



Sydney Water Monitoring Services™ Bacteriology

Design | Sampling | Field assessment
Microbiological analysis and enumeration
Data analysis | Reporting

Our Microbiology laboratory provides a comprehensive service covering routine identification and enumeration of the organisms indicative of faecal pollution including faecal coliforms, total coliforms, *E.coli*, enterococci, *Clostridium perfringens*, *Pseudomonas aeruginosa*, somatic coliphage and F-specific bacteriophage. Our laboratory also performs detection of Salmonella and heterotrophic plate counts. Our methods are based on APHA and Australian Standards. We also have methods custom developed in-house with full NATA accreditation.

Bacteriological examination is particularly important because it remains the most sensitive method of detecting faecal and therefore potentially dangerous pollution. The search for organisms indicative of faecal pollution instead of pathogens themselves is universally accepted for monitoring pollution of water. Any pathogenic micro-organism present in polluted water is generally greatly outnumbered by the normal intestinal flora. Indicator organisms should be easy to isolate, identify and enumerate. It is simpler, cheaper and quicker to rely on the detection of indicator organisms in the surveillance of drinking water, recreational and environmental waters, the effectiveness of water treatment and system maintenance processes.

● NATA accredited laboratory

ISO9001 certification | NATA ISO/IEC 17025 | Over 40 years of NATA accreditation

● Bacteriological analysis

Identification and enumeration of Faecal Coliforms| Enterococci | *E.coli* | *Clostridium perfringens* | *Pseudomonas aeruginosa* | Detection of Salmonella | Enumeration of Heterotrophic Plate Counts| Enzyme substrate technology to rapidly identify and enumerate Total Coliforms and *E.coli* with 24 hour turnaround time if required | Loop Mediated Isothermal Amplification(LAMP confirmation)

● Bacteriophage analysis

Identification and enumeration of F-specific RNA bacteriophages | Somatic coliphages

● Accredited to test wide range of samples

Potable (drinking) water | Surface waters – rivers, lakes and dams | Ground water | Recycled water | Saline | Swimming pools | Wastewater and stormwater| Biosolid | Sediment

● Incident response

Our laboratory operates 365 days per year | next day reporting of *E.coli*



Sydney Water Monitoring Services™

Your analytical and field services resource

Our service

High quality scientific services

We are a nationally recognised and highly regarded analytical service provider. Our environmental professionals are specialists in their field and passionate about delivering high quality, personalised and comprehensive scientific services to our clients. We offer a complete and dynamic range of services, from project design to analysis and reporting of results, for a variety of fresh water and marine habitats. We also work in collaboration with research facilities.

Guidelines

We are accredited to meet the reporting requirements of government regulatory guidelines and standards for microbiological quality of water.

Our Customer Services Group can provide further detail as to which guidelines apply to your situation.

Method codes

MI01MUG	Faecal coliform and E.coli enumeration by membrane filtration
MI03ENT	Enterococci enumeration by membrane filtration
MI04LAMP	Clostridium perfringens enumeration by membrane filtration and LAMP confirmation
MI19AS2008	Pseudomonas aeruginosa enumeration by membrane filtration
MI05	Salmonella presence/absence
MI06	Heterotrophic plate count by pour plate at 35°C
MI07	Heterotrophic plate count by pour plate at 20°C
MI08	Heterotrophic plate count by spread plate at 20°C
MI09	Heterotrophic plate count by spread plate at 35°C
MI24	Heterotrophic plate count by pour plate at 37°C
MI25	Heterotrophic plate count by pour plate at 22°C
MI10	Total coliforms enumeration by most probable number multiple tube method (MPN)
MI11	Faecal coliform and E.coli enumeration by MPN
MI14	Total coliforms, E.coli and faecal coliforms enumeration by MPN
MI12	Enterococci and faecal streptococci enumeration by MPN
MI15	API20E biochemical identification of Enterobacteriaceae family
MI28	Total coliforms and E.coli enumeration by enzyme substrate
MI32	F-specific bacteriophage 1 ml method (untreated samples)
MI33	F-specific bacteriophage 100 ml method (treated samples)
MI34	Somatic coliphage 1 ml method
MI35	Somatic coliphage 100 ml method

Sampling and holding times

Microbiological water samples

500ml sterile PET bottles with 0.5ml 10% Sodium Thiosulphate or red lidded bottles supplied by Sydney Water. Deliver in a cold esky within 24 hours of sampling

Microbiological biosolid or sediment sample

250ml sterile plastic or glass screw top jar | deliver to West Ryde in a cold esky within 24 hours of sampling

Coliphage or bacteriophage sample

500ml sterile PET bottles with 0.5ml 10% Sodium Thiosulphate or red lidded bottles supplied by Sydney Water. Deliver in a cold esky within 48 hours of sampling

Please refer to our Sydney Water Monitoring Services™ flyer for a full list of all analytical tests and services

Quality

We understand the importance of quality Sydney Water Monitoring Services™ owns and operates a leading dedicated environmental and water analysis laboratory in Australia. We deliver value for money and quality service for discerning clients.

What we provide

- Laboratory analysis and field sampling NATA ISO/IEC 17025 accredited and supported by comprehensive in-house quality assurance and quality control procedures
- Cutting edge technology and equipment
- Prompt service and incident response for both field sampling and sample analysis
- Project development and ad-hoc requests
- Online temperature monitoring system for critical equipment
- Excellent service and competitive rates

We are leaders in:

Phycology



Aquatic ecology



Microbiology



Chemistry

