

L23066566

PHYTOPLANKTON ANALYSIS

REPORT NO.

Date Sampled:

Address:

290314

Depth: N/A

Supercedes Report No:

Chlorophyll a: NA

Microcystin equivalents: NA

Disclaimer: Samples analysed as

Date analysed:

9/08/2023 Analyst:

Site:

Client:

Lims No:

Client ID: 237457

Department of Planning and Environment

Method: **MA71CENT** Issued By: Sydney Water

> Laboratory Services received.

Issued On: 31/08/2023

TAXA

Cells/ mL

Significance

ASU/ mL

29/08/2023

Biovolum mm3/L

Page 1 of 2

Cyanophyta (Blue green)

Aphanizomenonaceae	260	Potentially toxic, taste & odour	17.42	0.027
Coccoid Blue Green Picoplankton	1177209	Filter clogging?	2,236.69	0.531
Pseudanabaena	5531		44.24	0.055
Subtotal	1183000		2,298.35	0.613

Cells/	ASU/	Biovolume
mT	mT	mm2/I

Total	l Blue Green	1183000	2298.00	0.613
* Pot	tentially Toxic Blue Green	260	17.40	0.027

Comment:

Debris present in the sample.

 $ASU: One\ ASU\ (Area\ Standard\ Unit)\ equals\ 400\mu m^2\ of\ algal\ cells\ (as\ cross\ sectional\ area)$

Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Coccoid Blue Green Picoplankton: Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece

^{*}Taxa with potential to produce toxins.

Sydney Water Approved Signatory:



Analyst



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.

Accreditation No.: 610 Biological testing



REPORT NO.

Address:

Supercedes Report No:

290314

Depth:

Chlorophyll a:

N/A NA

NA

Microcystin equivalents:

Date analysed:

Analyst:

29/08/2023

Lims No:

L23066567 Date Sampled: 9/08/2023

Site:

Client:

Client ID: 237464

Department of Planning and Environment

Method: **MA71CENT** Issued By: Sydney Water Laboratory Services

Disclaimer: Samples analysed as

received.

Issued On: 31/08/2023

TAXA

Cells/ mL

619328

Significance

ASU/ mL

1,213.83

Biovolum mm3/L

0.336

Page 1 of 2

Cyanophyta (Blue green)

Coccoid Blue Green Picoplankton	613244	Filter clogging?	1,165.16	0.276
Pseudanabaena	6084		48.67	0.060
Subtotal	619328		1 213 83	0.336

Cells/	ASU/	Biovolume
mL	mL	mm3/L

Total Blue Green	619300	1214.00	0.336
* Potentially Toxic Blue Green	0	0.00	0.000

Comment:

Debris present in the sample.

ASU: One ASU (Area Standard Unit) equals 400μm² of algal cells (as cross sectional area)

Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Coccoid Blue Green Picoplankton: Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece

^{*}Taxa with potential to produce toxins.

Sydney Water Approved Signatory:



Analyst



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Accreditation No.: 610 Biological testing



REPORT

Address:

290314

9/08/2023

Depth: N/A

Supercedes Report No:

Chlorophyll a: NA

Microcystin equivalents: NA

Disclaimer: Samples analysed as

Date analysed:

28/08/2023

Lims No:

L23066568 Date Sampled: Analyst:

Client ID: 237471 Site:

Client: **Department of Planning and Environment**

Method: **MA71CENT** Issued By: Sydney Water

Laboratory Services

received.

Issued On: 31/08/2023

TAXA

Cells/ mL

Significance

ASU/ mL

Biovolum mm3/L

Page 1 of 1

Cyanophyta (Blue green)

Coccoid Blue Green Picoplankton	917377	Filter clogging?		1,743.01	0.414
Subtotal	917377			1,743.01	0.414
	Cells/		ASU/	Biov	olume

	mL	mL	mm3/L
Total Blue Green	917400	1743.00	0.414
* Potentially Toxic Blue Green	0	0.00	0.000

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.

