

REPORT Report no.

282169

30/03/2023

Depth: N/A

Supercedes Report No:

Chlorophyll a:

NA

NA

Microcystin equivalents:

Date analysed:

Analyst:

3/04/2023

ASU/

Biovolum

Page 1 of 4

Lims No: L23028277

Date Sampled:

Client ID: 232075 Site:

Client:

Address:

Department of Planning and Environment

Method: MA70CENTI

Issued By: Sydney Water

Disclaimer: Samples analysed as

received.

Significance

Issued On: 03/04/2023

Cells/

Laboratory Services

	mL	5	mL	mm3/L
Cyanophyta (Blue green)				
Anabaena	208	Taste & Odour	30.57	0.022
Anabaenopsis	104	Potentially toxic	7.17	0.012
Anagnostidinema	728		21.98	0.012
Aphanizomenonaceae	1526	Potentially toxic, taste & odour	102.24	0.158
Coccoid Blue Green Picoplankton	181573	Filter clogging?	344.98	0.081
Merismopedia	18804		18.80	0.158
Microcystis	40706	Potentially toxic, taste & odour	1,143.83	1.132
Myxobaktron	1936		34.07	0.009
Non toxic Aphanizomenonaceae	451	Taste & Odour	18.49	0.020
Planktolyngbya	3191	Filter clogging	31.91	0.255
Planktothrix	2706	Potentially toxic	186.71	0.512
Pseudanabaena	1936		15.48	0.019
Romeria	553		8.84	0.003
Snowella	4425		54.87	0.034
Spirulina	1106		16.59	0.004
Synechococcus cf	2710		33.33	0.018
Subtotal	262663		2,069.86	2.449
Chrysophyta (Golden brown)				
Chrysochromulina	830	potentially ichthyotoxic - (?) toxic to fish	24.23	0.021
Subtotal	830		24.23	0.021
Bacillariophyta (Diatom)				
Acanthoceras	69	Filter clogging	152.49	0.390
Aulacoseira	1582	Filter clogging	643.87	0.950
Cyclotella	7301	Filter clogging	496.46	0.569



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282169

Depth: N/A

Supercedes Report No: Chlorophyll a:

Microcystin equivalents: NA

Date analysed: 3/04/2023

NA

ASU/

Biovolum

Page 2 of 4

Lims No: L23028277 Date Sampled: 30/03/2023 Analyst:

Client ID: 232075

Address:

REPORT Report no.

Site:

Client: Department of Planning and Environment

Method: MA70CENTI Issued By: Sydney Water

Laboratory Services

Issued On: 03/04/2023

Cells/

Disclaimer: Samples analysed as

received.

Significance

	mL	Significance	ML ASU/	mm3/L
Cyclotella species 4	277	Filter clogging	432.42	3.901
Cyclotella/Stephanodiscus	1659	Filter clogging	88.75	0.131
Navicula	277		372.56	0.467
Nitzschia	2081		449.49	0.210
Synedra	139		82.56	0.076
Subtotal	13385		2,718.60	6.694
Euglenophyta (Euglenoid)				
Euglena	69	Discolouration of water	121.99	0.159
Trachelomonas	277	Common after flood	777.26	0.626
Subtotal	346		899.25	0.785
Chlorophyta (Green)				
Actinastrum	2489		156.80	0.052
Ankistrodesmus	3318		1,247.56	0.447
Chlamydomonas	277	Taste & Odour	22.16	0.023
Crucigenia	830		6.64	0.015
Dictyosphaerium	8904		641.08	0.133
Elakatothrix	553		48.11	0.021
Kirchneriella	2765		138.25	0.052
Koliella	830	Filter clogging	12.45	0.001
Monoraphidium cf	4701		125.98	0.091
Oocystis	3650		346.75	0.372
Pediastrum	6388		766.56	0.300
Planctonema	2151		178.53	0.243
Scenedesmus species 1	8904		694.51	0.488
Scenedesmus species 2	1106		551.67	0.979
Schroederia	1106		224.51	0.151



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3/04/2023

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Lims No: L23028277 Client ID: 232075

7 Date Sampled:

Address:

30/03/2023

Analyst:

Site:

Client:

Department of Planning and Environment

Method: MA70CENTI Issued By: Sydney Water

Laboratory Services

Issued On: 03/04/2023

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Staurastrum	277		1,465.60	0.574
Tetraedron	1383		587.77	0.138
Treubaria	277		17.45	0.022
Subtotal	49909		7,232.38	4.102
Miscellaneous				
Haptophyte	830		80.26	0.133
Subtotal	830		80.26	0.133
Cryptophyta (Monad)				
Chroomonas	1659	Common after flood	398.16	0.411
Cryptomonas	277	Common after flood, Taste & Odour	149.58	0.263
Subtotal	1936		547.74	0.674
	Cells/ mL	ASU/ mL		ovolume mm3/L
Total Blue Green	262700	2070.00		2.450
* Potentially Toxic Blue Green	45040	1440.00		1.810
* Potentially Toxic Algae	45870	1464.00		1.840
Total Algae	329900	13570.00		14.860

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

^{*}Taxa with potential to produce toxins.

Phycology

Sydney Water Approved Signatory:



Where a result is required to meet a compliance limit or specification the associated uncertainty must be considered.

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Accreditation No.: 610 Biological testing



REPORT

282169

Depth: N/A

Page 1 of 3

Supercedes Report No:

Chlorophyll a:

Date analysed:

Analyst:

Microcystin equivalents: NA

NA

1/04/2023

Lims No: L23028279 Date Sampled: 30/03/2023

Client ID: 232079

Address:

Site:

Client: Department of Planning and Environment

Method: MA70CENTI Issued By: Sydney Water

Laboratory Services

Issued On: 03/04/2023

Disclaimer: Samples analysed as

received.

TAXA

Cells/	Significance	ASU/	Biovolum
mL		\mathbf{mL}	mm3/L

Cyanophyta (Blue green)

Cyanophyta (Blue green)				
Aphanizomenonaceae	642	Potentially toxic, taste & odour	43.01	0.066
Coccoid Blue Green Picoplankton	70037	Filter clogging?	133.07	0.031
Merismopedia	14749		14.74	0.124
Microcystis	35618	Potentially toxic, taste & odour	1,000.86	0.990
Planktolyngbya	10693	Filter clogging	106.93	0.855
Pseudanabaena	8480		67.84	0.084
Pseudanabaena galeata	6637		244.90	0.203
Raphidiopsis raciborskii	572	Potentially toxic, taste & odour	21.62	0.016
Spirulina	1475		22.12	0.005
Synechococcus cf	1475		18.14	0.009
Subtotal	150378		1,673.23	2.383
Chrysophyta (Golden brown)				
Chrysochromulina	369	potentially ichthyotoxic - (?) toxic to fish	10.77	0.009
Dichotomococcus	1475		18.43	0.012
Subtotal	1844		29.20	0.021
Bacillariophyta (Diatom)				
Aulacoseira	352	Filter clogging	143.26	0.211
Cyclotella	3871	Filter clogging	263.22	0.301
Cyclotella species 4	17	Filter clogging	26.53	0.239
Cyclotella/Stephanodiscus	1327	Filter clogging	70.99	0.105
Nitzschia	541		116.85	0.054
Subtotal	6108		620.85	0.910

Dinophyta (Dinoflagellate)



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Supercedes Report No: Chlorophyll a:

> Microcystin equivalents: NA

Analyst:

Date analysed: 1/04/2023

Disclaimer: Samples analysed as

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Lims No: L23028279 30/03/2023 Date Sampled:

Client ID: 232079

Address:

Site:

Client: Department of Planning and Environment

Method: **MA70CENTI** Issued By: Sydney Water

Laboratory Services

received.

