

Certificate of Analysis

Laboratory Reference:230117-034

Attention:	Nz Queenstown Lab Results	Final Report:	496596-0	Replaces Report	493897-0
Client:	VEOLIA WATER	Report Issue Date:	15-Feb-2023		
Address:	74 Glenda Drive, Frankton, Queenstown, 9300	Received Date:	17-Jan-2023		
		Sampled By:	DH		
Client Reference:		Laboratory Activity Dates:	17-Jan-2023	-	28-Jan-2023
Purchase Order:	7300228298	Quote Reference :	48		

Amended report: Please note added metal results for sample 230117-034-2.

Sample Details

	WATERS	WATERS
Lab Sample ID:	230117-034-1	230117-034-2
Client Sample ID:	GLE003GL	S477
Sample Date/Time	17/01/2023 08:50	17/01/2023 08:40
Description:	GLE003GL Mull St	Glenorchy Source

Micro Summary View

Escherichia coli	MPN/100mL	<1.0	<1.0
Total Coliforms	MPN/100mL	<1.0	<1.0

Chemistry Detailed

Anions

Chloride	mg/L	-	1.07 ± 0.053
Nitrate (as N)	mg/L	-	0.341 ± 0.024
Sulphate	mg/L	-	4.9 ± 0.59

Oxygenated Halides/Bromide

Bromate	mg/L	<0.005	-
Bromide	mg/L	<0.005	-
Chlorate	mg/L	<0.01	-
Chlorite	mg/L	<0.005	-
Perchlorate	mg/L	<0.005	-

Sample Parameters and Field Testing

Sampled by Watercare Laboratory Services	Yes	Yes
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General Testing

Total Alkalinity (as CaCO3)	mg/L	-	75
True Colour (Dissolved)	Hazen Units	-	<5.0 *

Metals

Total Metals by ICP-MS—Trace (Default Digest)

Antimony (Total)	mg/L	-	<0.001
Arsenic (Total)	mg/L	-	0.0055 ± 0.0011
Barium (Total)	mg/L	-	0.0031 ± 0.00051
Cadmium (Total)	mg/L	-	<0.00005
Calcium (Total)	mg/L	-	29 ± 4.6
Chromium (Total)	mg/L	-	0.00062 ± 0.0001
Copper (Total)	mg/L	-	0.0059 ± 0.0011
Iron (Total)	mg/L	-	<0.002
Lead (Total)	mg/L	-	0.00065 ± 0.00011
Magnesium (Total)	mg/L	-	1.1 ± 0.25
Manganese (Total)	mg/L	-	<0.0005
Mercury (Total)	mg/L	-	<0.00005
Nickel (Total)	mg/L	-	0.00013 ± 0.000023
Sodium (Total)	mg/L	-	1.6 ± 0.33

Results marked with * are not accredited to International Accreditation New Zealand. A dash indicates no test performed.



Queenstown

74 Glenda Drive, Frankton, Queenstown, 9300
 T: (03) 409 0559

Invercargill

142 Esk Street, Invercargill, 9810
 T: (03) 214 4040

Analyst's Notes

The Nitrate (as N) analysis for sample Glenorchy Source commenced beyond the holding time of 2 Days

Reference Methods

The sample(s) referred to in this report were analysed by the following method(s)

Analyte	Method Reference	MDL	Samples	Location
Micro Summary View				
Escherichia coli	APHA (online edition) 9223 B	1 MPN/100mL	2	Queenstown
Escherichia coli	APHA (online edition) 9223 B	1 MPN/100mL	1	Queenstown
Total Coliforms	APHA (online edition) 9223 B	1 MPN/100mL	2	Queenstown
Total Coliforms	APHA (online edition) 9223 B	1 MPN/100mL	1	Queenstown

Chemistry Detailed

Anions

Chloride	APHA (online edition) 4110 B	0.02 mg/L	2	Auckland
Nitrate (as N)	APHA (online edition) 4110 B	0.002 mg/L	2	Auckland
Sulphate	APHA (online edition) 4110 B	0.02 mg/L	2	Auckland

Oxygenated Halides/Bromide

Bromate	USEPA 300.0 (modified)	0.005 mg/L	1	Auckland
Bromide	USEPA 300.0 (modified)	0.005 mg/L	1	Auckland
Chlorate	USEPA 300.0 (modified)	0.01 mg/L	1	Auckland
Chlorite	USEPA 300.0 (modified)	0.005 mg/L	1	Auckland
Perchlorate	USEPA 300.0 (modified)	0.005 mg/L	1	Auckland

Sample Parameters and Field Testing

Sampled by Watercare Laboratory Services	AS/NZS 5667 Part 4 (Lakes), Part 5 (Drinking Water), Part 6 (Rivers/Streams), Part 7 (Boiler s), Part 9 (Marine), Part 10 (Waste Waters), Part 11 (Groundwaters) and In-House Methods		All	At site
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General Testing

Total Alkalinity (as CaCO ₃) by Titration	APHA (online edition) 2320 B	1 mg/L	2	Auckland
True Colour (Dissolved) by Colour Comparator	APHA (online edition) 2120 B	5 Hazen Units	2	Auckland

Metals

Total Metals by ICP-MS—Trace (Default Digest)

Antimony (Total)	APHA (online edition) 3125 B by ICPMS	0.001 mg/L	2	Auckland
Arsenic (Total)	APHA (online edition) 3125 B by ICPMS	0.0001 mg/L	2	Auckland
Barium (Total)	APHA (online edition) 3125 B by ICPMS	0.0002 mg/L	2	Auckland
Cadmium (Total)	APHA (online edition) 3125 B by ICPMS	0.00005 mg/L	2	Auckland
Calcium (Total)	APHA (online edition) 3125 B by ICPMS	0.01 mg/L	2	Auckland
Chromium (Total)	APHA (online edition) 3125 B by ICPMS	0.0005 mg/L	2	Auckland
Copper (Total)	APHA (online edition) 3125 B by ICPMS	0.0002 mg/L	2	Auckland
Iron (Total)	APHA (online edition) 3125 B by ICPMS	0.002 mg/L	2	Auckland
Lead (Total)	APHA (online edition) 3125 B by ICPMS	0.0001 mg/L	2	Auckland
Magnesium (Total)	APHA (online edition) 3125 B by ICPMS	0.001 mg/L	2	Auckland
Manganese (Total)	APHA (online edition) 3125 B by ICPMS	0.0005 mg/L	2	Auckland
Mercury (Total)	APHA (online edition) 3125 B by ICPMS	0.00005 mg/L	2	Auckland
Nickel (Total)	APHA (online edition) 3125 B by ICPMS	0.0001 mg/L	2	Auckland
Sodium (Total)	APHA (online edition) 3125 B by ICPMS	0.1 mg/L	2	Auckland

Preparations

Digest for Total Metals in Liquids	APHA 3030E Modified (4:1 Nitric:Hydrochloric Acid: 95°C 2 hours)		2	Auckland
Membrane Filtration (0.45 µm)	APHA (online edition) 4500-P B (preliminary filtration)		2	Auckland

*The method detection limit (MDL) listed is the limit attainable in a relatively clean matrix. If dilutions are required for analysis the detection limit may be higher.
For more information please contact the Compliance and Projects Manager.*



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Samples, with suitable preservation and stability of analytes, will be held by the laboratory for a period of two weeks after results have been reported, unless otherwise advised by the submitter.

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Zum Nguyen
KTP Signatory



Anel Du Preez
KTP Signatory



David Hoekendijk
KTP Signatory



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74 Glenda Drive, Frankton, Queenstown, 9300
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