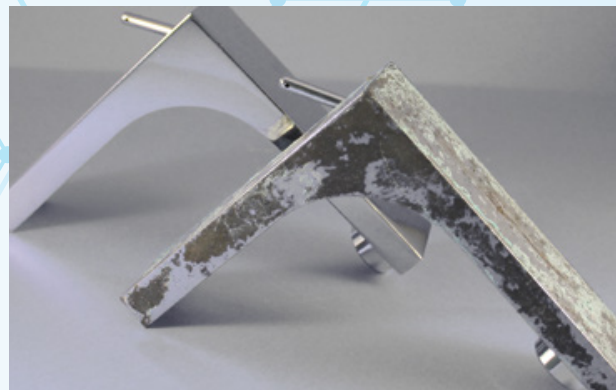
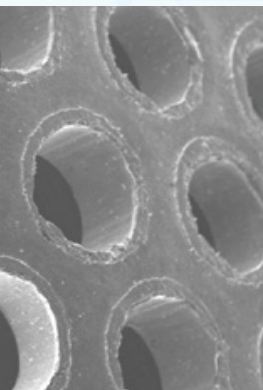
Surface & Coating Analysis is important in the **automotive** or **sanitary sector**, as it is not just about appearance, but also about protection against corrosion, for example. The analysis of process baths also plays an important role here.

Coated components

- ✓ Metallography
- ✓ Surface testing
- ✓ Salt spray & alternating corrosion tests
- ✓ Climate & alternating climate tests

Process baths

- ✓ Analysis of electroplating & process baths



Materials & Metallurgical Analysis is a fundamental cornerstone of our laboratories. Our diverse range of methods allows for **comprehensive material characterization** of chemical elements, mineral phases/compounds, or surface and microstructure analysis.

Oxides and minerals

- ✓ Refractory materials / raw materials
- ✓ Slags
- ✓ Ores and rocks

Alloys and additives

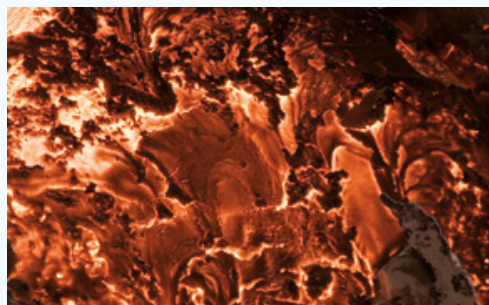
- ✓ Ferroalloys
- ✓ Lime
- ✓ Fluorspar
- ✓ Carbides

Metals

- ✓ Steels
- ✓ Non-ferrous metals
- ✓ Scrap

Other materials

- ✓ Fuels
- ✓ Batteries
- ✓ Insulation material & composite analysis
- ✓ Chloride analysis in concrete



Analytics

Accredited Laboratory Services



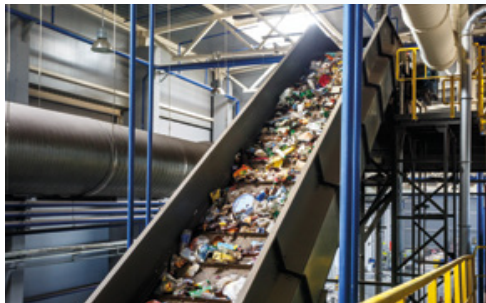
Solving problems and answering different questions with regard to our scarce and important resources such as **water** and **soil** are essential. Ultimately, they not only serve to **protect** the environment, but also **people**.

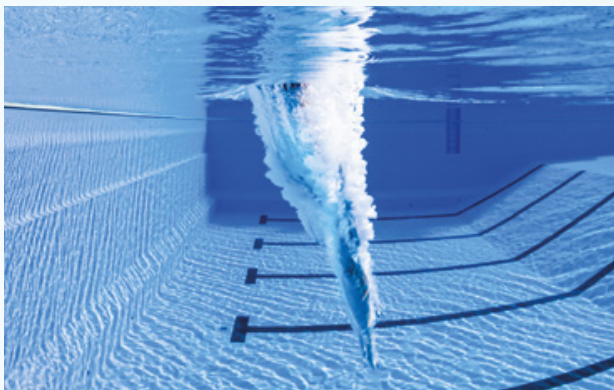
Solid

- ✓ Waste investigation
- ✓ Recycling material
- ✓ Soil
- ✓ Building pollutants

Water

- ✓ Drinking water, raw water & livestock water
- ✓ Cooling water & wet scrubbers
- ✓ Waste water





As a **Microbiological Laboratory** and **Drinking Water Testing Center** for **microbiological** and **chemical tests**, we can offer our customers a wide range of tests thanks to our modern laboratory equipment and our qualified staff.

