



Chemical Laboratory

Simmonds & Bristow delivers the right answers on time. We understand delivery on time is critical. Since initiating a performance program in early 2004, our laboratories have consistently exceeded the target of 95% delivery on time. Simmonds and Bristow is NATA Registered for the majority of analyses performed. Experienced scientists operate some of Queensland's most advanced analytical instrumentation.

At Simmonds & Bristow you can speak directly to our professionals - without the need to make special arrangements, between the hours of 8:30am to 5.00pm, Monday to Friday. If you need help to collect samples or interpret your results our internal consultants can assist you. Call us for a proposal and you will be surprised how cost-effective high-quality, independent analysis can be for your business.

- Raw Water Sources
- Wastewater and Sewage
 - Environmental Waters
- Potable and Bottled Water
 - Irrigation Waters
- Corrosion Assessments
 - Recreational Waters
- Concrete, Mortar & Aggregate
 - Monitoring Programs
 - Indoor Air Monitoring
- Soils & Sediment Analysis

EASI-Sample

Receive sampling kits FREE, automatically, each time your sample is scheduled. Or we can collect samples for you!

Chemical Laboratory Services

Raw Water & Environmental Water

Simmonds & Bristow test raw surface and groundwaters that are considered a potential source of water. We also test environmental waters to assess ecosystem stability and to ensure minimal impact.

Wastewater, Sewage & Sludge

Correct treatment and disposal or wastewater is essential for the protection of our environment. Our laboratories are specialised in testing a variety of wastewater including sewage (raw, process and treated), trade waste, process waters, dried sludges, activated sludges, brines and contaminated stormwater.

Potable & Bottled Water

We are experienced in testing water supplies to monitor treatment plant performance and continued compliance with the NH&MRC Drinking Water Guidelines. We can conduct product testing on mineral and bottled waters.

Corrosion Assessments

Our laboratories are skilled in the analysis of waters and soil to determine the various corrosion indicators.

Irrigation Waters

While using recycled water for irrigation purposes is encouraged practice, environmental and public health issues need consideration. Our laboratories are experienced in testing potential irrigation waters for crucial parameters.

Recreational & Pool Waters

With current restrictions on water use, a new source for recreational water is in demand. Simmonds & Bristow are able to analyse water sources for their suitability for recreational use.

Concrete, Mortar & Aggregate

Simmonds & Bristow are capable of performing tests on both raw and manufactured construction materials.

Soil & Sediment Analysis

A considerable number of the tests we perform on water matrices can also be applied to soil matrices.

Dust Deposition and Air Emissions

We can assist when developers or industry are required to monitor dust and emissions levels.

Indoor Air Monitoring

We can assess indoor air quality and comfort through a combination of on-site and laboratory testing.

Monitoring Programmes

We have designed and carried out a large number of monitoring programmes. We supply pre-labelled bottles and sample kits free of charge.



DATAMINE

See your results immediately with historical trends compiled for you!

Chemical Laboratory

**NATA
Accredited
Tests:**



Physical Chemistry

pH
Conductivity
Acidity
Alkalinity
Total Solids
Suspended Solids
Total Dissolved Solids
Fixed and Volatile Solids
Turbidity
Colour
Eh (Redox Potential)
Atmospheric Dust Fallout

Wet Chemistry

Chloride by IC
Cyanide by colorimetric method
Fluoride by colorimetric method
Total Organic Carbon by colorimetric method
Sulphate by IC
Sulphide by methylene blue method
Hydrogen Sulphide calculation
Total Oil and Grease by Soxhlet extraction
Volatile Acids
Phenols by colorimetric method
Anionic and Nonionic Surfactants by MBAS and CTAS
Chlorine (free and total) by DPD (on water only)
Chlorine dioxide by DPD
Dissolved Oxygen by titrimetric or membrane electrode method
Biochemical Oxygen Demand
Chemical Oxygen Demand
Silica by colorimetric method
Sulphite by colorimetric method
Chlorophyll – trichromatic by colorimetric method
Tannin & Lignin by colorimetric method
Volatile acids alkalinity by titri-

metric method

Metals

Determination of trace elements by ICP-MS
Mercury by cold vapour AAS
Cations (Na, Ca, K, Mg) by cold vapour AAS

