



Corporate Accreditation No 63  
Accredited for compliance with ISO/IEC 17025 - Testing



## Analytical Report 287713

Issue Date: 12/07/2023  
Issued By : Sydney Water Laboratory Services

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### Sydney Water Approved Signatory

[Redacted], Phycology Supervisor	[Redacted], Organics Analyst	[Redacted], Organics Senior Analyst
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Where a result is required to meet a compliance limit or specification the associated uncertainty must be considered. Uncertainty estimates are available for all accredited test results.

**SAMPLE SUMMARY**

<u>Client Sample ID</u>	<u>Sample Number</u>	<u>Sampling Procedure</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Date Authorised</u>	<u>Description</u>
235502	L23052690	1	22/06/2023	26/06/2023	29/06/2023	E12 (ENVIRONMENTAL WATER)
235503	L23052691	1	22/06/2023	26/06/2023	29/06/2023	E15 (ENVIRONMENTAL WATER)
235504	L23052692	1	22/06/2023	26/06/2023	29/06/2023	E14 (ENVIRONMENTAL WATER)
235524	L23052693	1	22/06/2023	26/06/2023	10/07/2023	E12 (ENVIRONMENTAL WATER)
235525	L23052694	1	22/06/2023	26/06/2023	11/07/2023	E15 (ENVIRONMENTAL WATER)
235526	L23052695	1	22/06/2023	26/06/2023	10/07/2023	E14 (ENVIRONMENTAL WATER)

**Sampling procedures**

- 1 Samples analysed as received.
- 2 Samples collected as per FS procedures SAWI 070, Excluding Oil & Grease which is collected as per clients instructions.
- 3 Samples collected as per FS procedures SAWI 070.
- 4 Results reported as received from WNSW.

**ANALYTICAL RESULTS**

<b>Client Sample ID</b>	235502	235503	235504	235524	235525	235526		
<b>Sampled Date</b>	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM		
<b>Sample Number</b>	L23052690	L23052691	L23052692	L23052693	L23052694	L23052695		

**ALGAL**

**MA70CENT : Total Algal ID & Enumeration, Including ASU & Biovolumes**

Total Algae	cells/mL	-	-	-	1542000	250000	350100		
Total Biovol	mm3/L	-	-	-	47.5	15.25	25.58		
Total ASU	ASU/mL	-	-	-	32390	13000	19660		
Total Blue Green	cells/mL	-	-	-	1442000	166400	218500		
Blue Green Biovol	mm3/L	-	-	-	10.69	2.44	1.92		
Blue Green ASU	ASU/mL	-	-	-	8884	2095	1722		
Potentially Toxic Blue Green	cells/mL	-	-	-	44970	3190	2220		
Potentially Toxic Blue Green Biovol	mm3/L	-	-	-	1.42	0.092	0.065		
Potentially Toxic Blue Green ASU	ASU/mL	-	-	-	1723	117.9	83.9		
Potentially Toxic ASU	ASU/mL	-	-	-	1723	117.9	83.9		
Potentially Toxic Algae	cells/mL	-	-	-	44970	3190	2220		

"-" = Not required or refer to Laboratory comment

<b>Client Sample ID</b>	235502	235503	235504	235524	235525	235526		
<b>Sampled Date</b>	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM		
<b>Sample Number</b>	L23052690	L23052691	L23052692	L23052693	L23052694	L23052695		

**ALGAL**

**MA70CENT : Total Algal ID & Enumeration, Including ASU & Biovolumes(Continued)**

Potentially Toxic Biovol	mm3/L	-	-	-	1.42	0.092	0.065		
Total Colonies	cols/mL	-	-	-	0.00	0.00	0.00		

**MA91 : Individual Species Total Count, Total BioVol, Total ASU**

Algae Source*	N/A	-	-	-	EXTERNAL	EXTERNAL	EXTERNAL		
Date of Performance	DD/MM/YY				10/07/23 00:00	10/07/23 00:00	10/07/23 00:00		

