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Certificate of Analysis

Client:	Food and Health Standards (2006) Limited	**Lab No:**	2767608	DWMAVUPv1
Contact:	Lisa Shaw	**Date Received:**	15-Nov-2021	
	C/- Food and Health Standards (2006) Limited	**Date Reported:**	23-Nov-2021	
	PO Box 7469	**Quote No:**	87133	
	Christchurch 8240	**Order No:**		
		Client Reference:	HDC DBP Testing	
		Submitted By:	Fraser Cross	

Sample Type: Aqueous

		Sample Name:	AMB001AT - Amberley - Church St 15-Nov-2021 9:27 am	**Maximum Acceptable Value**	**Outside Limit**
		Lab Number:	2767608.1		
Individual Tests					
Monochloramine	g/m³		< 0.05	3	No
Halogenated Acetic Acids in Water by GC-MS					
Bromochloroacetic acid	g/m³		< 0.004 ± 0.0013	-	-
Dibromoacetic acid	g/m³		< 0.004 ± 0.0014	-	-
Dichloroacetic acid	g/m³		< 0.004 ± 0.0014	0.05	No
Monobromoacetic acid	g/m³		< 0.004 ± 0.0013	-	-
Monochloroacetic acid	g/m³		< 0.005 ± 0.0034	0.02	No
Trichloroacetic acid	g/m³		< 0.004 ± 0.0016	0.2	No
Total HAA	g/m³		< 0.03 ± 0.0046	-	-
Sum of HAA DWSNZ MAV ratios			< 0.3 ± 0.17	1	No
Halogenated Volatile Disinfection By-Products in Water by GCMS					
Bromochloroacetonitrile	g/m³		< 0.0004 ± 0.00019	-	-
Bromodichloromethane	g/m³		< 0.0004 ± 0.00016	0.06	No
Bromoform (tribromomethane)	g/m³		0.00061 ± 0.00019	0.1	No
Carbon tetrachloride	g/m³		< 0.0007 ± 0.00047	0.005	No
Chloroform (Trichloromethane)	g/m³		< 0.007 ± 0.0047	0.4	No
Chloropicrin	g/m³		< 0.0004 ± 0.00023	-	-
1,2-Dibromo-3-chloropropane	g/m³		< 0.0004 ± 0.00022	0.001	No
Dibromoacetonitrile	g/m³		< 0.0004 ± 0.00023	0.08	No
Dibromochloromethane	g/m³		0.00044 ± 0.00017	0.15	No
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³		< 0.0003 ± 0.00020	0.0004	No
1,1-Dichloro-2-propanone	g/m³		< 0.0004 ± 0.00023	-	-
Dichloroacetonitrile	g/m³		< 0.0004 ± 0.00022	0.02	No
Tetrachloroethene (tetrachloroethylene)	g/m³		< 0.0004 ± 0.00013	0.05	No
1,1,1-Trichloro-2-propanone	g/m³		< 0.0004 ± 0.00023	-	-
Trichloroacetonitrile	g/m³		< 0.0004 ± 0.00023	-	-
1,1,1-Trichloroethane	g/m³		< 0.0004 ± 0.00014	-	-
Trichloroethene (trichloroethylene)	g/m³		< 0.0004 ± 0.00012	0.02	No
Total Trihalomethanes (THM)	g/m³		< 0.007 ± 0.0037	-	-
Chloroform MAV ratio			< 0.018 ± 0.012	-	-
Bromodichloromethane MAV ratio			< 0.007 ± 0.003	-	-
Dibromochloromethane MAV ratio			0.003 ± 0.002	-	-
Bromoform MAV ratio			0.006 ± 0.002	-	-
Sum of THM MAV ratios (NZ DW Stds)			< 0.02 ± 0.013	1	No
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)			< 0.03 ± 0.012	1	No

