

## SANS 241 Chemistry-Only Water Testing

A detailed chemical assessment for borehole, municipal, rainwater, stored and treated water systems in South Africa.

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SANAS-accredited laboratory testing. Sampling available across Gauteng. Nationwide courier support. H<sub>2</sub>OGuru Clarity Report included.

### Understand the Chemical Quality of Your Water

The SANS 241 Chemistry-Only package evaluates the physical and chemical characteristics of water without including microbiological analysis. It is suited to clients who need to understand mineral content, salts, metals, hardness, scaling, corrosion, staining, taste, odour and the chemical suitability of water for drinking or treatment design.

This package is commonly used for borehole water, municipal water, rainwater systems, storage tanks and treated water where the primary concern is chemical quality. It is also useful when a previous microbiological test has already been completed, when routine chemistry monitoring is required, or when filtration equipment must be selected according to actual laboratory results.

Water chemistry can vary significantly between sites, even where properties are located close to one another. Groundwater chemistry is influenced by geology, depth, recharge conditions, agriculture, industry, sewage systems and the materials used in borehole construction and plumbing. Municipal and stored water can also change due to pipework, tanks, corrosion and blending with alternative sources.

H<sub>2</sub>OGuru follows a test-first approach. The purpose of the analysis is not merely to produce laboratory values, but to identify the chemical factors that affect health, taste, appearance, plumbing, appliances and treatment-system performance.

### Package at a Glance

#### Water Sources

Borehole, municipal, rainwater, stored and treated water

#### Assessment Type

Physical and chemical analysis

### Reference Standard

SANS 241 drinking water requirements

### Sampling Options

On-site sampling or nationwide courier

### Laboratory

SANAS-accredited testing partner

### Reporting

Laboratory results and H<sub>2</sub>OGuru Clarity Report

## Who Should Use This Package?

### Borehole Owners

Determine whether groundwater contains excessive minerals, salts, metals or naturally occurring chemical constituents.

### Homeowners

Investigate hardness, staining, taste, odour, scale, corrosion and the suitability of water for domestic use.

### Water Treatment Installers

Select filters, softeners, dosing systems, membranes or media according to actual laboratory results.

### Estates and Complexes

Assess shared boreholes, tanks, backup systems and blended municipal or groundwater supplies.

### Commercial Facilities

Evaluate chemical quality where water is used by staff, visitors, customers or production processes.

### Property Buyers and Developers

Understand the chemical quality of a water source before purchase, development or treatment investment.

## What Does the Package Test?

The final parameter list is confirmed according to the selected package, water source and project requirements. A SANS 241 chemistry profile typically includes the following groups:

| Parameter Group                    | Typical Determinants                                                            | Why They Matter                                                                                                        |
|------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Physical and Aesthetic Quality     | Colour, turbidity, conductivity and total dissolved solids                      | Provides information on water clarity, suspended material, dissolved mineral content, taste and general acceptability. |
| Acid-Base Balance                  | pH, alkalinity and related buffering characteristics                            | Influences corrosion, scale formation, chemical dosing and the stability of the water.                                 |
| Hardness Minerals                  | Calcium, magnesium and total hardness                                           | Associated with scale in geysers, kettles, plumbing, membranes and heating equipment.                                  |
| Major Salts                        | Chloride, sulphate, sodium and related dissolved salts                          | Can affect taste, salinity, corrosion, plumbing and the suitability of water for reverse osmosis treatment.            |
| Nutrients and Pollution Indicators | Nitrate, nitrite and ammonia                                                    | May indicate agricultural influence, sewage contamination, fertiliser movement or groundwater pollution.               |
| Metals                             | Iron, manganese, copper, zinc and other metals included in the selected profile | Can cause staining, taste, colour, deposits, health concerns and treatment-system fouling.                             |
| Trace Elements                     | Fluoride and other trace determinants included in the selected package          | Some trace constituents have health-based limits even when they do not affect taste or appearance.                     |

This package does not include microbiological testing. Where the water will be used for drinking, cooking or food preparation and the microbiological quality is unknown, the complete SANS 241 Chemistry and Microbiology package is usually the more appropriate option.

## Common Problems This Test Can Identify

### Hard Water and Scale

High calcium, magnesium, hardness or alkalinity that causes deposits in plumbing and appliances.

### Iron and Manganese

Brown, orange or black staining, metallic taste, deposits and filtration problems.

