

WATER ANALYSIS



Condition Monitoring Specialists

Testing and Analysis | Lubricant-Enabled Reliability |
Asset Reliability Care



www.wearcheck.co.za

Water Analysis

Our water division offers full suite water analysis. Analysis is conducted using various accredited techniques such as: Photometric, Electrometric, Colorimetric, Gravimetric, ICP-OES and ICP-MS and Enzyme Substrates. These techniques are used to obtain the best possible results in physicochemical and microbiological analysis.

Industries we serve include:

- Mining and Exploration
- Environmental
- Industrial
- Energy
- Manufacturing Materials
- Food and Beverage
- Agriculture
- Hospitality
- Construction
- Health Care
- Recreation and Tourism
- Private

Types of Water:

- Waste/effluent water
- Drinking water
- Bottled water
- Agricultural/irrigation water
- Water quality
- Surface and groundwater
- Cooling systems
- Corrosion control

AdBlue Testing

Selective catalytic reduction (SCR) technology found in Euro IV or Tier 4 and higher rated diesel engines uses a diesel exhaust fluid reductant known commercially as AdBlue, which is injected into the exhaust gas to help reduce Nitrogen oxide (NOx) emissions, over a catalyst. Aqueous urea is the preferred reductant of choice in modern SCR systems.

Purity requirements for SCR catalyst reductants like AdBlue are high and among the specific requirements, metals such as sodium, potassium, calcium, magnesium, copper, zinc, iron or chromium - as well as the content of ash-forming phosphates - must be kept at low levels in SCR-grade urea. As a result of these purity requirements, testing of these reductants is of utmost importance.

WearCheck tests AdBlue according to the requirements set out in ISO 22241-2. We conduct tests for the following parameters: % Urea, Refractive index, % Alkalinity, % Biuret, Aldehydes, Insoluble Matter, and other trace impurities such as Al (Aluminum), Ca (Calcium), Cr (Chromium), Cu (Copper), Mg (Magnesium), Ni (Nickel), K (Potassium), Na (Sodium), and Zn (Zinc).



Water Analysis

Water Quality

Water quality describes the condition of water, including chemical, physical and biological characteristics, usually with respect to its suitability for drinking, irrigation, bathing, and effluent purposes.

Safe water should contain no chemical or radioactive substances, be free from disease-causing organisms and be stable in terms of corrosion or scaling.

Why Water Monitoring is important

- Ensuring mining, industrial and sewage effluent is compliant with environmental regulations and municipal by-laws
- Establishing drinking water safety, in compliance with The National Water Act, SANS241 parameters and WHO Guidelines
- Confirming bottled water complies with The National Water Act, SANS1724
- Ground and Surface water is uncontaminated and safe
- Irrigation water is safe and free from toxins or disease
- Pool and spa water is safe for skin contact
- Ensuring water quality is safe for handling and exposure to clients and staff
- Checking water is free from spotting elements at washing facilities
- Accurately determining water treatment type and its effectiveness
- Tracking and monitoring readings over time, identifying changes
- Ensuring water is non-corrosive and won't result in future, unforeseen maintenance
- Identifying any problems before they become long-term

Mining

WearCheck Water offers wastewater, groundwater and surface water analysis in areas surrounding mining and exploration sites.

Effluent/Wastewater

Ensuring water is compliant and safe for disposal is essential. Compliance with municipal by-laws and environmental safety standards allows for safe disposal of wastewater into streams, rivers etc.

Ground and Surface Water

Water quality analysis allows for determination of water safety for use on equipment, drinking and washing.



Water Analysis

Industry & Manufacturing

Waste/effluent water analysis ensures compliance with municipal by-laws and environmental safety standards allows for safe disposal of effluent into streams, rivers etc.

For successful industry operation and reduced repair costs, it is important to monitor the various water systems of a manufacturing plant.

Cooling systems water should be monitored to ensure optimal functioning, identify corrosive and microbial determinands. These systems provide the perfect environment for bacterial growth.

Water should be continually monitored for scaling and corrosive determinands. This enables early detection of potential equipment risks, reduces excessive repair costs and ensures optimal functioning of machinery.



Irrigation & Agriculture

Safe and clean irrigation and agricultural water is essential to ensure leaching is not occurring, preventing disease and maintaining a healthy ecosystem in soil structure for plant growth and yield.

Food & Beverage Production

Water quality is essential in the production of food and beverage. The analysis is conducted in line with various local and international standards:

- SANS241 - drinking Water
- SANS1657 - bottled and processed Water
- WHO guidelines

Hospitality & Lifestyle

We provide regular water quality analysis for:

- Lifestyle centres and malls
- Retail and business parks
- Restaurants and fast food facilities
- Gym and fitness facilities
- Spas and recreational facilities



CONTACT US