



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



Analytical Report 282739

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Sydney Water Approved Signatory

[REDACTED], Phycology Analyst	[REDACTED], Phycology Analysis	[REDACTED], Organics 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>
232155	L23029760	1	04/04/2023	05/04/2023	13/04/2023	KR (WATER SAMPLE)
232159	L23029761	1	04/04/2023	05/04/2023	13/04/2023	PBK (WATER SAMPLE)

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

Client Sample ID	232155	232159						
Sampled Date	04/04/2023 11:00:00 AM	04/04/2023 12:20:00 PM						
Sample Number	L23029760	L23029761						

ALGAL

MA70CENT1 : Total Algal ID & Enumeration, Including ASU & Biovolumes

Blue Green ASU	ASU/mL	938.2	165.5					
Blue Green Biovol	mm3/L	2.41	0.484					
Potentially Toxic Algae	cells/mL	6190	760					
Potentially Toxic ASU	ASU/mL	243.8	26.7					
Potentially Toxic Biovol	mm3/L	0.299	0.021					
Potentially Toxic Blue Green	cells/mL	6190	760					
Potentially Toxic Blue Green ASU	ASU/mL	243.8	26.7					
Potentially Toxic Blue Green Biovol	mm3/L	0.299	0.021					
Total Algae	cells/mL	129400	32340					
Total ASU	ASU/mL	4266	1806					

Client Sample ID		232155	232159						
Sampled Date		04/04/2023 11:00:00 AM	04/04/2023 12:20:00 PM						
Sample Number		L23029760	L23029761						
ALGAL									
MA70CENTI : Total Algal ID & Enumeration, Including ASU & Biovolumes(Continued)									
Total Biovol	mm3/L	4.66	2.92						
Total Blue Green	cells/mL	98760	19680						
Total Colonies	cols/mL	0.00	0.00						
MA91 : Individual Species Total Count, Total BioVol, Total ASU									
Algae Source*	N/A	EXTERNAL	EXTERNAL						
Date of Performance	DD/MM/YY	13/04/23 00:00	13/04/23 00:00						
ORGANICS									
TC0049DWI : Algal Toxins									
Anatoxin-a(extracellular)	ug/L	<0.1	<0.1						
Anatoxin-a(intracellular)	ug/L	<0.1	<0.1						
Cylindrospermopsin (extra cellular)	ug/L	0.64	<0.05						

* Indicates NATA accreditation does not cover the performance of this service

Client Sample ID		232155	232159						
Sampled Date		04/04/2023 11:00:00 AM	04/04/2023 12:20:00 PM						
Sample Number		L23029760	L23029761						
ORGANICS									
TC0049DWI : Algal Toxins(Continued)									
Cylindrospermopsin (intra cellular)	ug/L	<0.05	<0.05						
Microcystin LR(extracellular)	ug/L	<0.05	<0.05						
Microcystin LR(intracellular)	ug/L	<0.05	<0.05						
Microcystin RR(extracellular)	ug/L	<0.05	<0.05						
Microcystin RR(intracellular)	ug/L	<0.05	<0.05						
Microcystin YR(extracellular)	ug/L	<0.05	<0.05						
Microcystin YR(intracellular)	ug/L	<0.05	<0.05						
Nodularin (extracellular)	ug/L	<0.1	<0.1						
Nodularin (intracellular)	ug/L	<0.1	<0.1						
Date of Performance	DD/MM/YY	05/04/23	05/04/23						

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Client Sample ID	232155	232159						
Sampled Date	04/04/2023 11:00:00 AM	04/04/2023 12:20:00 PM						
Sample Number	L23029760	L23029761						

ORGANICS

TC0061DWI : Paralytic Shellfish Toxins (PST) Analysis by UPLCMSMS

C1	ug/L	<0.5	<0.5					
C2	ug/L	<0.3	<0.3					
dcGTX2	ug/L	<0.5	<0.5					
dcGTX3	ug/L	<0.3	<0.3					
dcNeo	ug/L	<0.5	<0.5					
dcSTX	ug/L	<0.5	<0.5					
GTX1	ug/L	<0.5	<0.5					
GTX2	ug/L	<1	<1					
GTX3	ug/L	<0.5	<0.5					
GTX4	ug/L	<0.3	<0.3					
GTX5	ug/L	<0.5	<0.5					
GTX6	ug/L	<0.3	<0.3					

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Client Sample ID		232155	232159						
Sampled Date		04/04/2023 11:00:00 AM	04/04/2023 12:20:00 PM						
Sample Number		L23029760	L23029761						
ORGANICS									
TC0061DWI : Paralytic Shellfish Toxins (PST) Analysis by UPLCMSMS(Continued)									
Neosaxitoxin	ug/L	<0.3	<0.3						
Saxitoxin	ug/L	<0.4	<0.4						
Date of Performance	DD/MM/YY	05/04/23	05/04/23						

COMMENTS

<u>Sample ID</u>	<u>Comment Level</u>	<u>Method</u>	<u>Test</u>	<u>Comment</u>
L23029760	Method	MA91	-	Sample received unpreserved/ partially preserved, results may be compromised. Debris present in the sample.
L23029761	Method	MA91	-	Sample received unpreserved/ partially preserved, results may be compromised. Debris present in the sample.