**ORGANICS**

**TC0049DW : Algal Toxins**

Cylindrospermopsin (extra cellular)	ug/L	0.38	0.40	0.38	-	-	-		
Cylindrospermopsin (intra cellular)	ug/L	0.10	<0.05	0.05	-	-	-		
Anatoxin-a(extracellular)	ug/L	<0.1	<0.1	<0.1	-	-	-		
Anatoxin-a(intracellular)	ug/L	<0.1	<0.1	<0.1	-	-	-		

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<b>Client Sample ID</b>	235502	235503	235504	235524	235525	235526		
<b>Sampled Date</b>	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM		
<b>Sample Number</b>	L23052690	L23052691	L23052692	L23052693	L23052694	L23052695		

**ORGANICS**

TC0049DW : Algal Toxins(Continued)

Nodularin (extracellular)	ug/L	<0.1	<0.1	<0.1	-	-	-		
Nodularin (intracellular)	ug/L	<0.1	<0.1	<0.1	-	-	-		
Microcystin RR(extracellular)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Microcystin YR(extracellular)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Microcystin LR(extracellular)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Microcystin LR(intracellular)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Microcystin YR(intracellular)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Microcystin RR(intracellular)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Anatoxin-a(total)	ug/L	<0.1	<0.1	<0.1	-	-	-		
Cylindrospermopsin(total)	ug/L	0.48	0.41	0.43	-	-	-		

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<b>Client Sample ID</b>	235502	235503	235504	235524	235525	235526		
<b>Sampled Date</b>	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM		
<b>Sample Number</b>	L23052690	L23052691	L23052692	L23052693	L23052694	L23052695		

**ORGANICS**

**TC0049DW : Algal Toxins(Continued)**

Microcystin LR(total)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Microcystin RR(total)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Microcystin YR(total)	ug/L	<0.05	<0.05	<0.05	-	-	-		
Nodularin (total)	ug/L	<0.1	<0.1	<0.1	-	-	-		
Date of Performance	DD/MM/YY	26/06/23	26/06/23	26/06/23					

**TC0061DW : Paralytic Shellfish Toxins (PST) Analysis by UPLCMSMS**

Saxitoxin	ug/L	<0.4	<0.4	<0.4	-	-	-		
Neosaxitoxin	ug/L	<0.3	<0.3	<0.3	-	-	-		
dcSTX	ug/L	<0.5	<0.5	<0.5	-	-	-		
C2	ug/L	<0.3	<0.3	<0.3	-	-	-		
GTX4	ug/L	<0.3	<0.3	<0.3	-	-	-		
GTX3	ug/L	<0.5	<0.5	<0.5	-	-	-		

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<b>Client Sample ID</b>		235502	235503	235504	235524	235525	235526		
<b>Sampled Date</b>		22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM	22/06/2023 08:59:00 AM	22/06/2023 10:35:00 AM	22/06/2023 11:55:00 AM		
<b>Sample Number</b>		L23052690	L23052691	L23052692	L23052693	L23052694	L23052695		
<b>ORGANICS</b>									
TC0061DW : Paralytic Shellfish Toxins (PST) Analysis by UPLCMSMS(Continued)									
GTX5	ug/L	<0.5	<0.5	<0.5	-	-	-		
dcNeo	ug/L	<0.5	<0.5	<0.5	-	-	-		
dcGTX3	ug/L	<0.3	<0.3	<0.3	-	-	-		
GTX6	ug/L	<0.3	<0.3	<0.3	-	-	-		
GTX2	ug/L	<1	<1	<1	-	-	-		
GTX1	ug/L	<0.5	<0.5	<0.5	-	-	-		
C1	ug/L	<0.5	<0.5	<0.5	-	-	-		
dcGTX2	ug/L	<0.5	<0.5	<0.5	-	-	-		
Date of Performance	DD/MM/YY	27/06/23	27/06/23	27/06/23					

**COMMENTS**

<u>Sample ID</u>	<u>Comment Level</u>	<u>Method</u>	<u>Test</u>	<u>Comment</u>
L23052693	Method	MA91	-	Sample received unpreserved/ partially preserved, results may be compromised. Debris present in the sample.
L23052694	Method	MA91	-	Sample received unpreserved/ partially preserved, results may be compromised. Debris present in the sample.