Microbiological analyses

- ✓ Cooling water & wet scrubbers
- ✓ Drinking water, raw water & livestock water
- ✓ Swimming pool water, small swimming ponds, bathings water, water playgrounds

Hygiene controls

- ✓ Sterilization controls
- ✓ Dosing systems
- ✓ Bedpan
- ✓ Dishwasher
- ✓ Washing machines
- ✓ Water meter
- ✓ Examination of dental units



Service

Trust is Good – Control is Better

Specialist advice: Your benefit from our laboratory experts

In addition to analysis, our focus is on **consulting** and **service**. We go beyond the standard range and also offer you support for more complex tasks.

Our service includes everything from **accredited sampling** and **detailed mechanical sample preparation** to **in-process consulting**, a detailed **final discussion of results** and targeted **training measures**.

Do you have further, individual requirements? Then please do not hesitate to contact us.
(E-mail: anfrage@industrial-lab.de or contact details on the reverse)

Sampling

Not only analysis by an **independent laboratory** is important for numerous companies, authorities and waste disposal companies, but also **qualified** and **accredited sampling**. In order to guarantee this, we offer you the services of a **specially trained team** in addition to the analysis, which is ready to take samples directly on your premises.

Sampling also includes **workplace measurements** to protect employees.

Our services at a glance

- ✓ Sampling of waste and solids (according to LAGA PN98)
- ✓ Sampling of refractory material
- ✓ Sampling of alloys
- ✓ Sampling according to TrinkwV
- ✓ Sampling according to 42nd BImSchV
- ✓ Workplace measurement
- ✓ Evaluation of hazardous substances in the workplace

Horn & Co. Analytics GmbH and Trittech Oberflächen-technik GmbH are accredited according to DIN EN ISO/IEC 17025 (2018). All certificates and approvals can be found at:
www.industrial-lab.de/certificates



Mechanical sample preparation

Shredding, sieving? No problem!

Our versatile crushing plant with downstream screening unit (up to 4 fractions in one run) enables us to crush a wide variety of materials and produce different grain fractions precisely and efficiently. With customized solutions, we bring the customer's material into the desired fractions.



Technical data

- ✓ Maximum material feed 300 mm (edge length)
- ✓ Screen area: 1,0 m x 1,60 m per screen
- ✓ Sieves: 2 mm, 8 mm, 11 mm, 16 mm, 22 mm, 35 mm, 45 mm, 60 mm (other screen sizes available on request)
- ✓ Feed quantities: Kilogram range up to several tons

Material examples

- ✓ Alloys
- ✓ Ores
- ✓ Refractory materials
- ✓ Recycling materials (RCL-material)



Further Services – Your problem, our solution

Although common **routine tests** such as **steel, slag, environmental** or **microbiological analysis** are very important to us, we also offer analysis and solutions tailored to **specific customer problems**.

Thanks to modern analytical equipment and the high level of expertise of our laboratory staff, we have a solution for many problems.

Talk to us!

We find a solution

- ✓ Optical emission spectrometry with inductively coupled plasma (ICP-OES)
- ✓ Ion chromatography (IC)
- ✓ Gas chromatography with mass spectrometry coupling (GC-MS)
- ✓ Scanning electron microscopy (SEM) with energy dispersive X-ray analysis (EDX)
- ✓ X-ray diffraction (XRD)
- ✓ X-ray fluorescence analysis (RFA)
- ✓ Spark emission spectrometry (OES)

Sustainability

For the sake of the environment

Sustainability as the core of our actions

In line with our mission statement "Strong through diversity" and our business model, we take our social responsibility in terms of sustainable business with heart and mind. As a medium-sized company rooted in the region, the diversity of the company's impact on the environment and society encompasses social as well as ecological and economic aspects.

Our specific contribution to sustainable management, which makes a decisive contribution to the company's success, is reflected in the following areas of activity.

- ✓ Fair Business practices
- ✓ Modern corporate management
- ✓ Social commitment on site
- ✓ Ecological and economic responsibility in the supply chain



Horn & Co.
Group

Strength through diversity!

The current sustainability report and further information on the topic of sustainability can be found at www.horn-co.de



Especially in the traditional raw material and energy-intensive industry, economic and ecological optimizations must and can be made. Horn & Co. has been tackling these challenges since 1922, drawing on the experience gained from its four divisions Industrial Services, Minerals Recovery, Products and Analytics.

"We are looking to the next step: making the Group's service portfolio accessible to our customers' customers!"



Contact details & locations

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Siegen, Witten and Wetzlar

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