Issued On: 03/04/2023

TAXA

(PO Box 73) West Rvde NSW 2114

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Peridinium species 1	17		17.00	0.071
Subtotal	17		17.00	0.071
Euglenophyta (Euglenoid)				
Euglena	156	Discolouration of water	275.80	0.360
Phacus	35		221.83	0.121
Trachelomonas	553	Common after flood	1,551.71	1.250
Subtotal	744		2,049.34	1.731
Chlorophyta (Green)				
Ankistrodesmus	4240		1,594.24	0.572
Dictyosphaerium	1844		132.76	0.027
Kirchneriella	4425		221.25	0.084
Koliella	369	Filter clogging	5.53	0.000
Lagerheimia	184		35.51	0.044
Micractinium	2212		28.75	0.033
Monoraphidium arcuatum	17		4.61	0.003
Monoraphidium cf	8296		222.33	0.162
Pediastrum	208		24.96	0.009
Scenedesmus species 1	15117		1,179.12	0.829
Tetraedron	737		313.22	0.073
Tetrastrum	2212		303.04	0.380
Treubaria	184		11.59	0.015
Subtotal	40045		4,076.91	2.231
Cryptophyta (Monad)				
Cryptomonas	553	Common after flood, Taste & Odour	298.62	0.525
Subtotal	553		298.62	0.525

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	150400	1673.00	2.380
* Potentially Toxic Blue Green	36830	1065.00	1.070
* Potentially Toxic Algae	37200	1076.00	1.080
Total Algae	199700	8765.00	7.870

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





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Accreditation No.: 610 Biological testing



282169

Depth: N/A

Chlorophyll a:

Date analysed:

NA

3/04/2023

Page 1 of 3

Microcystin equivalents:

NA

Disclaimer: Samples analysed as

Lims No: L23028281

Date Sampled:
Address:

REPORT Report no.

Supercedes Report No:

30/03/2023

Analyst:

Client ID: 232083 Site:

Client: Department of Planning and Environment

Method: MA70CENTI Issued By: Sydney Water

received

received.

Issued On: 03/04/2023

Laboratory Services

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Anabaenopsis	2212	Potentially toxic	152.62	0.262
Coccoid Blue Green Picoplankton	1080643	Filter clogging?	2,053.22	0.487
Dolichospermum	833	Potentially toxic, taste & odour	76.13	0.135
Merismopedia	22123		22.12	0.186
Microcystis	32299	Potentially toxic, taste & odour	907.60	0.898
Planktolyngbya	5619	Filter clogging	56.19	0.449
Pseudanabaena	9567		76.53	0.095
Raphidiopsis raciborskii	869	Potentially toxic, taste & odour	32.84	0.025
Sphaerospermopsis reniformis	2081	Taste & Odour	83.44	0.096
Synechococcus cf	1106		13.60	0.007
Subtotal	1157352		3,474.29	2.640
Chrysophyta (Golden brown)				
Synura	139	Taste & Odour	5.97	0.003
Subtotal	139		5.97	0.003
Bacillariophyta (Diatom)				
Aulacoseira	1249	Filter clogging	508.34	0.750
Cyclotella	5531	Filter clogging	376.10	0.431
Cyclotella species 4	69	Filter clogging	107.71	0.971
Cyclotella/Stephanodiscus	1659	Filter clogging	88.75	0.131
Navicula	69		92.80	0.116
Nitzschia	971		209.73	0.098
Synedra	69		40.98	0.037
Subtotal	9617		1,424.41	2.534



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Chlorophyll a: NA

Microcystin equivalents: NA

Disclaimer: Samples analysed as

Date analysed:

Analyst:

3/04/2023

Page 2 of 3

Lims No:

Site: Client: L23028281 Date Sampled:

Client ID: 232083

Address:

Department of Planning and Environment

Method: **MA70CENTI** Issued By: Sydney Water

> Laboratory Services Issued On: 03/04/2023

received.

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Dinophyta (Dinoflagellate)				
Peridinium species 2	69		300.35	3.567
Subtotal	69		300.35	3.567
Euglenophyta (Euglenoid)				
Euglena	486	Discolouration of water	859.24	1.124
Phacus	69		437.32	0.239
Strombomonas	139		111.89	0.027
Trachelomonas	1106	Common after flood	3,103.43	2.501
Subtotal	1800		4,511.88	3.891
Chlorophyta (Green)				
Crucigenia	8296		66.36	0.157
Dictyosphaerium	4425		318.60	0.066
Kirchneriella	3816		190.80	0.072
Koliella	2212	Filter clogging	33.18	0.003
Monoraphidium cf	7190		192.69	0.140
Pediastrum	278		33.36	0.013
Planctonema	278		23.07	0.031
Scenedesmus species 1	27654		2,157.01	1.517
Tetraedron	2212		940.10	0.221
Subtotal	56361		3,955.17	2.220
Cryptophyta (Monad)				
Chroomonas	6084	Common after flood	1,460.16	1.508
Cryptomonas	553	Common after flood, Taste & Odour	298.62	0.525
Subtotal	6637		1,758.78	2.033

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	1157000	3474.00	2.640
* Potentially Toxic Blue Green	36210	1169.00	1.320
* Potentially Toxic Algae	36210	1169.00	1.320
Total Algae	1232000	15430.00	16.890

Comment:

Debris present in the sample.

