

### Certificate of Analysis

#### Laboratory Reference:230117-038

Attention:	Nz Queenstown Lab Results	Final Report:	497734-0	Replaces Report	496951-0
Client:	VEOLIA WATER	Report Issue Date:	23-Feb-2023		
Address:	74 Glenda Drive, Frankton, Queenstown, 9300	Received Date:	17-Jan-2023		
		Sampled By:	th		
Client Reference:		Laboratory Activity Dates:	17-Jan-2023	-	17-Feb-2023
Purchase Order:	7300228298	Quote Reference :	48		

Amended report: Please note added metals results on sample 230117-038-1.

#### Sample Details

	WATERS	WATERS
Lab Sample ID:	230117-038-1	230117-038-2
Client Sample ID:	S3014	WAN007WA
Sample Date/Time	17/01/2023 09:40	17/01/2023 09:50
Description:	Wanaka Airport Source	WAN007WA End of Reticulation Bollard - Wanaka Airport

#### Micro Summary View

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

#### Chemistry Detailed

##### Anions

Chloride	mg/L	2.15 ± 0.11	-
Nitrate (as N)	mg/L	3.0	-
Sulphate	mg/L	5.05 ± 0.35	-

#### Sample Parameters and Field Testing

Residual Free Chlorine (as Cl <sub>2</sub> )	mg/L	-	0.74 ± 0.037
Sampled by Watercare Laboratory Services		Yes	Yes

#### General Testing

Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	160	-
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	0.00082 ± 0.00017	-
Barium (Total)	mg/L	0.011 ± 0.0018	-
Cadmium (Total)	mg/L	<0.00005	-
Calcium (Total)	mg/L	58 ± 9.4	-
Chromium (Total)	mg/L	0.00065 ± 0.00011	-
Copper (Total)	mg/L	0.0011 ± 0.0002	-
Iron (Total)	mg/L	<0.002	-
Lead (Total)	mg/L	0.0012 ± 0.00021	-
Magnesium (Total)	mg/L	4.5 ± 0.96	-
Manganese (Total)	mg/L	<0.0005	-
Mercury (Total)	mg/L	<0.00005	-
Nickel (Total)	mg/L	<0.0001	-
Sodium (Total)	mg/L	3.9 ± 0.81	-

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

Where samples have been supplied by the client, they are tested as received.

The results of analysis contained in this report relate only to the sample(s) tested. Where sample collection was performed by the laboratory, the results of analysis contained in this report relate only to the sample(s) collected.



#### Queenstown

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

#### Invercargill

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

## 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	1	Queenstown
Total Coliforms	APHA (online edition) 9223 B	1 MPN/100mL	1	Queenstown
Chemistry Detailed				
<b>Anions</b>				
Chloride	APHA (online edition) 4110 B	0.02 mg/L	1	Auckland
Nitrate (as N)	APHA (online edition) 4110 B	0.002 mg/L	1	Auckland
Sulphate	APHA (online edition) 4110 B	0.02 mg/L	1	Auckland
Sample Parameters and Field Testing				
Residual Free Chlorine (as Cl <sub>2</sub> )	APHA (online edition) 4500-Cl G	0.02 mg/L	2	At site
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
General Testing				
Total Alkalinity (as CaCO <sub>3</sub> ) by Titration	APHA (online edition) 2320 B	1 mg/L	1	Auckland
True Colour (Dissolved) by Colour Comparator	APHA (online edition) 2120 B	5 Hazen Units	1	Auckland
Metals				
<b>Total Metals by ICP-MS—Trace (Default Digest)</b>				
Antimony (Total)	APHA (online edition) 3125 B by ICPMS	0.001 mg/L	1	Auckland
Arsenic (Total)	APHA (online edition) 3125 B by ICPMS	0.0001 mg/L	1	Auckland
Barium (Total)	APHA (online edition) 3125 B by ICPMS	0.0002 mg/L	1	Auckland
Cadmium (Total)	APHA (online edition) 3125 B by ICPMS	0.00005 mg/L	1	Auckland
Calcium (Total)	APHA (online edition) 3125 B by ICPMS	0.01 mg/L	1	Auckland
Chromium (Total)	APHA (online edition) 3125 B by ICPMS	0.0005 mg/L	1	Auckland
Copper (Total)	APHA (online edition) 3125 B by ICPMS	0.0002 mg/L	1	Auckland
Iron (Total)	APHA (online edition) 3125 B by ICPMS	0.002 mg/L	1	Auckland
Lead (Total)	APHA (online edition) 3125 B by ICPMS	0.0001 mg/L	1	Auckland
Magnesium (Total)	APHA (online edition) 3125 B by ICPMS	0.001 mg/L	1	Auckland
Manganese (Total)	APHA (online edition) 3125 B by ICPMS	0.0005 mg/L	1	Auckland
Mercury (Total)	APHA (online edition) 3125 B by ICPMS	0.00005 mg/L	1	Auckland
Nickel (Total)	APHA (online edition) 3125 B by ICPMS	0.0001 mg/L	1	Auckland
Sodium (Total)	APHA (online edition) 3125 B by ICPMS	0.1 mg/L	1	Auckland
Preparations				
Digest for Total Metals in Liquids	APHA 3030E Modified ( 4:1 Nitric:Hydrochloric Acid: 95°C 2 hours)		1	Auckland
Membrane Filtration (0.45 µm)	APHA (online edition) 4500-P B (preliminary filtration)		1	Auckland
<i>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.</i>				

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.

Watercare Laboratory Services is a division of Watercare Services Limited .

**This report may not be reproduced, except in full, without the written authority of the Compliance and Projects Manager.**



Zum Nguyen  
KTP Signatory



Anel Du Preez  
KTP Signatory



David Hoekendijk  
KTP Signatory



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

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