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Cawthron Analytical Science
Ensuring Integrity Through Analytical Excellence.

# Certificate of Analysis: Final

**Cawthron Contract Number:** 60026

## Project Number: C06041

**Timaru District Council**
**PO Box 522**
**TIMARU**

**Attention:** John Clemens

**Customer Order No:** 38372
**Email Recipients:** John Clemens

### Sample Details

**Laboratory ID:** C06041-1 **Sample Type:** Water **Date Sampled:** 05/01/2022 13:30
**Description:** Pareora Source **Date Received:** 06/01/2022 11:50
**Customer ID:** Pareora River Source

| Species | Description | Unit Count (Units/mL) | Cell Count (Cells/mL) | Mean Cell Vol. (µm³)* | Biovolume (mm³/L)* |
|---|---|---|---|---|---|
| Total Cyanobacteria cell count | | | 1 | | 0.00004 |
| Total unit count | | 5 | | | |
| Pseudanabaena sp. (1.3-2.6 µm) | Potentially Toxic Cyanobacteria | | 1 | 39 | 0.00004 |
| Planktolyngbya sp. | Cyanobacteria (not known to be toxic) | 5 | | | |

Method: In-house, based on Hotzel and Croome 1999
*Biovolume Method: In-house, based on NZ Guidelines for Cyanobacteria in Recreational Fresh Waters - Interim Guidelines (Table A4.1) 2009*

### Sample Details

**Laboratory ID:** C06041-2 **Sample Type:** Water **Date Sampled:** 05/01/2022 13:30
**Description:** Timaru Treated **Date Received:** 06/01/2022 11:50
**Customer ID:** Timaru Treated

| Species | Description | Unit Count (Units/mL) | Cell Count (Cells/mL) | Mean Cell Vol. (µm³)* | Biovolume (mm³/L)* |
|---|---|---|---|---|---|
| Total Cyanobacteria cell count | | | 3 | | 0.00009 |
| Pseudanabaena sp. (1.3-2.6 µm) | Potentially Toxic Cyanobacteria | | 2 | 39 | 0.00008 |
| Pseudanabaenaceae | Cyanobacteria (not known to be toxic) | 3 | | | |
| Synechococcus sp. (1.0-2.6 µm) | Cyanobacteria (not known to be toxic) | | 1 | 12 | 0.00001 |

Method: In-house, based on Hotzel and Croome 1999
*Biovolume Method: In-house, based on NZ Guidelines for Cyanobacteria in Recreational Fresh Waters - Interim Guidelines (Table A4.1) 2009*

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Test results indicated as not accredited are outside the scope of the laboratory's accreditation



**Report Number:** 920457
**Project Number:** C06041

* Indicates an analysis that is not IANZ accredited

V18.55 SL:FW



T (+64) 03 548 2839 | F (+64) 03 546 9464 | 98 Halifax Street East, Nelson 7010. Private Bag 2, Nelson 7042. New Zealand | www.cawthron.org.nz

## Sample Details

**Laboratory ID:** C06041-3 **Sample Type:** Water **Date Sampled:** 05/01/2022 13:30
**Description:** Timaru Raw **Date Received:** 06/01/2022 11:50
**Customer ID:** Timaru Raw

| Species | Description | Unit Count (Units/mL) |
|---|---|---|
| Total unit count | | 870 |
| Planktolyngbya sp. | Cyanobacteria (not known to be toxic) | 870 |

Method: In-house, based on Hotzel and Croome 1999

## Sample Details

**Laboratory ID:** C06041-4 **Sample Type:** Water **Date Sampled:** 05/01/2022 15:15
**Description:** Opihi Gallery **Date Received:** 06/01/2022 11:50
**Customer ID:** Opihi Gallery

| Species | Description | Unit Count (Units/mL) | Cell Count (Cells/mL) | *Mean Cell Vol. (µm³)** | *Biovolume (mm³/L)** |
|---|---|---|---|---|---|
| Total Cyanobacteria cell count | | | 580 | | 0.0003 |
| Total unit count | | 24 | | | |
| Picocyanobacteria (< 1 µm) | Potentially Toxic Cyanobacteria | | 580 | 0.52 | 0.0003 |
| Planktolyngbya sp. | Cyanobacteria (not known to be toxic) | 24 | | | |

Method: In-house, based on Hotzel and Croome 1999
*Biovolume Method: In-house, based on NZ Guidelines for Cyanobacteria in Recreational Fresh Waters - Interim Guidelines (Table A4.1) 2009*

## Sample Details

**Laboratory ID:** C06041-5 **Sample Type:** Water **Date Sampled:** 05/01/2022 16:30
**Description:** 108 Meadows Road **Date Received:** 06/01/2022 11:50
**Customer ID:** 108 Meadows Road

| Species | Description | Unit Count (Units/mL) |
|---|---|---|
| Total unit count | | 6 |
| Planktolyngbya sp. | Cyanobacteria (not known to be toxic) | 1 |
| Pseudanabaenaceae | Cyanobacteria (not known to be toxic) | 5 |

Method: In-house, based on Hotzel and Croome 1999

Results apply to samples as received unless otherwise specified.

*Taxa identifications and enumeration are reported to the best possible certainty within the limitations of bright field microscopy and on-going taxonomic reviews. These limitations are most apparent in organisms with a cell diameter less than 2.5µm.*

Our routine detection limits for chemical testing relate to samples with a clean matrix.
Reported detection limits may be higher for individual samples if there is insufficient sample or the matrix is complex.

< means less than, > means greater than

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**Date Generated:** 7/1/22

**Authorised by:** Sumali Nanayakkara

**Position:** Senior Technician, Natural Toxins Laboratory

**Signature:** 

Test results indicated as not accredited are outside the scope of the laboratory's accreditation



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