Sample Type: Aqueous				
Sample Name:		AMB001BE - Amberley Beach -Campground 15-Nov-2021 9:10 am	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.2		
Individual Tests				
Monochloramine	g/m³	< 0.05	3	No
Halogenated Acetic Acids in Water by GC-MS				
Bromochloroacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Dibromoacetic acid	g/m³	< 0.004 ± 0.0014	-	-
Dichloroacetic acid	g/m³	< 0.004 ± 0.0014	0.05	No
Monobromoacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Monochloroacetic acid	g/m³	< 0.005 ± 0.0034	0.02	No
Trichloroacetic acid	g/m³	< 0.004 ± 0.0016	0.2	No
Total HAA	g/m³	< 0.03 ± 0.0046	-	-
Sum of HAA DWSNZ MAV ratios		< 0.3 ± 0.17	1	No
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Bromochloroacetonitrile	g/m³	< 0.0004 ± 0.00019	-	-
Bromodichloromethane	g/m³	< 0.0004 ± 0.00016	0.06	No
Bromoform (tribromomethane)	g/m³	0.00060 ± 0.00019	0.1	No
Carbon tetrachloride	g/m³	< 0.0007 ± 0.00047	0.005	No
Chloroform (Trichloromethane)	g/m³	< 0.007 ± 0.0047	0.4	No
Chloropicrin	g/m³	< 0.0004 ± 0.00023	-	-
1,2-Dibromo-3-chloropropane	g/m³	< 0.0004 ± 0.00022	0.001	No
Dibromoacetonitrile	g/m³	< 0.0004 ± 0.00023	0.08	No
Dibromochloromethane	g/m³	< 0.0004 ± 0.00015	0.15	No
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³	< 0.0003 ± 0.00020	0.0004	No
1,1-Dichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Dichloroacetonitrile	g/m³	< 0.0004 ± 0.00022	0.02	No
Tetrachloroethene (tetrachloroethylene)	g/m³	< 0.0004 ± 0.00013	0.05	No
1,1,1-Trichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Trichloroacetonitrile	g/m³	< 0.0004 ± 0.00023	-	-
1,1,1-Trichloroethane	g/m³	< 0.0004 ± 0.00014	-	-
Trichloroethene (trichloroethylene)	g/m³	< 0.0004 ± 0.00012	0.02	No
Total Trihalomethanes (THM)	g/m³	< 0.007 ± 0.0037	-	-
Chloroform MAV ratio		< 0.018 ± 0.012	-	-
Bromodichloromethane MAV ratio		< 0.007 ± 0.003	-	-
Dibromochloromethane MAV ratio		< 0.003 ± 0.001	-	-
Bromoform MAV ratio		0.006 ± 0.002	-	-
Sum of THM MAV ratios (NZ DW Stds)		< 0.02 ± 0.013	1	No
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)		< 0.03 ± 0.012	1	No

Sample Name:		BRO016BR - Racecourse Rd -Broomfield Retic 15-Nov-2021 2:39 pm	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.3		
Individual Tests				
Monochloramine	g/m³	< 0.05	3	No
Halogenated Acetic Acids in Water by GC-MS				
Bromochloroacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Dibromoacetic acid	g/m³	< 0.004 ± 0.0014	-	-
Dichloroacetic acid	g/m³	< 0.004 ± 0.0014	0.05	No
Monobromoacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Monochloroacetic acid	g/m³	< 0.005 ± 0.0034	0.02	No
Trichloroacetic acid	g/m³	< 0.004 ± 0.0016	0.2	No
Total HAA	g/m³	< 0.03 ± 0.0046	-	-
Sum of HAA DWSNZ MAV ratios		< 0.3 ± 0.17	1	No
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Bromochloroacetonitrile	g/m³	< 0.0004 ± 0.00019	-	-
Bromodichloromethane	g/m³	< 0.0004 ± 0.00016	0.06	No
Bromoform (tribromomethane)	g/m³	< 0.0004 ± 0.00013	0.1	No