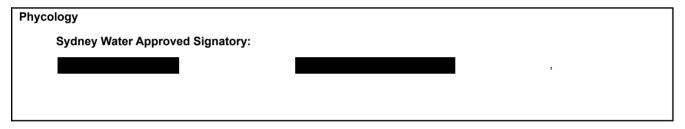
*Taxa with potential to produce toxins.

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





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REPORT NO.

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Supercedes Report No:

Chlorophyll a: NA

Date analysed:

Significance

Microcystin equivalents: NA

Disclaimer: Samples analysed as

1/04/2023

ASU/

24.88

0.002

Biovolum

Lims No: L23028283 Date Sampled: 30/03/2023 Analyst:

Client ID: 232087

Address:

Site:

Client: Department of Planning and Environment

Method: MA70CENTI Issued By: Sydney Water

Laboratory Services received.

Issued On: 03/04/2023

Cells/

TAXA

	mL	Signineance	mL	mm3/L
Cyanophyta (Blue green)				
Coccoid Blue Green Picoplankton	233064	Filter clogging?	442.82	0.105
Merismopedia	11034		11.03	0.092
Microcystis	14601	Potentially toxic, taste & odour	410.28	0.406
Planktolyngbya	9955	Filter clogging	99.55	0.796
Pseudanabaena	12721		101.76	0.127
Synechococcus cf	2212		27.20	0.014
Subtotal	283587		1,092.64	1.540
Bacillariophyta (Diatom)				
Aulacoseira	347	Filter clogging	141.22	0.208
Cyclotella	2212	Filter clogging	150.41	0.172
Cyclotella/Stephanodiscus	2157	Filter clogging	115.39	0.170
Nitzschia	1327		286.63	0.134
Subtotal	6043		693.65	0.684
Euglenophyta (Euglenoid)				
Euglena	208	Discolouration of water	367.74	0.481
Strombomonas	69		55.54	0.013
Subtotal	277		423.28	0.494
Chlorophyta (Green)				
Actinastrum	830		52.29	0.017
Chlamydomonas	1936	Taste & Odour	154.88	0.164
Dictyosphaerium	4978		358.41	0.074
Kirchneriella	3595		179.75	0.068

Filter clogging

1659

Koliella



L23028283

PHYTOPLANKTON ANALYSIS

REPORT Report no:

Date Sampled:

282169

30/03/2023

Depth: N/A

Supercedes Report No:

Chlorophyll a: NA

Microcystin equivalents: NA

Disclaimer: Samples analysed as

Date analysed: Analyst:

1/04/2023

Page 2 of 3

0.406

7.070

410.30

7076.00

Client ID: 232087

Address:

Site:

Lims No:

Client: **Department of Planning and Environment**

Method: **MA70CENTI** Issued By: Sydney Water

Laboratory Services

Issued On: 03/04/2023

received.

TAXA

IAAA					
	Cells/ mL	Significance		ASU/ mL	Biovolum mm3/L
Micractinium	1991			25.88	0.029
Monoraphidium cf	1936			51.88	0.037
Oocystis	1991			189.14	0.203
Pediastrum	833			99.96	0.039
Planctonema	833			69.13	0.094
Scenedesmus species 1	9457			737.64	0.518
Tetraedron	1106			470.05	0.110
Tetrastrum	4203			575.81	0.722
Treubaria	553			34.83	0.045
Subtotal	35901			3,024.53	2.122
Cryptophyta (Monad)					
Chroomonas	5807	Common after flood		1,393.68	1.440
Cryptomonas	830	Common after flood, Taste & Odour		448.20	0.788
Subtotal	6637			1,841.88	2.228
	Cells/ mL		ASU/ mL		iovolume mm3/L
Total Blue Green	283600		1093.00		1.540
* Potentially Toxic Blue Green	14600		410.30		0.406

Comment:

Total Algae

Debris present in the sample.

