

CAPABILITY STATEMENT



- High quality analytical services
- Professional sampling services

Our accredited analytical laboratory provides a complete testing service

The Australian Water Quality Centre (AWQC) is South Australia's leading analytical laboratory, recognised for its reliability, accuracy and expertise. We specialise in meeting the analytical needs of the water and wastewater industries, providing comprehensive solutions from field sampling and testing to analytical reporting.

Operating as an independent business unit of SA Water since 1933, AWQC provides a comprehensive suite of NATA-accredited services, including:

- sampling and field testing
- microbiology
- molecular
- biology
- general chemistry
- inorganic chemistry
- organic chemistry.

Our extensive capabilities enable us to support councils and government (SA).

We deliver high-quality, reliable analytical services to cater to the diverse needs of our customers. Our comprehensive services include:

- NATA-accredited field sampling and testing
- NATA-accredited water quality testing
- sample and monitoring plan design
- data analysis reporting

Our local team of water experts conduct tests on:

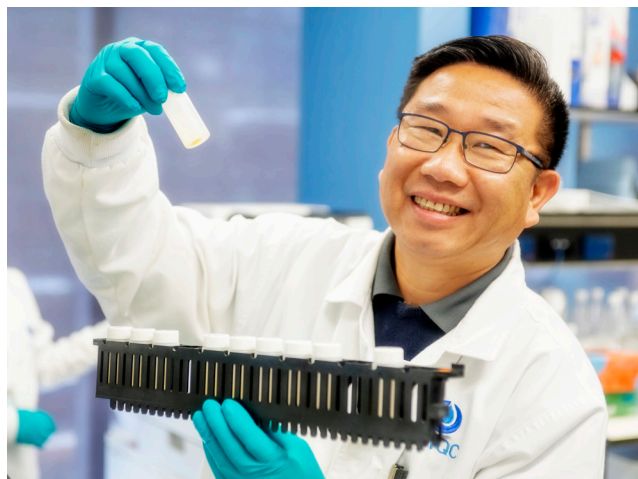
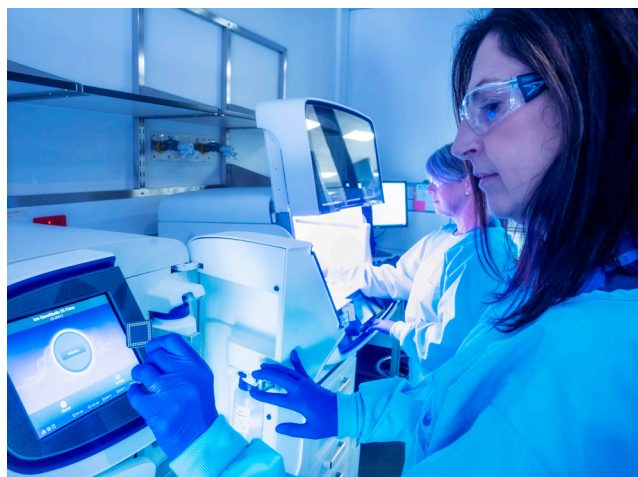
- drinking water
- effluent
- ground water
- process water
- raw sewage
- recreational water
- saline water
- sludge
- trade waste
- wastewater
- solids
- surface water.

When quality is paramount

At AWQC, quality is our top priority. We are committed to continuous improvement and maintain a strong focus on excellence in safety, service, technology, and sustainability.

Our Business Quality Management System is ISO 9001 certified, and our laboratory holds NATA accreditation for chemical, biological, DNA, and radiological sampling and testing. In addition, our testing and instrument calibration services are certified to ISO/IEC 17025.

We deliver quality outcomes for our customers by simplifying service use, driving innovation, adopting new technologies, seeking efficiencies, and optimising operations.



Our services

Sampling

Accurate analytical results rely on the collection of representative samples, making professional and reliable sampling essential for any testing program.

We provide the following sampling services:

Drinking water

- Raw and treated drinking water sources

Trade waste

- Collections using autosamplers

Wastewater

- Treatment plant influent and/or effluent using autosamplers

Groundwater monitoring

- Bore water samples from multiple depths up to 50 metres deep
- Bore pump monitoring

Environmental sampling

- Reservoirs, rivers/streams, marine and freshwater boat surveys

Online water monitoring equipment

- Maintenance service for online water analysers

Water sampling drones

- Underwater and above water sampling

We provide expert NATA accredited sampling services across South Australia in metropolitan, regional and remote areas.

Microbiology

We provide accredited testing services to detect and enumerate various micro-organisms. Microbial testing is vital when human health is at risk from microbiological pathogens and harmful bacteria. The range of microorganisms tested includes Coliforms, *E.coli*, Legionella, Pseudomonas, Salmonella, Campylobacter and Clostridium, among others.

The Protozoology laboratory has extensive experience in identifying and enumerating protozoa including Amoebae, Giardia, Cryptosporidium and Helminths.

Biology

We offer identification and enumeration of algae and cyanobacteria estimating their diversity and abundance. Furthermore, we provide algal biomass by measuring chlorophyll a (the major pigment in all photosynthetic plants) via spectrophotometry.

Inorganic Chemistry

Our inorganic chemistry department offers a comprehensive range of tests and efficiently handles high sample numbers with quick turnaround times. We test for cations, anions, nutrients, metals, and general tests like BOD, COD, and conductivity. We also conduct radioactivity testing and various wastewater related analyses.

Organic Chemistry

Our organic chemistry team provides accredited testing services for a wide range of organic constituents including algal toxins, disinfection by-products, general and volatile organic compounds, NDMA, pesticides, petroleum and hydrocarbons. We also provide specialised mass spectral analyses for the identification and quantification of organic compounds in water.

Specialty testing

E. coli phylogrouping and Whole Genome Sequencing (WGS)

Identifying sources of *E. coli* is crucial for managing suspected faecal contamination in water and mitigating associated risks. AWQC's *E. coli* phylogrouping method identifies human and animal sources causing contamination in water. In addition, DNA fingerprinting employing whole genome sequencing (WGS) can be utilised to track *E. coli* isolates and confirm bloom forming strains.



Faecal source tracking (FST)

Identifying and understanding the source of faecal contamination is essential for making informed water quality management decisions. AWQC's faecal source tracking (FST) method targets specific DNA markers via qPCR to detect human and animal sources causing contamination in water.

Cyanobacterial toxins

AWQC offers fully validated HPLC/MS/MS, HPLC/DAD/MS and LC/MS/MS methods for the determination of cyanobacteria toxins.

We also offer a validated, rapid molecular test that detects and quantifies the presence of cyanobacteria and their toxin producing genes in aquatic environments. CyanoDTec is a powerful, rapid PCR based DNA testing technology that can provide early warning of a potentially toxic cyanobacteria bloom. This test detects the genes responsible for microcystin, nodularin, cylindrospermopsin and saxitoxin.

We deliver exceptional service with a personal touch. Here's what you can expect from us:

- Friendly, reliable experts ready to assist.
- Flexible services tailored to your needs.
- Convenient sample containers, eskies, and ice packs for optimal sample preservation.
- Customised sampling services.
- Fast, dependable results to support quick decision-making.
- Electronic reporting and invoicing in PDF and Excel formats.
- Competitive pricing for great value.
- A proudly South Australian laboratory employing local talent.
- Private lab tours to explore our state-of-the-art facilities and meet our team.
- We're here to support you with outstanding service and a dedication to excellence.

Contact us

Australian Water Quality Centre

250 Victoria Square, Adelaide SA 5000

Phone: 08 7424 1514

Email: customerservice@awqc.com.au

Website: awqc.com.au