Sample Type: Aqueous				
Sample Name:		BRO016BR - Racecourse Rd -Broomfield Retic 15-Nov-2021 2:39 pm	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.3		
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Carbon tetrachloride	g/m³	< 0.0007 ± 0.00047	0.005	No
Chloroform (Trichloromethane)	g/m³	< 0.007 ± 0.0047	0.4	No
Chloropicrin	g/m³	< 0.0004 ± 0.00023	-	-
1,2-Dibromo-3-chloropropane	g/m³	< 0.0004 ± 0.00022	0.001	No
Dibromoacetonitrile	g/m³	< 0.0004 ± 0.00023	0.08	No
Dibromochloromethane	g/m³	< 0.0004 ± 0.00015	0.15	No
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³	< 0.0003 ± 0.00020	0.0004	No
1,1-Dichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Dichloroacetonitrile	g/m³	< 0.0004 ± 0.00022	0.02	No
Tetrachloroethene (tetrachloroethylene)	g/m³	< 0.0004 ± 0.00013	0.05	No
1,1,1-Trichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Trichloroacetonitrile	g/m³	< 0.0004 ± 0.00023	-	-
1,1,1-Trichloroethane	g/m³	< 0.0004 ± 0.00014	-	-
Trichloroethene (trichloroethylene)	g/m³	< 0.0004 ± 0.00012	0.02	No
Total Trihalomethanes (THM)	g/m³	< 0.007 ± 0.0037	-	-
Chloroform MAV ratio		< 0.018 ± 0.012	-	-
Bromodichloromethane MAV ratio		< 0.007 ± 0.003	-	-
Dibromochloromethane MAV ratio		< 0.003 ± 0.001	-	-
Bromoform MAV ratio		< 0.004 ± 0.002	-	-
Sum of THM MAV ratios (NZ DW Stds)		< 0.02 ± 0.013	1	No
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)		< 0.03 ± 0.012	1	No

Sample Name:		CHE001CT - Cheviot - Deer Park Rd 15-Nov-2021 12:35 pm	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.4		
Individual Tests				
Monochloramine	g/m³	< 0.05	3	No
Halogenated Acetic Acids in Water by GC-MS				
Bromochloroacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Dibromoacetic acid	g/m³	< 0.004 ± 0.0014	-	-
Dichloroacetic acid	g/m³	< 0.004 ± 0.0014	0.05	No
Monobromoacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Monochloroacetic acid	g/m³	< 0.005 ± 0.0034	0.02	No
Trichloroacetic acid	g/m³	< 0.004 ± 0.0016	0.2	No
Total HAA	g/m³	< 0.03 ± 0.0046	-	-
Sum of HAA DWSNZ MAV ratios		< 0.3 ± 0.17	1	No
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Bromochloroacetonitrile	g/m³	< 0.0004 ± 0.00019	-	-
Bromodichloromethane	g/m³	0.00108 ± 0.00042	0.06	No
Bromoform (tribromomethane)	g/m³	< 0.0004 ± 0.00013	0.1	No
Carbon tetrachloride	g/m³	< 0.0007 ± 0.00047	0.005	No
Chloroform (Trichloromethane)	g/m³	< 0.007 ± 0.0047	0.4	No
Chloropicrin	g/m³	< 0.0004 ± 0.00023	-	-
1,2-Dibromo-3-chloropropane	g/m³	< 0.0004 ± 0.00022	0.001	No
Dibromoacetonitrile	g/m³	< 0.0004 ± 0.00023	0.08	No
Dibromochloromethane	g/m³	< 0.0004 ± 0.00015	0.15	No
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³	< 0.0003 ± 0.00020	0.0004	No
1,1-Dichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Dichloroacetonitrile	g/m³	< 0.0004 ± 0.00022	0.02	No
Tetrachloroethene (tetrachloroethylene)	g/m³	< 0.0004 ± 0.00013	0.05	No
1,1,1-Trichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Trichloroacetonitrile	g/m³	< 0.0004 ± 0.00023	-	-
1,1,1-Trichloroethane	g/m³	< 0.0004 ± 0.00014	-	-

