



# SAS | Scientific Analytical Services

**Tried, tested and trusted  
for more than 120 years**



QUEENSLAND  
**UrbanUtilities**



## WHEN YOU'RE IN THE BUSINESS OF TESTING, RESULTS ARE EVERYTHING.

For more than 120 years, we have been Queensland's preferred scientific laboratory, providing analytical support and scientific results for government and industry.

As part of Queensland Urban Utilities' diverse service offerings, we provide **National Association of Testing Authorities (NATA) accredited, world-class laboratory services**, testing thousands of samples every week.

As times have changed and techniques advanced, we've learned from the world's best laboratories in our pursuit of answers and excellence. We are **the laboratory of choice** for environmental, water and wastewater professionals. Today, our abilities extend beyond the water and wastewater industry and our expertise is now being used across industries as diverse as mining, agriculture and hospitality.

## WE CAN:

- design a water monitoring program for your business,
- take on-site measurements and collect samples from your site,
- analyse water, wastewater, soil and air samples,
- supply NATA endorsed reports,
- interpret data to help you make decisions about operational changes or future monitoring,
- help you with tailored sampling programs, pollution investigations and addressing public health concerns.

Queensland Urban Utilities, one of the largest water distributor-retailers in Australia, acquired SAS from Brisbane City Council in August 2012. This acquisition enabled Queensland Urban Utilities to expand its service offerings to provide sampling, analytical and consulting services to a range of industries in addition to its role of delivering drinking water, recycled water and sewerage services to residential and commercial customers across a 14,384km<sup>2</sup> service territory in South East Queensland.



### We're fully accredited

SAS is NATA accredited for a wide range of chemical and biological analyses, as well as sampling. Our methodology is based on validated American Public Health Association (APHA) Standards, Australian Standards and US Environmental Protection Agency (EPA) methods.

## OUR SERVICES UNDER THE MICROSCOPE

We offer a wide range of services and capabilities, developed in response to our clients' ever-changing requirements and environmental legislation.

SAS can assist clients with the requirements of the Australian Drinking Water Guidelines, the Australian and New Zealand Environment Conservation Council (ANZECC) Guidelines, World Health Organisation Guidelines for Drinking Water and Queensland Recycled Water Guidelines. We also assist our clients in meeting legislation such as the *Environmental Protection Act 1994*, the *Water Act 2000* and the *Water Supply (Safety and Reliability) Act 2008*.

We can plan testing regimes to comply with licence requirements, including developing a program that addresses sampling protocols, sample preservation and holding times, relevant analyses, and interpretive reporting as required.

### Field testing and monitoring

We offer on-site testing and monitoring services for:

- lakes, dams, reservoirs, estuaries,
- water quality management on construction projects,
- soil, sediment, air particle sampling,
- groundwater and surface water,
- new mains sampling,
- landfill gas,
- sewage treatment plants,
- waterway health assessments,
- domestic sewage treatment systems,
- data downloads from fixed data loggers.

Our NATA accredited Environmental Monitoring Team operates a fleet of well-equipped 4WD vehicles that provide safe access to most sampling locations. Sampling of rivers, lakes, dams and estuaries is undertaken using our five metre Allycraft boat. Using our Environmental Monitoring Team for your sampling requirements **assures the integrity of the samples and data** from the planning stage, through on-site sampling, sample transport, laboratory analysis, to reporting and secure data storage and retrieval.

### Types of analysis

**Wastewater analysis** – BOD<sub>5</sub>, COD, TOC, SS, oil and grease, volatile acids, biosolids, metals, coliforms and faecal coliforms.

**Water supply analysis** – general chemistry, metals, disinfection by-products, taste and odour compounds and water microbiology.

**Environmental analysis** – nitrogen and phosphorus, field analysis for pH, conductivity, dissolved oxygen, redox potential and temperature, algae identification and counting, acid sulphate soils, microbiology, *Legionella*, fungi and chlorophyll.

**Biological analysis** – coliforms and faecal coliforms, *Legionella*, fungi, algae and chlorophyll.

**Air quality audits** – for air-conditioned premises.

## EQUIPMENT AND TECHNOLOGY

The SAS laboratory is a modern, fully-equipped facility with a wide range of state-of-the-art equipment and technology.

### SOME OF OUR EQUIPMENT

#### Varian Cary 50 Spectrophotometer

For routine colorimetric analysis.

#### Lachat Flow Injection Analysers (2X)

For analysis of trace levels of nitrate, nitrite, ammonia and phosphorus down to 0.001 mg/L.