Organics

Organochlorine and Organophosphate Pesticides by GC
Total Petroleum Hydrocarbons by GC
BTEX (Benzene, Toluene, Ethylene, Xylene) by GC

Nutrients

Ammonia as N by AQ2 Seal
Nitrate as N by Cadmium Reduction
NOx (oxidized N) by AQ2 Seal
Nitrite as N by AQ2 Seal
Organic Nitrogen calculation
Total Kjeldahl Nitrogen by Tecator
Total Nitrogen by AQ2 Seal
Total Phosphorus by AQ2 Seal
Orthophosphate by AQ2 Seal

Other Soils Tests

Loss on Ignition
Moisture Content to AS1289.2.1.1
Water Soluble Salts (1 to 5 extract)
Exchangeable Soil Acids by titrimetric method
Organic Matter
SPOCAS and CRS (for acid sulphate soils)
Saturated resistivity and water content

Resistivity

Potential or alkali reactivity
Acid Soluble Chloride and Sulphate
Acid insolubles
Carbonate content of soil by rapid titration
Exchangeable cations by AAS

Non NATA tests carried out to Australian Standards:

Sugar (Presence/Absence)
Polychlorinated Biphenyls (PCBs) by GC-MS
Volatile Organic Compounds (VOCs) by GC-MS
Polyaromatic Hydrocarbons (PAHs) by GC-MS
Total Phenolics by GC-MS
OrganoTins by GC-MS
Constant Head Permeability
Porosity by wax method
Bulk Density
Dispersibility
TCLP
Large, Light & Weak Particles
Soil Texture

Tests in blue text are executed on waters only. Tests in brown text are executed on soils only. Tests in black are done on liquid and soil matrices.



WaterRMS

Water Resource Management System

**A holistic support solution
in one service package**

S&B's WaterRMS is a complete service package designed for regional resorts, utilities & industry. WaterRMS combines:

- State-of-the-art laboratories
- Integrated environmental & engineering consultancies
- Registered water industry training
- The DataMine: Online access to historical and current results, reporting tools, incident management and email notification of non-compliances

Whatever your environmental compliance needs may be, our WaterRMS will deliver the best, most cost-effective service solution for your requirements, minimising non-compliance and saving you time and money.



Key to Abbreviations

IC	Ion Chromatograph
DPD	N,N-Diethyl-p-Phenylene Diamine, a chemical used in chlorine analysis
Colorimetric	any reaction resulting in a colour development which can be measured by UV-Vis (light falling into the ultraviolet or visible spectrums)
Titrimetric	an acid/base procedure which locates a pH level or colour change
SPOCAS	Suspension Peroxide-Oxidation Combined Acidity and Sulphate, a suite of tests used to determine acid and sulphur accounting for acid sulphate soils
CRS	Chromium Reducible Sulphur, a method for detecting reduced inorganic sulphur species, in acid sulphate soils
MBAS	Methyl Blue Active Substance
CTAS	Cobalt Thiocyanate Active Substances
AAS	Atomic Absorption Spectrometer – an instrument which measures certain absorbances at different wavelengths
GC	Gas Chromatograph
GC-MS	Gas Chromatograph Mass Spectrometer
ICP-MS	Inductively Coupled Plasma Mass Spectrometer
TCLP	Toxicity Characteristic Leachate Procedure
AQ2 Seal	Discrete Analyser, a robotic system for colorimetric procedures

SB:0711

 **Simmonds & Bristow**
Established 1965 ACN 010 252 418 Pty Ltd

WATER AND WASTE MANAGEMENT SOLUTIONS FOR • MINING • HOSPITALITY • COMMUNITIES • DEVELOPMENT
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