ASU: One ASU (Area Standard Unit) equals 400 µm² of algal cells (as cross sectional area)

Biovolume: Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Coccoid Blue Green Picoplankton: Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece

; Cyanodictyon

Phycology

Sydney Water Approved Signatory:

Analyst



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Accreditation No.: 610 Biological testing





REPORT Report no.

290314

Depth: N/A

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Supercedes Report No:

Chlorophyll a: NA

Microcystin equivalents: NA

Date analysed:

Lims No: L23066569 Date Sampled: 9/08/2023 Analyst:

Client ID: 237478

Address:

Site:

Client: Department of Planning and Environment

Method: MA71CENT Issued By: Sydney Water

Laboratory Services

Issued On: 31/08/2023

Disclaimer: Samples analysed as

29/08/2023

received.

TAXA

 $\begin{array}{cccc} Cells/ & Significance & ASU/ & Biovolum \\ mL & mL & mm3/L \end{array}$

Cyanophyta (Blue green)

Cyanophyta (Dide green)					
$\Lambda phanizomenonaceae$	139	Potentially toxic, taste & odour		9.31	0.014
Coccoid Blue Green Picoplankton	864006	Filter clogging?		1,641.61	0.390
Merismopedia	1475			1.47	0.012
Non toxic Aphanizomenonaceae	728	Taste & Odour		29.84	0.032
Romeria	369			5.90	0.002
Subtotal	866717			1,688.13	0.450
	Cells/ mL		ASU/ mL		olume u3/L
Total Blue Green	866700		1688.00		0.450
* Potentially Toxic Blue Green	139		9.31		0.014

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.

ASU: One ASU (Area Standard Unit) equals 400 µm² of algal cells (as cross sectional area)

Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Coccoid Blue Green Picoplankton: Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece

Sydney Water Approved Signatory:



Analyst



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Accreditation No.: 610 Biological testing



REPORT Report no.

290314

Depth: N/A

Supercedes Report No:

Chlorophyll a: NA

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Microcystin equivalents: NA

Date analysed:

Lims No: L23066570 Date Sampled: 9/08/2023 Analyst:

Client ID: 237485

Address:

Site:

Client: Department of Planning and Environment

Method: MA71CENT Issued By: Sydney Water

Laboratory Services

Issued On: 31/08/2023

Disclaimer: Samples analysed as

9.31

0.014

29/08/2023

received.

TAXA

Cells/ Significance ASU/ Biovolum mL mm3/L

Cyanophyta (Blue green)

Aphanizomenonaceae	139	Potentially toxic, taste & odour		9.31	0.014
Coccoid Blue Green Picoplankton	698970	Filter clogging?		1,328.04	0.315
Pseudanabaena	3318			26.54	0.033
Romeria	369			5.90	0.002
Subtotal	702796			1,369.79	0.364
	Cells/ mL		ASU/ mL		olume 13/L
Total Blue Green	702800		1370.00		0.364

Comment:

Debris present in the sample.

* Potentially Toxic Blue Green

ASU: One ASU (Area Standard Unit) equals 400 µm² of algal cells (as cross sectional area)

Biovolume: Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Coccoid Blue Green Picoplankton: Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece

139

^{*}Taxa with potential to produce toxins.

Sydney Water Approved Signatory:



Analyst



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.

Accreditation No.: 610 Biological testing



REPORT

Address:

290314

Depth: N/A

Supercedes Report No:

Chlorophyll a:

Microcystin equivalents: NA

Date analysed:

28/08/2023

NA

Lims No: Client ID: 237492

L23066571 Date Sampled: 9/08/2023 Analyst:

Site:

Client: **Department of Planning and Environment**

Method: **MA71CENT** Issued By: Sydney Water

Laboratory Services

Issued On: 31/08/2023

Disclaimer: Samples analysed as

received.