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L23052695	Method	MA91	-	Sample received unpreserved/ partially preserved, results may be compromised. Debris present.
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**LABORATORY QC RESULTS**

N/A - Not Applicable

PQL - Practical Quantitation Limit

LOQ - Limit of Quantification

RPD - Relative Percent Difference

SPIKE/Positive Control - Addition of a known amount and concentration

Duplicate Precision = Accepted - Result 2 within 95% confidence limits of result 1

Duplicate Precision = Outlier - Result 2 outside 95% confidence limits of result 1

Duplicate Precision = Not calculated - Result is outside test range

LOQ	Blank	Control <i>Acceptance Criteria</i>	Spike <i>Acceptance Criteria</i>	Duplicate1	Duplicate2	RPD <i>Acceptance Criteria</i>
<b>TC0049DW Anatoxin-a(extracellular)</b>						
<0.1 ug/L	<0.1	120 50.0 - 120.0 ug/L	110 % Recovery 50.0 - 130.0 % Recovery	<0.1	<0.1	B 0.0 - 0.0 %
<b>TC0049DW Anatoxin-a(intracellular)</b>						
<0.1 ug/L	F		E	<0.1	<0.1	B 0.0 - 0.0 %
<b>TC0049DW Anatoxin-a(total)</b>						
<0.1 ug/L	F		E	<0.1	<0.1	B 0.0 - 0.0 %
<b>TC0049DW Cylindrospermopsin (extracellular)</b>						
<0.05 ug/L	<0.05	96 50.0 - 120.0 ug/L	93 % Recovery 50.0 - 130.0 % Recovery	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Cylindrospermopsin (intracellular)</b>						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Cylindrospermopsin(total)</b>						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %

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LOQ	Blank	Control <i>Acceptance Criteria</i>	Spike <i>Acceptance Criteria</i>	Duplicate1	Duplicate2	RPD <i>Acceptance Criteria</i>
<b>TC0049DW Microcystin LR(extracellular)</b>						
<0.05 ug/L	<0.05	92 50.0 - 120.0 ug/L	70 % Recovery 50.0 - 130.0 % Recovery	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Microcystin LR(intracellular)</b>						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Microcystin LR(total)</b>						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Microcystin RR(extracellular)</b>						
<0.05 ug/L	<0.05	98 50.0 - 120.0 ug/L	70 % Recovery 50.0 - 130.0 % Recovery	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Microcystin RR(intracellular)</b>						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Microcystin RR(total)</b>						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Microcystin YR(extracellular)</b>						
<0.05 ug/L	<0.05	100 50.0 - 120.0 ug/L	76 % Recovery 50.0 - 130.0 % Recovery	<0.05	<0.05	B 0.0 - 0.0 %

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LOQ	Blank	Control <i>Acceptance Criteria</i>	Spike <i>Acceptance Criteria</i>	Duplicate1	Duplicate2	RPD <i>Acceptance Criteria</i>
<b>TC0049DW Microcystin YR(intracellular)</b>						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Microcystin YR(total)</b>						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
<b>TC0049DW Nodularin (extracellular)</b>						
<0.1 ug/L	<0.1	94 50.0 - 120.0 ug/L	77 % Recovery 50.0 - 130.0 % Recovery	<0.1	<0.1	B 0.0 - 0.0 %
<b>TC0049DW Nodularin (intracellular)</b>						
<0.1 ug/L	F		E	<0.1	<0.1	B 0.0 - 0.0 %
<b>TC0049DW Nodularin (total)</b>						
<0.1 ug/L	F		E	<0.1	<0.1	B 0.0 - 0.0 %
<b>TC0061DW C1</b>						
<0.5 ug/L	<0.5	110 70.0 - 130.0 ug/L	81 % Recovery 50.0 - 130.0 % Recovery	<0.5	<0.5	B 0.0 - 0.0 %
<b>TC0061DW C2</b>						
<0.3 ug/L	<0.3	97 70.0 - 130.0 ug/L	66 % Recovery 50.0 - 130.0 % Recovery	<0.3	<0.3	B 0.0 - 0.0 %

