

Sydney Water Monitoring Services™ Algal capability

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

Algae occur naturally in our environment. They are abundant in fresh, brackish and marine waters and may be used as indicators of water quality. They have the potential to cause problems associated with water quality including toxin production, taste and odour, filter clogging and aesthetics.

Blue green and algal growth, in general, are favoured by nutrient enrichment, in conjunction with stable conditions and warm water temperatures.

Algal toxins have been associated with animal deaths and have implications for human health and recreation.

Public health concerns regarding cyanobacteria, centres on the ability of many species and strains to produce cyanotoxins. Human populations can be exposed to these toxins through drinking water or recreational activities.

Our algal laboratory provides a comprehensive service covering routine identification, enumeration, chlorophyll analysis, toxin analysis, specialised investigations and scientific advice.

NATA accredited laboratory

- ISO9001 certification
- NATA ISO/IEC 17025 accreditation

Algal analysis

- Identification of algae including blue green algae
- Speciation where possible
- Biovolume/ASU determinations

Chlorophyll analysis

- Photosynthetic pigments
(*Chlorophyll a, b and c, Lorenzen, Phaeophytin*)

Cyanobacterial toxin analysis

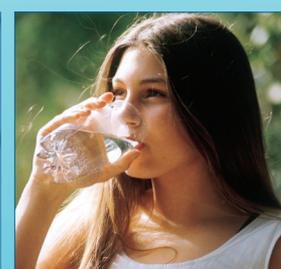
- Protein Phosphate-2A Inhibition Assay (PP-2A) for detection of Hepatotoxins (Microcystins) in water
- LCMSMS for the detection of Microcystin variants LR, YR and RR
- LCMSMS for the detection of *Cylindrospermopsin*

Wide range of samples

- Freshwater
- Estuarine
- Marine

Incident response

- Our Laboratory has the ability to analyse and report results within 24 hrs



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.

Guidelines

The Australian Drinking Water Guidelines (ADWG) 2011 includes a health based limit for total concentration of Microcystins in drinking water of 1.3µg/L expressed as Microcystin-LR Toxicity Equivalents.

Guideline values for cylindrospermopsin, nodularin or saxitoxins have yet to be determined. Given their known toxicity, NSW Health should be advised immediately if blooms of potentially toxic species occur in sources of drinking water. For notification and alert levels of potentially toxin-producing cyanobacteria, refer to the Australian Drinking Water Guidelines (ADWG) 2011.

Method Codes

- MA52CENT Full algal identification and enumeration
- MA51CENT Blue green identification and enumeration
- MA50CENT Algal Identification
- MA58CENT Identification and enumeration of toxic marine algae
- MA59CENT Biovolume determination
- MA60CENT ASU determination
- MA55 Microcystin-LR equivalent detection by PP-2A
- TC0049 LCMSMS determination of toxins

Sampling and holding time requirements

Algal samples

250mL PET bottle | samples preserved in Lugols Iodine | alternatively deliver to West Ryde in a cold esky in the dark within 24 hrs of sampling

Toxin samples (PP-2A)

500 mL bottle | no preservation | deliver to West Ryde in a cold esky in the dark within 24 hrs of sampling

Chlorophyll samples

1.25 L PET bottle | no preservation | deliver to West Ryde in a cold esky in the dark within 24 hrs 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
- Technologically advanced
- Excellent service and competitive rates

We are leaders in:

Phycology



Aquatic ecology

Microbiology



Chemistry