TAXA

Cells/ mL

Significance

ASU/ mL

Biovolum mm3/L

Page 1 of 2

Cyanophyta (Blue green)

Coccoid Blue Green Picoplankton	1322059	Filter clogging?	2,511.91	0.596
Pseudanabaena	3457		27.65	0.034
Raphidiopsis	2558	Potentially toxic	154.24	0.172
Subtotal	1328074		2,693.80	0.802

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	1328000	2694.00	0.802
* Potentially Toxic Blue Green	0	0.00	0.000

Comment:

Debris present in the sample.

 $ASU: One\ ASU\ (Area\ Standard\ Unit)\ equals\ 400\mu m^2\ of\ algal\ cells\ (as\ cross\ sectional\ area)$

Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Coccoid Blue Green Picoplankton: Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece

^{*}Taxa with potential to produce toxins.

Sydney Water Approved Signatory:



Analyst



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.

Accreditation No.: 610 Biological testing



REPORT

290314

Depth: N/A

Supercedes Report No:

Chlorophyll a: NA

Microcystin equivalents: NA

Disclaimer: Samples analysed as

Date analysed:

Lims No: 9/08/2023 Analyst: L23066572 Date Sampled:

Client ID: 237499

Address:

Site:

Client:

Department of Planning and Environment

Method: **MA71CENT** Issued By: Sydney Water

Laboratory Services

received.

Issued On: 31/08/2023

TAXA

Cells/

Significance

ASU/ mL

29/08/2023

Biovolum mm3/L

Page 1 of 1

mL

Cyanophyta (Blue green)

Coccoid Blue Green Picoplankton	1530013	Filter clogging?	2,907.02 0.69	90
Subtotal	1530013		2,907.02 0.69	90

Cells/	ASU/	Biovolume
mL	mL	mm3/L
1530000	2907.00	0.690

Total Blue Green	1530000	2907.00	0.690
* Potentially Toxic Blue Green	0	0.00	0.000

Comment:

Debris present in the sample.

ASU: One ASU (Area Standard Unit) equals 400 µm² of algal cells (as cross sectional area)

Biovolume: Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Coccoid Blue Green Picoplankton: Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece

; Cyanodictyon

Phycology

Sydney Water Approved Signatory:

Analyst



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.

Accreditation No.: 610 Biological testing



^{*}Taxa with potential to produce toxins.



REPORT

290314

Depth:

Supercedes Report No: Chlorophyll a:

Microcystin equivalents: NA

Date analysed: 29/08/2023

N/A

NA

Lims No: L23066573 Date Sampled: 9/08/2023 Analyst:

Client ID: 237506

Address:

Site:

Client: Department of Planning and Environment

Method: MA71CENT Issued By: Sydney Water

Laboratory Services

Issued On: 31/08/2023

Disclaimer: Samples analysed as

received.

TAXA

Cells/ mL **Significance**

ASU/ mL Biovolum mm3/L

Page 1 of 1

Cyanophyta (Blue green)

Coccoid Blue Green Picoplankton	813345	Filter clogging?	1,545.35	0.367
Subtotal	813345		1 545 35	0.367

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	813300	1545.00	0.367
* Potentially Toxic Blue Green	0	0.00	0.000

Comment:

Debris present in the sample.

ASU: One ASU (Area Standard Unit) equals 400 µm² of algal cells (as cross sectional area)

Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

 $Coccoid\ Blue\ Green\ Picoplankton:\ Aphanocapsa;\ Aphanothece;\ Cyanogranis;\ Cyanonephron;\ Cyanocatena;\ Gloeocapsa;\ Gloeothece$

; Cyanodictyon

Phycology

Sydney Water Approved Signatory:

Brad Castelnuovo, Analyst



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Uncertainty estimates are available for all accredited test results.

Accreditation No.: 610 Biological testing



^{*}Taxa with potential to produce toxins.