Sample Type: Aqueous				
Sample Name:		CHE001CT - Cheviot - Deer Park Rd 15-Nov-2021 12:35 pm	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.4		
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Trichloroethene (trichloroethylene)	g/m³	< 0.0004 ± 0.00012	0.02	No
Total Trihalomethanes (THM)	g/m³	< 0.007 ± 0.0037	-	-
Chloroform MAV ratio		< 0.018 ± 0.012	-	-
Bromodichloromethane MAV ratio		0.018 ± 0.007	-	-
Dibromochloromethane MAV ratio		< 0.003 ± 0.001	-	-
Bromoform MAV ratio		< 0.004 ± 0.002	-	-
Sum of THM MAV ratios (NZ DW Stds)		0.020 ± 0.014	1	No
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)		< 0.03 ± 0.012	1	No

Sample Name:		MOT016MO - Hurunui No. 1 -Motunau Greta Scargill 15-Nov-2021 10:10 am	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.5		
Individual Tests				
Monochloramine	g/m³	< 0.05	3	No
Halogenated Acetic Acids in Water by GC-MS				
Bromochloroacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Dibromoacetic acid	g/m³	< 0.004 ± 0.0014	-	-
Dichloroacetic acid	g/m³	< 0.004 ± 0.0014	0.05	No
Monobromoacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Monochloroacetic acid	g/m³	< 0.005 ± 0.0034	0.02	No
Trichloroacetic acid	g/m³	< 0.004 ± 0.0016	0.2	No
Total HAA	g/m³	< 0.03 ± 0.0046	-	-
Sum of HAA DWSNZ MAV ratios		< 0.3 ± 0.17	1	No
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Bromochloroacetonitrile	g/m³	< 0.0004 ± 0.00019	-	-
Bromodichloromethane	g/m³	0.00182 ± 0.00069	0.06	No
Bromoform (tribromomethane)	g/m³	< 0.0004 ± 0.00013	0.1	No
Carbon tetrachloride	g/m³	< 0.0007 ± 0.00047	0.005	No
Chloroform (Trichloromethane)	g/m³	< 0.007 ± 0.0047	0.4	No
Chloropicrin	g/m³	< 0.0004 ± 0.00023	-	-
1,2-Dibromo-3-chloropropane	g/m³	< 0.0004 ± 0.00022	0.001	No
Dibromoacetonitrile	g/m³	< 0.0004 ± 0.00023	0.08	No
Dibromochloromethane	g/m³	< 0.0004 ± 0.00015	0.15	No
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³	< 0.0003 ± 0.00020	0.0004	No
1,1-Dichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Dichloroacetonitrile	g/m³	0.00046 ± 0.00024	0.02	No
Tetrachloroethene (tetrachloroethylene)	g/m³	< 0.0004 ± 0.00013	0.05	No
1,1,1-Trichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Trichloroacetonitrile	g/m³	< 0.0004 ± 0.00023	-	-
1,1,1-Trichloroethane	g/m³	< 0.0004 ± 0.00014	-	-
Trichloroethene (trichloroethylene)	g/m³	< 0.0004 ± 0.00012	0.02	No
Total Trihalomethanes (THM)	g/m³	< 0.007 ± 0.0037	-	-
Chloroform MAV ratio		< 0.018 ± 0.012	-	-
Bromodichloromethane MAV ratio		0.030 ± 0.012	-	-
Dibromochloromethane MAV ratio		< 0.003 ± 0.001	-	-
Bromoform MAV ratio		< 0.004 ± 0.002	-	-
Sum of THM MAV ratios (NZ DW Stds)		0.041 ± 0.017	1	No
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)		0.023 ± 0.012	1	No

Sample Name:		ASH002LE - Ashley - Brighton St 15-Nov-2021 8:51 am	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.6		
Individual Tests				
Monochloramine	g/m³	< 0.05	3	No

