



INFRALEUNA®



Analytics and laboratory services

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Analytics and laboratory services

The analytics and laboratory services department of InfraLeuna GmbH is a DAkkS accredited test laboratory according to DIN EN ISO/IEC 17025. Accreditation is valid for the testing procedures listed in the document.

The analytics and laboratory services department of InfraLeuna GmbH is an accredited laboratory for the analysis of drinking water by the Landesamt für Verbraucherschutz des Landes Sachsen-Anhalt (The Saxony-Anhalt State Office of Consumer protection) for physical, physicochemical, chemical and microbiological drinking water examinations.

The analytics and laboratory services department of InfraLeuna GmbH is accredited for sampling and analysis according to 42. BImSchV 2017 (Regulation on evaporation coolers and wet separation systems).

The analytics and laboratory services department of InfraLeuna GmbH is accredited according to DIN EN ISO 9001, DIN EN ISO 14001, DIN EN ISO 45001 and DIN EN ISO 50001.

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Analytics and laboratory services

1. Competence

We are your competent contact person concerning analytical problems of the water, waste water, product, and fouling analysis. Due to our immediate proximity to your plants and many years of experience in analytical monitoring of industrial plants for water treatment, waste water treatment, power and steam generation, as well as of closed cooling systems, you can benefit from many advantages.

Our range of services comprises nearly all standard methods of the water and waste water analysis, inorganic and organic trace analysis, and microbiology. Appropriate analysis methods can be chosen specifically for the solution of your problems. The results are provided to you after a short processing time. Our modern laboratory and information management system offers the possibility to prepare the analysis results in a test report or in table format and transmit them via email. On request, we can notify you immediately by email when limit values are exceeded.

Additionally, completion of complex laboratory analytical monitoring tasks for the process management of your plants, ranging from sampling to daily result transmission, is part of our range of services.

Contact persons:

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Customized solutions

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2. Main activities

Process-accompanying analysis and analytical monitoring of quality parameters:

Industrial water treatment:

- Fresh water and industrial water treatment,
- Condensate and feed water treatment,
- e.g. analytical monitoring of decarbonization, coagulation, reverse osmosis, desalination, ion exchanger;

Power generation plants and steam generators:

- Monitoring of water-steam cycles according to VGB and VdTÜV guidelines,
- Ultrapure water analysis,
- Flue gas desulphurization, FGD gypsum (according to VGB-M 701);

Cooling circuits:

- Cooling water treatment, cooling water conditioning,
- Microbiological testing in cooling circuits;
- i.e. Sampling and microbiological analysis of industrial water according to 42. BImSchV

Waste water treatment:

- Waste water declaration analysis,
- Control of waste water discharges according to official regulations,
- Supervision of biological waste water treatment plants;

Drinking water analysis, hot water systems (chemical, physicochemical, microbiological):

- Drinking water treatment, distribution networks,
- Installation of in-house water systems,
- Water pipe releases;

Ground water analysis:

- Ground water purification plant,
- Ground water gauge networks,
- Landfill leachates;

Monitoring of measuring devices by means of on-site laboratory testing and control testing with portable testing equipment;

Development of customer-specific solutions and standards for measuring devices;

Composition of foulings in industrial plants.

3. Services offered

With our qualified employees in immediate customer proximity, we guarantee a reliable, competent, and long-term secured cooperation on a technically advanced level. Due to our

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modern equipment technology we can offer you a comprehensive range of parameters for a wide variety of sample matrices.

Sampling:

- Drinking water
- Cooling water
- Waste water
- Ground water;

Element determination:

- Elemental analysis (C, S) ,
- Determination of elements with the help of atomic spectroscopy (e.g. Ca, Mg, Na, K, Ba, Sr, Pb, Cd, Cr, Cu, Ni, Zn, As, Se, Sb, Ti, V, Mn, Mo, Pt, Fe, Co, Pd, Ag, Al, Tl, Sn, P, Hg) ranging from the ultra trace range to the main components,
- Semi-quantitative overview analysis,
- Different sample pretreatment and pulping technologies;

Samples matrices:

- Water (drinking water, ground water, cooling water, deionized water, permeate, feed water, ultrapure water, steam condensate, etc.),
- Waste water
- Products (e.g. acids, salts, hydrogen peroxide, methanol, gypsum, calcium carbonate, polymers),
- Foulings
- Sludge,
- Fuels, oil and refinery products.

4. Parameters

4.1. Parameters of water and waste water analysis

pH-value	Ammonium
Electrical conductivity	Chloride
Temperature	Nitrate
Redox potential	Sulfate
Oxygen	Nitrite
Coloration	Bromate
Clouding	Sulfide
Hardness (total, carbonate)	Sulfite
Acid and base capacity	Fluoride
Permanganate index	Anionic surfactants ((MBAS)
Particle size distribution	Easily released Cyanides
Phenol index	Silicic acid
Carbon compounds (TOC, DOC, TIC)	Iron (total, dissolved, Fe II)

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Calcite saturation, carbonated species	Hydrazine
AOX (absorbable organic halogen compounds)	Total phosphorus
Nitrogen compounds (TNb)	Orthophosphate
Biochemical oxygen demand (5 days)	Free chlorine
Chemical oxygen demand Nitrification inhibition test	Lipophilic substances Filtratable solids
Depletion test	Filtrate dry residue
Biodegradability (Zahn-Wellens-test)	Settleable solids
Luminescent bacteria test (L 52)	Suspended solids

4.2. Organic parameter

BTEXC (benzene, toluene, ethyl benzene, xylene, cumene)

LHKW (lightly volatile halogenated hydrocarbons)

MTBE

Methanol

Carbonic acids (C1 – C6)

PAK (polycyclic aromatic hydrocarbon)

Ethylene glycol

GC-MS-overview analysis (qualitative screening)

Hydrocarbon index

IR-spectra measurement

HPLC analyses available on request

4.3. Microbiological tests

Pipe release

Monitoring of cooling circuits

Colony number

Escherichia coli, coli form germs

Enterococci

Pseudomonas aeruginosa

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Legionella

Yeasts, fungus

Clostridium perfringens

Bacteria and fungus in selected petroleum products

4.4. Further analysis parameters

Dry residue

Ignition loss, ignition residue

Sludge volume index

Water-soluble part

Determination out of the eluate (DIN 38414 S4)

Determination out of the aqua regia extract (DIN 38414 S7)

Microscopical analysis of activated sludge