



SCIENCE & ENGINEERING

921 College Hill Rd. Fredericton, NB Canada E3B 6Z9
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Cyanobacteria and Cyanotoxins

RPC is pleased to offer testing for cyanobacteria and cyanotoxins in environmental water samples following our newly developed Quantitative Polymerase Chain Reaction (qPCR) and Enzyme-linked Immunosorbent Assay (ELISA) methods.

The increasing occurrence of cyanobacteria (blue-green algae) blooms is of global concern and is often associated with environmental and socio-economic problems, such as degenerated ecosystems and aquaculture impairment. Some species of cyanobacteria produce cyanotoxins, which have harmful effects on animal and human health. To protect water quality and the ecosystem, it is essential to have rapid and reliable methods for cyanobacteria and cyanotoxin detection to assist with prediction of bloom trends and risk management.

TOTAL CYANOBACTERIA ANALYSIS

The qPCR approach targets the detection and quantification of total cyanobacteria using the 16S rRNA gene. Not all cyanobacteria produce cyanotoxins, for that reason, it is beneficial to understand whether a confirmed cyanobacteria bloom has the potential to become toxic. Our test also provides insight into whether the detected bacteria contain any of the six common toxin-producing genes, namely;

- *mycE/ndaF* (microcystin/nodularin-producing)
- *cyrA* (cylindrospermopsin-producing)
- *sxtA* (saxitoxin producing)
- *anaC* (anatoxin-producing)
- *GntA* (guanitoxin-producing)

Reporting limit: ≥ 45 gc/ml (gene copies/ml)

Sampling Requirements: 250ml sterile plastic bottle*

**sodium thiosulfate preservative must be added for municipal/chlorinated water source samples*

Pricing: \$196 per sample

Turnaround Time: 5 business days

CONTACT

For more information about Cyanobacteria and Cyanotoxin testing, or to speak with a microbiology specialist, please call RPC at (506) 452-1212, or contact the specified location and contact listed below:

Cyanobacteria (qPCR)

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Cyanotoxin (Microcystins)

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