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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

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LOQ	Blank	Control <i>Acceptance Criteria</i>	Spike <i>Acceptance Criteria</i>	Duplicate1	Duplicate2	RPD <i>Acceptance Criteria</i>
TC0049DWI Anatoxin-a(extracellular)						
<0.1 ug/L	<0.1	87 50.0 - 120.0 ug/L	75 % Recovery 50.0 - 130.0 % Recovery	<0.1	<0.1	B 0.0 - 0.0 %
TC0049DWI Anatoxin-a(intracellular)						
<0.1 ug/L	F		E	<0.1	<0.1	B 0.0 - 0.0 %
TC0049DWI Cylindrospermopsin (extracellular)						
<0.05 ug/L	<0.05	92 50.0 - 120.0 ug/L	78 % Recovery 50.0 - 130.0 % Recovery	<0.05	<0.05	B 0.0 - 0.0 %
TC0049DWI Cylindrospermopsin (intracellular)						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
TC0049DWI Microcystin LR(extracellular)						
<0.05 ug/L	<0.05	70 50.0 - 120.0 ug/L	64 % Recovery 50.0 - 130.0 % Recovery	<0.05	<0.05	B 0.0 - 0.0 %
TC0049DWI Microcystin LR(intracellular)						
<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>
TC0049DWI Microcystin RR(extracellular)						
<0.05 ug/L	<0.05	74 50.0 - 120.0 ug/L	66 % Recovery 50.0 - 130.0 % Recovery	<0.05	<0.05	B 0.0 - 0.0 %
TC0049DWI Microcystin RR(intracellular)						
<0.05 ug/L	F		E	0.08	0.08	B 0.0 - 0.0 %
TC0049DWI Microcystin YR(extracellular)						
<0.05 ug/L	<0.05	73 50.0 - 120.0 ug/L	68 % Recovery 50.0 - 130.0 % Recovery	<0.05	<0.05	B 0.0 - 0.0 %
TC0049DWI Microcystin YR(intracellular)						
<0.05 ug/L	F		E	<0.05	<0.05	B 0.0 - 0.0 %
TC0049DWI Nodularin (extracellular)						
<0.1 ug/L	<0.1	70 50.0 - 120.0 ug/L	67 % Recovery 50.0 - 130.0 % Recovery	<0.1	<0.1	B 0.0 - 0.0 %
TC0049DWI Nodularin (intracellular)						
<0.1 ug/L	F		E	<0.1	<0.1	B 0.0 - 0.0 %
TC0061DWI C1						
<0.5 ug/L	<0.5	100 70.0 - 130.0 ug/L	93 % Recovery 50.0 - 130.0 % Recovery	<0.5	<0.5	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>
TC0061DWI C2						
<0.3 ug/L	<0.3	100 <i>70.0 - 130.0 ug/L</i>	99 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	B <i>0.0 - 0.0 %</i>
TC0061DWI dcGTX2						
<0.5 ug/L	<0.5	100 <i>70.0 - 130.0 ug/L</i>	110 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
TC0061DWI dcGTX3						
<0.3 ug/L	<0.3	100 <i>70.0 - 130.0 ug/L</i>	90 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	B <i>0.0 - 0.0 %</i>
TC0061DWI dcNeo						
<0.5 ug/L	<0.5	100 <i>70.0 - 130.0 ug/L</i>	62 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
TC0061DWI dcSTX						
<0.5 ug/L	<0.5	100 <i>70.0 - 130.0 ug/L</i>	71 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
TC0061DWI GTX1						
<0.5 ug/L	<0.5	100 <i>70.0 - 130.0 ug/L</i>	79 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
TC0061DWI GTX2						
<1 ug/L	<1	97 <i>70.0 - 130.0 ug/L</i>	90 % Recovery <i>50.0 - 130.0 % Recovery</i>	<1	<1	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>
TC0061DWI GTX3						
<0.5 ug/L	<0.5	98 <i>70.0 - 130.0 ug/L</i>	87 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
TC0061DWI GTX4						
<0.3 ug/L	<0.3	97 <i>70.0 - 130.0 ug/L</i>	94 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	B <i>0.0 - 0.0 %</i>
TC0061DWI GTX5						
<0.5 ug/L	<0.5	110 <i>70.0 - 130.0 ug/L</i>	94 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.5	<0.5	B <i>0.0 - 0.0 %</i>
TC0061DWI GTX6						
<0.3 ug/L	<0.3	99 <i>70.0 - 130.0 ug/L</i>	87 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	B <i>0.0 - 0.0 %</i>
TC0061DWI Neosaxitoxin						
<0.3 ug/L	<0.3	100 <i>70.0 - 130.0 ug/L</i>	76 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.3	<0.3	B <i>0.0 - 0.0 %</i>
TC0061DWI Saxitoxin						
<0.4 ug/L	<0.4	110 <i>70.0 - 130.0 ug/L</i>	79 % Recovery <i>50.0 - 130.0 % Recovery</i>	<0.4	<0.4	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 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 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 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 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 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 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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