Sample Type: Aqueous				
Sample Name:		ASH002LE - Ashley - Brighton St 15-Nov-2021 8:51 am	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.6		
Halogenated Acetic Acids in Water by GC-MS				
Bromochloroacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Dibromoacetic acid	g/m³	< 0.004 ± 0.0014	-	-
Dichloroacetic acid	g/m³	< 0.004 ± 0.0014	0.05	No
Monobromoacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Monochloroacetic acid	g/m³	< 0.005 ± 0.0034	0.02	No
Trichloroacetic acid	g/m³	< 0.004 ± 0.0016	0.2	No
Total HAA	g/m³	< 0.03 ± 0.0046	-	-
Sum of HAA DWSNZ MAV ratios		< 0.3 ± 0.17	1	No
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Bromochloroacetonitrile	g/m³	< 0.0004 ± 0.00019	-	-
Bromodichloromethane	g/m³	< 0.0004 ± 0.00016	0.06	No
Bromoform (tribromomethane)	g/m³	0.00118 ± 0.00036	0.1	No
Carbon tetrachloride	g/m³	< 0.0007 ± 0.00047	0.005	No
Chloroform (Trichloromethane)	g/m³	< 0.007 ± 0.0047	0.4	No
Chloropicrin	g/m³	< 0.0004 ± 0.00023	-	-
1,2-Dibromo-3-chloropropane	g/m³	< 0.0004 ± 0.00022	0.001	No
Dibromoacetonitrile	g/m³	< 0.0004 ± 0.00023	0.08	No
Dibromochloromethane	g/m³	0.00041 ± 0.00015	0.15	No
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³	< 0.0003 ± 0.00020	0.0004	No
1,1-Dichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Dichloroacetonitrile	g/m³	< 0.0004 ± 0.00022	0.02	No
Tetrachloroethene (tetrachloroethylene)	g/m³	< 0.0004 ± 0.00013	0.05	No
1,1,1-Trichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Trichloroacetonitrile	g/m³	< 0.0004 ± 0.00023	-	-
1,1,1-Trichloroethane	g/m³	< 0.0004 ± 0.00014	-	-
Trichloroethene (trichloroethylene)	g/m³	< 0.0004 ± 0.00012	0.02	No
Total Trihalomethanes (THM)	g/m³	< 0.007 ± 0.0037	-	-
Chloroform MAV ratio		< 0.018 ± 0.012	-	-
Bromodichloromethane MAV ratio		< 0.007 ± 0.003	-	-
Dibromochloromethane MAV ratio		0.003 ± 0.001	-	-
Bromoform MAV ratio		0.012 ± 0.004	-	-
Sum of THM MAV ratios (NZ DW Stds)		< 0.02 ± 0.013	1	No
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)		< 0.03 ± 0.012	1	No

Sample Name:		CHE001GO - Cheviot - Gore Bay/Port Robinson Rural 15-Nov-2021 12:10 pm	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.7		
Individual Tests				
Monochloramine	g/m³	< 0.05	3	No
Halogenated Acetic Acids in Water by GC-MS				
Bromochloroacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Dibromoacetic acid	g/m³	< 0.004 ± 0.0014	-	-
Dichloroacetic acid	g/m³	< 0.004 ± 0.0014	0.05	No
Monobromoacetic acid	g/m³	< 0.004 ± 0.0013	-	-
Monochloroacetic acid	g/m³	< 0.005 ± 0.0034	0.02	No
Trichloroacetic acid	g/m³	< 0.004 ± 0.0016	0.2	No
Total HAA	g/m³	< 0.03 ± 0.0046	-	-
Sum of HAA DWSNZ MAV ratios		< 0.3 ± 0.17	1	No
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Bromochloroacetonitrile	g/m³	< 0.0004 ± 0.00019	-	-
Bromodichloromethane	g/m³	0.00139 ± 0.00053	0.06	No
Bromoform (tribromomethane)	g/m³	< 0.0004 ± 0.00013	0.1	No
Carbon tetrachloride	g/m³	< 0.0007 ± 0.00047	0.005	No
Chloroform (Trichloromethane)	g/m³	< 0.007 ± 0.0047	0.4	No