14600

332400

* Potentially Toxic Algae

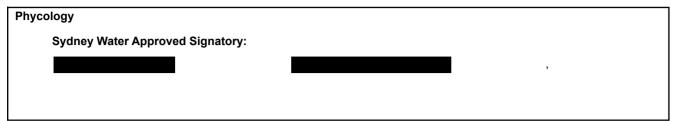
*Taxa with potential to produce toxins.

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





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N/A

Page 1 of 3

Supercedes Report No:

REPORT Report no.

Date Sampled:

Chlorophyll a: NA

Microcystin equivalents: NA

Analyst:

1/04/2023

Lims No: L23028285 Client ID: 232091

Address:

Site:

Client: Department of Planning and Environment

Method: MA70CENTI Issued By: Sydney Water Disclaimer: Samples analysed as

Laboratory Services received.

30/03/2023

Issued On: 03/04/2023

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Anagnostidinema	659		19.90	0.011
Coccoid Blue Green Picoplankton	69106	Filter clogging?	131.30	0.031
Merismopedia	2212		2.21	0.018
Microcystis	13661	Potentially toxic, taste & odour	383.87	0.380
Planktothrix	2341	Potentially toxic	161.52	0.443
Pseudanabaena	4701		37.60	0.047
Raphidiopsis raciborskii	208	Potentially toxic, taste & odour	7.86	0.006
Spirulina	2489		37.33	0.009
Synechococcus cf	553		6.80	0.003
Subtotal	95930		788.39	0.948
Bacillariophyta (Diatom)				
Aulacoseira	347	Filter clogging	141.22	0.208
Cyclotella	8213	Filter clogging	558.48	0.640
Cyclotella species 4	139	Filter clogging	216.99	1.957
Cyclotella/Stephanodiscus	2129	Filter clogging	113.90	0.168
Navicula	277		372.56	0.467
Nitzschia	278		60.04	0.028
Skeletonema	277	Filter clogging	207.75	0.018
Subtotal	11660		1,670.94	3.486
Euglenophyta (Euglenoid)				
Euglena	347	Discolouration of water	613.49	0.802
Phacus	69		437.32	0.239
Subtotal	416		1,050.81	1.041



282169

30/03/2023

Depth :

N/A

Supercedes Report No:

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Chlorophyll a:

NA

NA

Microcystin equivalents:

Date analysed:

1/04/2023

Page 2 of 3

Lims No: L23028285

Date Sampled:

Analyst:

Client ID: 232091 Site:

Client:

Address:

Department of Planning and Environment

Method: MA70CENTI

Issued By: Sydney Water

Disclaimer: Samples analysed as

received.

Issued On: 03/04/2023

Laboratory Services

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Chlorophyta (Green)				
Ankistrodesmus	1936		727.93	0.261
Crucigenia	1106		8.84	0.021
Dictyosphaerium	7743		557.49	0.116
Golenkinia	277		19.39	0.050
Kirchneriella	830		41.50	0.015
Monoraphidium cf	2212		59.28	0.043
Oocystis	1659		157.60	0.169
Planctonema	2352		195.21	0.265
Scenedesmus species 1	19357		1,509.84	1.061
Tetraedron	277		117.72	0.027
Subtotal	37749		3,394.80	2.028
Cryptophyta (Monad)				
Chroomonas	1383	Common after flood	331.92	0.342
Cryptomonas	553	Common after flood, Taste & Odour	298.62	0.525
Subtotal	1936		630.54	0.867
	Cells/ mL	ASU/ mL		iovolume mm3/L
Total Blue Green	95930	788.40)	0.948
* Potentially Toxic Blue Green	16210	553.30)	0.829
* Potentially Toxic Algae	16210	553.30)	0.829
Total Algae	147700	7535.00)	8.370

Comment:

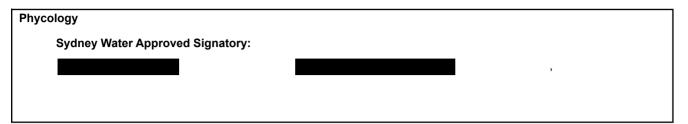
Debris present in the sample.

*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





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