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LOQ	Blank	Control <i>Acceptance Criteria</i>	Spike <i>Acceptance Criteria</i>	Duplicate1	Duplicate2	RPD <i>Acceptance Criteria</i>
<b>TC0061DW dcGTX2</b>						
<0.5 ug/L	<0.5	110 <i>70.0 - 130.0 ug/L</i>	83 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
<b>TC0061DW dcGTX3</b>						
<0.3 ug/L	<0.3	120 <i>70.0 - 130.0 ug/L</i>	63 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	B <i>0.0 - 0.0 %</i>
<b>TC0061DW dcNeo</b>						
<0.5 ug/L	<0.5	110 <i>70.0 - 130.0 ug/L</i>	57 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
<b>TC0061DW dcSTX</b>						
<0.5 ug/L	<0.5	110 <i>70.0 - 130.0 ug/L</i>	68 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
<b>TC0061DW GTX1</b>						
<0.5 ug/L	<0.5	98 <i>70.0 - 130.0 ug/L</i>	73 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
<b>TC0061DW GTX2</b>						
<1 ug/L	<1	100 <i>70.0 - 130.0 ug/L</i>	79 % Recovery <i>50.0 - 130.0 % Recovery</i>	<1	<1	B <i>0.0 - 0.0 %</i>
<b>TC0061DW GTX3</b>						
<0.5 ug/L	<0.5	100 <i>70.0 - 130.0 ug/L</i>	80 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>

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LOQ	Blank	Control <i>Acceptance Criteria</i>	Spike <i>Acceptance Criteria</i>	Duplicate1	Duplicate2	RPD <i>Acceptance Criteria</i>
<b>TC0061DW GTX4</b>						
<0.3 ug/L	<0.3	<b>110</b> <i>70.0 - 130.0 ug/L</i>	<b>61 % Recovery</b> <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	<b>B</b> <i>0.0 - 0.0 %</i>
<b>TC0061DW GTX5</b>						
<0.5 ug/L	<0.5	<b>130</b> <i>70.0 - 130.0 ug/L</i>	<b>78 % Recovery</b> <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	<b>B</b> <i>0.0 - 0.0 %</i>
<b>TC0061DW GTX6</b>						
<0.3 ug/L	<0.3	<b>96</b> <i>70.0 - 130.0 ug/L</i>	<b>100 % Recovery</b> <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	<b>B</b> <i>0.0 - 0.0 %</i>
<b>TC0061DW Neosaxitoxin</b>						
<0.3 ug/L	<0.3	<b>120</b> <i>70.0 - 130.0 ug/L</i>	<b>81 % Recovery</b> <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	<b>B</b> <i>0.0 - 0.0 %</i>
<b>TC0061DW Saxitoxin</b>						
<0.4 ug/L	<0.4	<b>120</b> <i>70.0 - 130.0 ug/L</i>	<b>72 % Recovery</b> <i>50.0 - 130.0 % Recovery</i>	<0.4	<0.4	<b>B</b> <i>0.0 - 0.0 %</i>

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## Extra Note:

F: Blank is not applicable for this analyte

E: Spike is not applicable for this analyte

DUPLICATE Anatoxin-a(extracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Anatoxin-a(intracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Anatoxin-a(total) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Cylindrospermopsin (extracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Cylindrospermopsin (intracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Cylindrospermopsin(total) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin LR(extracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin LR(intracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin LR(total) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin RR(extracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin RR(intracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin RR(total) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin YR(extracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin YR(intracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Microcystin YR(total) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Nodularin (extracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Nodularin (intracellular) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Nodularin (total) B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE C1 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE C2 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE dcGTX2 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE dcGTX3 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE dcNeo B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE dcSTX B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE GTX1 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE GTX2 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE GTX3 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE GTX4 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE GTX5 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE GTX6 B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Neosaxitoxin B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Saxitoxin B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

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