Sample Type: Aqueous				
Sample Name:		CHE001GO - Cheviot - Gore Bay/Port Robinson Rural 15-Nov-2021 12:10 pm	**Maximum Acceptable Value**	**Outside Limit**
Lab Number:		2767608.7		
Halogenated Volatile Disinfection By-Products in Water by GCMS				
Chloropicrin	g/m³	< 0.0004 ± 0.00023	-	-
1,2-Dibromo-3-chloropropane	g/m³	< 0.0004 ± 0.00022	0.001	No
Dibromoacetonitrile	g/m³	< 0.0004 ± 0.00023	0.08	No
Dibromochloromethane	g/m³	< 0.0004 ± 0.00015	0.15	No
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³	< 0.0003 ± 0.00020	0.0004	No
1,1-Dichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Dichloroacetonitrile	g/m³	< 0.0004 ± 0.00022	0.02	No
Tetrachloroethene (tetrachloroethylene)	g/m³	< 0.0004 ± 0.00013	0.05	No
1,1,1-Trichloro-2-propanone	g/m³	< 0.0004 ± 0.00023	-	-
Trichloroacetonitrile	g/m³	< 0.0004 ± 0.00023	-	-
1,1,1-Trichloroethane	g/m³	< 0.0004 ± 0.00014	-	-
Trichloroethene (trichloroethylene)	g/m³	< 0.0004 ± 0.00012	0.02	No
Total Trihalomethanes (THM)	g/m³	< 0.007 ± 0.0037	-	-
Chloroform MAV ratio		< 0.018 ± 0.012	-	-
Bromodichloromethane MAV ratio		0.023 ± 0.009	-	-
Dibromochloromethane MAV ratio		< 0.003 ± 0.001	-	-
Bromoform MAV ratio		< 0.004 ± 0.002	-	-
Sum of THM MAV ratios (NZ DW Stds)		0.026 ± 0.015	1	No
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)		< 0.03 ± 0.012	1	No

The Maximum Acceptable Values (MAV) are taken from the publication 'Drinking-water Standards for New Zealand 2005 (Revised 2018)', Ministry of Health. Copies of this publication are available from:
https://www.health.govt.nz/publication/drinking-water-standards-new-zealand-2005-revised-2018

The Maximum Acceptable Values (MAVs) have been defined by the Ministry of Health for parameters of health significance and should not be exceeded. The 'Drinking-water Standards for New Zealand' also contains Guideline Values which are the limits for aesthetic determinands that, if exceeded, may render the water unattractive to consumers. This report compares the results obtained with the Maximum Acceptable Values only.

Under Section 73 (2) of the Water Services Act (2021), the laboratory is required to report the results of any analysis or test carried out (for the purposes of testing for compliance with the New Zealand Drinking Water Standards 2005 (Revised 2018)) that indicates any non-compliance (transgression) with the Maximum Acceptable Values (MAVs) to Taumata Arowai, the water services regulator for Aotearoa.

The reported uncertainty is an expanded uncertainty with a level of confidence of approximately 95 percent (i.e. two standard deviations, calculated using a coverage factor of 2). Reported uncertainties are calculated from the performance of typical matrices, and do not include variation due to sampling. For further information on uncertainty of measurement at Hill Laboratories, refer to the technical note on our website:
http://www.hill-laboratories.com/files/Intro_To_UOM.pdf, or contact the laboratory.

Note that the units g/m³ are the same as mg/L and ppm.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Halogenated Acetic Acids in Water by GC-MS	Solvent extraction, derivitisation, GC-MS analysis. In-house based on US EPA 552.	-	1-7
Halogenated Volatile Disinfection By-Products in Water by GCMS	Solvent extraction, GC-MS analysis. In-house based on US EPA 551.	-	1-7
Monochloramine	Colorimetric. APHA 4500-Cl G 23rd ed. 2017.	0.05 g/m³	1-7
Sum of HAA DWSNZ MAV ratios	Calculated as the sum of the individual haloacetic acids specified in DWSNZ (monochloroacetic acid, dichloroacetic acid and trichloroacetic acid) to their respective Maximum Allowable Values (MAVs). Drinking-water Standards for New Zealand 2005 (Revised 2018).	0.001	1-7

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)	Calculated as the sum of the individual haloacetonitriles specified in DWSNZ (dibromoacetonitrile & dichloroacetonitrile) to their respective Maximum Allowable Values (MAVs). Drinking-water Standards for New Zealand 2005 (Revised 2018).	-	1-7

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 16-Nov-2021 and 23-Nov-2021. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Client Services Manager - Environmental