INFRALEUNA

Analytics Department

Overview of Services and Analysis Parameters

LEUNA THE SITE FOR SUSTAINABLE CHEMISTRY

1. Analytics

Our range of services includes almost all standard methods of water and wastewater analysis, inorganic and organic trace analysis, and microbiology. Suitable analysis methods can be specifically selected to solve your problem. If limit values are violated, you will be notified immediately by email on request.

Our range of services also includes the assumption of complex laboratory analytical monitoring tasks for the process control of your systems, from sampling to the daily transmission of results.

1.1. Analytical Services

We offer you the guarantee of reliable, competent, and long-term cooperation at a high professional level near our customers.

Thanks to our modern equipment technology, we can offer you a comprehensive range of parameters for a wide variety of sample matrices:

- sampling of:
  - drinking water
  - cooling water
  - wastewater
  - groundwater

- elemental determinations:
  - elemental analysis (C, S)
  - determination of elements by 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) from ultra trace range to principal components
  - semi-quantitative overview analysis
  - various sample pretreatment and digestion techniques

- sample matrices:
  - waters (drinking water, groundwater, cooling water, demineralized water, permeate, feed water, ultrapure water, steam condensate, etc.)
  - wastewater
  - products (e.g., acids, salts, hydrogen peroxide, methanol, gypsum, lime, polymers)
  - coatings
  - sludges
  - fuels, oil, and refinery products.

We also offer in-process analysis and analytical monitoring of quality parameters:

- industrial water treatment:
  - fresh water and process water treatment
  - condensate and feed water treatment
  - e.g., analytical monitoring of decarbonization, flocculation, reverse osmosis, complete desalination, ion exchangers

- power generation plants and steam generators:
  - monitoring of water-steam cycles according to VGB and VdTÜV guidelines
  - ultrapure water analysis
  - flue gas desulfurization, FGD gypsum (according to VGB-M 701)

- cooling circuits:
  - cooling water treatment, cooling water conditioning
  - microbiological analysis in cooling circuits
  - e.g., sampling, and microbiological examination of process water according to 42. BIm-SchV

- wastewater treatment:
  - wastewater declaration analyses
  - control of wastewater discharges according to official regulations
  - monitoring of biological wastewater treatment plants

- drinking water analysis, hot water systems (chemical, physico-chemical, microbiological):
  - drinking water treatment, distribution networks
  - domestic installations
  - pipeline approvals

- groundwater analytics:
  - groundwater purification systems
  - groundwater level networks
  - landfill leachates

- verification of operational measuring instruments by laboratory measurements and on-site control measurements with mobile test equipment

- production of customized solutions and standards for operational measuring instruments

- composition of coatings in industrial plants.

1.2. Analysis Parameters

1.2.1. Parameters of Water and Wastewater Analytics

The following water and wastewater analysis parameters can be analyzed:

acid and base capacity	ammonium
anionic surfactants	AOX (adsorbable organic halogen compounds)
biochemical oxygen demand (5 days)	biodegradability (Zahn-Wellens test)
bromate	calcite saturation
carbon compounds (TOC, DOC, TIC)	chemical oxygen demand
chloride	cyanide easily releasable
electrical conductivity	feeding test
filterable solids	filtrate dry residue
fluoride	free chlorine
hardness (total, carbonate hardness)	hydrazine
iron (total, dissolved, Fe II)	lipophilic substances
luminescent bacteria test (L 52)	nitrate

nitrification inhibition test	nitrite
nitrogen compounds (TNb)	ortho-phosphate
oxygen	particle size distribution
permanganate index	pH-value
phenol index	phosphorus (total)
redox potential	settleable solids
silicic acid	solids in suspension
staining	sulfate
sulfide	sulfite
temperature	turbidity

1.2.2. Organic Parameters

The following organic parameters can be analyzed:

- BTEX (benzene, toluene, ethylbenzene, xylene, cumene)
- carboxylic acids (C1 - C6)
- ethylene glycol
- GC-MS overview analysis (qualitative screening)
- HPLC analyses on request
- hydrocarbon index
- IR spectra imaging
- LHKW (volatile halogenated hydrocarbons)
- methanol
- MTBE
- PAH (polycyclic aromatic hydrocarbons).

1.2.3. Microbiological Tests

We carry out the following microbiological tests:

- bacteria and fungi in selected mineral oil products
- clostridium perfringens
- colony count
- enterococci
- Escherichia coli, coliforms
- legionella
- line releases
- monitoring of cooling circuits
- pseudomonas aeruginosa
- yeasts, fungi.

1.2.4. Further Analytical Parameters

The following additional analysis parameters supplement the portfolio:

- determinations from the aqua regia extract (DIN 38414 S7)
- determinations from the eluate (DIN 38414 S4)
- dry residue
- loss on ignition, residue on ignition
- microscopic examination of activated sludge
- sludge volume index
- water soluble fraction.

1.3. Contact Persons

If you have any questions, please do not hesitate to contact us:

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