### High Salinity

Elevated conductivity, total dissolved solids, sodium, chloride or sulphate.

### Nitrate and Nitrite

Possible agricultural, sewage, fertiliser or groundwater contamination concerns.

### **Corrosion Risk**

Low pH, low alkalinity or aggressive water that may affect copper, steel, fittings and equipment.

### **Fluoride or Trace Elements**

Chemical constituents that may exceed drinking water limits without changing water appearance.

## **When Is Chemistry-Only Testing Appropriate?**

### **Treatment-System Design**

Use the results to select suitable media, membrane capacity, softening, dosing or filtration stages.

### **Follow-Up Monitoring**

Repeat selected chemistry parameters after treatment, maintenance or a known change in the water source.

### **Known Microbiological Status**

Use chemistry-only testing where a valid microbiological assessment has already been completed separately.

### **Scaling and Staining Investigations**

Investigate white deposits, brown staining, metallic taste, blocked filters or damaged appliances.

### **Source Comparison**

Compare borehole, municipal, raw and treated water to understand chemical differences.

### **Property or Project Assessment**

Evaluate the chemical character of water before buying, developing or commissioning a site.

## **Suitable Water Sources**

### **Borehole Water**

Groundwater may contain naturally elevated hardness, fluoride, nitrate, iron, manganese or dissolved salts.

### **Municipal Water**

Chemistry testing can investigate localised taste, colour, corrosion, storage or pipework concerns.

## Rainwater

Rainwater often has low mineral content and may be corrosive, especially where it is stored or blended.

## JoJo Tanks and Stored Water

Storage can affect pH, metals, turbidity and general chemical quality depending on the system materials.

## Blended Water

Municipal and borehole blending can change hardness, salinity, metals and treatment requirements.

## Treated Water

Post-treatment chemistry confirms whether filters, softeners, dosing systems or reverse osmosis are performing correctly.

# The H<sub>2</sub>OGuru Sample-to-Solution Process

1

Discuss the source and water-quality concerns

2

Confirm the required chemistry profile

3

Collect or receive the sample

4

Complete accredited laboratory testing

5

Interpret the results in a Clarity Report

6

Recommend treatment only where necessary

Chemical test results are most valuable when the sample is representative of the actual water source. The sampling point, flushing period, storage conditions and treatment status should be recorded before sampling.

# What You Receive

## Laboratory Test Report

The formal analytical results issued by the accredited testing laboratory.

## H<sub>2</sub>OGuru Clarity Report

A practical interpretation of compliant, non-compliant and operationally important findings.

## Treatment Guidance

Where required, the results can be used to develop a treatment approach suited to the measured chemistry.

# Why Choose H<sub>2</sub>OGuru?

| H <sub>2</sub> OGuru Service  | Benefit to the Client                                                                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------------|
| Correct package selection     | Helps prevent unnecessary testing while ensuring the important chemistry parameters are included.     |
| Accredited laboratory testing | Provides reliable analytical data produced within the laboratory's accredited scope.                  |
| Clarity Report                | Explains the significance of hardness, salinity, metals, pH, nitrate and other findings.              |
| Sample-to-Solution service    | Testing, interpretation, treatment guidance and verification can be coordinated through one provider. |
| Nationwide support            | Courier arrangements allow clients outside Gauteng to access the testing service.                     |

# Need a Different Analysis?

Not every water source requires the same laboratory profile. Explore the other H<sub>2</sub>OGuru testing packages to select the analysis that matches your water source and intended use.

## SANS 241 Chemistry and Microbiology

A complete drinking water assessment covering chemical and microbiological quality.

## SANS 241 Microbiology Only

For E. coli, coliforms and routine microbiological monitoring.

## SANS 1657 Bottled Water

For bottled, purified, refill and packaged drinking water.

### **Irrigation Water Testing**

For salinity, sodium hazard, crop suitability and irrigation performance.

### **Wastewater and Effluent**

For process monitoring, discharge assessment and reuse investigations.

### **SANS 51008 Concrete Water**

For water used in concrete mixing and construction applications.

### **Water Source Identification**

Compare seepage water with municipal, borehole or groundwater sources.

### **Custom Water Testing**

Tailored parameter selection for specialised projects and investigations.

## **Understand Your Water Before Choosing Treatment**

Arrange a SANS 241 chemistry assessment and receive clear guidance on the minerals, metals, salts and treatment requirements of your water.

[\*\*Request a Quote\*\*](#)

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