#### Agilent 7890A Gas Chromatograph 5975C Mass Spectrometer/ECD

Specialising in MIB/Geosmin analysis to 2ng/L.

#### Dionex ICS-2000 Ion Chromatograph

For analysis of routine anions bromide, chloride, nitrate, nitrite, fluoride, sulphate, phosphate, plus determination of the oxyhalides bromate, chlorate and chlorite in disinfected water.

#### Agilent 7500cx Inductively Coupled Plasma Mass Spectrometer

Analysing metals in solution down to parts per trillion level.

#### Skalar SP 1000 Automated BOD<sub>5</sub> Analyser

Provides unrivalled capacity for timely and accurate determination of biochemical oxygen demand of environmental, wastewater and trade waste samples.

#### PerkinElmer Clarus 600 Gas Chromatograph Mass Spectrometer

For disinfection by-product, TPH/BTEX analysis.

#### LabMedics AquaKem 600 Discrete Analyser

A multi-capable robotic analyser for nutrients, chloride and other colorimetric analyses.

#### PerkinElmer Optima DV Inductively Coupled Plasma Optical Emission Spectrometer

Analysing metals in solution down to 0.001 mg/L.

#### Millennium Merlin Atomic Fluorescence Trace Mercury Analyser

Analyses mercury in drinking water to parts per trillion level.

#### Elementar HiTOC Total Organic Carbon Analyser

For organic carbon determination from 0.1 mg/L to 10,000+mg/L.

#### Shimadzu TOC-VCSH Total Organic Carbon Analyser

For organic carbon determination from 0.1 mg/L to 10,000+mg/L.

#### Radiometer TitraLab Automated pH/Conductivity/Alkalinity Processor

#### PerkinElmer Autosystem and Autosystem XL Gas Chromatographs

## THREE SPECIALIST LABORATORIES

SAS has three purpose-built specialist laboratories, all located on one site at Darra, in Brisbane. These laboratories use the latest equipment to provide rapid, reliable and accurate analyses to our customers.

### Environmental 1 Laboratory

The Environmental 1 Laboratory monitors the performance of sewage treatment plants as well as testing samples from trade waste clients and clients concerned with environmental issues.

### Environmental 2 Laboratory

The Environmental 2 Laboratory produces analytical results for a wide range of metals, nutrients, organic, taste and odour compounds in potable and environmental water, wastewater and soils, and volatile acids in sewage sludge digesters. An extensive range of instrumentation is used including ICP-OES, ICP-MS, GC/MS, FIA, GC, IR and UV-Vis.

### Microbiology Laboratory

The Microbiology Laboratory carries NATA accreditation for all microbiological analyses relevant to drinking water, environmental waters (creeks, dams, rivers), swimming pools and wastewater including *E.coli*, total and faecal coliforms, heterotrophic plate count, *Enterococci*, *Legionella* and *Pseudomonas aeruginosa*. The laboratory is renowned for its expertise in identifying and counting algae, particularly in drinking water supplies. The laboratory also holds accreditation for sampling and analyses of airborne bacteria and fungi in indoor environments.





## LABORATORY INFORMATION MANAGEMENT SYSTEMS

**SAS operates the Australian designed LTech LIMS I laboratory information management system, which enables us to provide customers with:**

- custom job templates for specific needs,
- automated email capabilities for laboratory reports and data,
- pre-registration and scheduling of jobs,
- a fully-integrated report system for sample receipts, laboratory work lists, certificates and invoices,
- long-term storage, retrieval and analysis of all laboratory data through filter/search functions,
- data export capabilities to other software and corporate databases,
- full compliance with Australian and international laboratory standards,
- secure web-based access to data.

## WE'RE EXPERTS IN OUR FIELD – AND OUT IN THE FIELD

We employ a team of the brightest chemists, microbiologists and biologists with world-class experience and up-to-date training, who can monitor your projects within our facilities or out in the field.

## CUSTOMER CHARTER

When you contact us, you can expect to:

- be treated with honesty, fairness, sensitivity and dignity,
- have your enquiries and orders attended to promptly,
- receive acknowledgement within one working day of your online enquiry or email,
- have your quotation request answered within two working days.

We deliver value for money and continually review our operations to increase efficiency and improve our services.

## POINT OF DIFFERENCE

- 120 years of industry experience and knowledge,
- NATA accreditation,
- value for money,
- prompt, reliable service.



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