

**ANALYTICAL REPORT**

**Client:** Town of Cochrane  
 101 Ranchehouse Rd  
 Cochrane, AB, T4C 2K8

**Attention:** Richard Gaida

<b>KaizenLAB JOB #:</b>	<b>308056</b>
<b>DATE RECEIVED:</b>	11-Aug-2020
<b>DATE REPORTED:</b>	26-Aug-2020
<b>PROJECT ID:</b>	Summer Samples
<b>LOCATION:</b>	WTP

**KaizenLAB Sample #:** 308056\_001    **Sample ID:** WTP  
**Date Sampled:** 11-Aug-2020 7:30    **Matrix:** Water

Parameter Description	Units	Result	Detection Limit
<b>Routine Water Potability Analysis (Potability pkg #2)</b>			
pH		7.5	
Electrical Conductivity (EC)	uS/cm	297	1
<b>Alkalinity parameters of water</b>			
Alkalinity (total, as CaCO <sub>3</sub> )	mg/L	114.7	2.0
Alkalinity (phenolphthalein, as CaCO <sub>3</sub> )	mg/L	<2.0	2.0
Bicarbonate (as HCO <sub>3</sub> )	mg/L	139.9	2.5
Carbonate (as CO <sub>3</sub> )	mg/L	<1.5	1.5
Hydroxide (as OH)	mg/L	<0.5	0.5
Total Dissolved Solids (calculated)	mg/L	165	10
<b>Anions in Water by IC</b>			
Fluoride	mg/L	<0.10	0.10
Chloride	mg/L	7.47	0.50
Nitrite-N	mg/L	<0.005	0.005
Nitrate-N	mg/L	0.125	0.010
Nitrite-N + Nitrate-N	mg/L	0.125	0.015
Phosphate	mg/L	<0.10	0.10
Sulphate	mg/L	31.53	0.50
Bromide	mg/L	<0.10	0.10
<b>Cations in Water by ICP-OES</b>			
Dissolved Calcium	mg/L	37.6	0.1
Dissolved Magnesium	mg/L	13.1	0.1
Dissolved Potassium	mg/L	0.6	0.1
Dissolved Sodium	mg/L	3.8	0.1
Dissolved Iron	mg/L	<0.02	0.02
Dissolved Manganese	mg/L	<0.03	0.03
Hardness (calculated, as CaCO <sub>3</sub> )	mg/L	147.9	0.1
Sodium Adsorption Ratio		0.14	0.01
True Colour	TCU	<4	4
Turbidity	NTU	0.15	0.10
Total Residual Chlorine	mg/L	1.12	0.05

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Parameter Description	Units	Result	Detection Limit
Cyanide	mg/L	<0.100	0.100
MCPA	mg/L	<0.002	0.002
Microcystins (as LR)	mg/L	<0.00015	0.00015
Ammonia-N	mg/L	0.06	0.05
<b>Oxyhalides in water</b>			
<b>Oxyhalides in Water by IC</b>			
Bromate	mg/L	<0.005	0.005
Chlorite	mg/L	<0.05	0.05
Chlorate	mg/L	0.08	0.05
<b>Organic Chemicals &amp; Pesticides (Primary) in water</b>			
<b>Base/Neutral and Acid Extractable Organic Compounds in Water</b>			
Atrazine + Metabolites	mg/L	<0.001	0.001 *
Benzo(a)Pyrene	mg/L	<0.000005	0.000005
2,4-Dichlorophenol	mg/L	<0.002	0.002
2,4,6-Trichlorophenol	mg/L	<0.002	0.002
2,3,4,6-Tetrachlorophenol	mg/L	<0.002	0.002
Pentachlorophenol	mg/L	<0.002	0.002
Chlorpyrifos	mg/L	<0.002	0.002
Cyanazine	mg/L	<0.002	0.002
Diazinon	mg/L	<0.002	0.002
Diclofop-methyl	mg/L	<0.002	0.002
Dimethoate	mg/L	<0.002	0.002
Diuron	mg/L	<0.003	0.003
Malathion	mg/L	<0.002	0.002
Methoxychlor	mg/L	<0.002	0.002
Metolachlor	mg/L	<0.002	0.002
Metribuzin	mg/L	<0.002	0.002
Simazine	mg/L	<0.002	0.002
Terbufos	mg/L	<0.0005	0.0005
Triallate	mg/L	<0.002	0.002
Trifluralin	mg/L	<0.002	0.002
Glyphosate	mg/L	<0.020	0.020
<b>Herbicides in Water</b>			
Bromoxynil	mg/L	<0.002	0.002
2,4-D	mg/L	<0.002	0.002
Dicamba	mg/L	<0.002	0.002
Picloram	mg/L	<0.002	0.002
Nitritotriacetic Acid (NTA)	mg/L	<0.4	0.4
<b>Volatile Organic Compounds in Water</b>			
Benzene	mg/L	<0.001	0.001
Ethylbenzene	mg/L	<0.001	0.001
MTBE	mg/L	<0.004	0.004
Tetrachloroethene	mg/L	<0.001	0.001

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Toluene	mg/L	<0.002	0.002
Trichloroethene	mg/L	<0.002	0.002
Vinyl Chloride	mg/L	<0.001	0.001
m,p-Xylenes	mg/L	<0.002	0.002
o-Xylenes	mg/L	<0.001	0.001
Total Xylenes	mg/L	<0.003	0.003
Carbon Tetrachloride	mg/L	<0.0005	0.0005
Chlorobenzene	mg/L	<0.001	0.001
1,2-Dichlorobenzene	mg/L	<0.0005	0.0005
1,4-Dichlorobenzene	mg/L	<0.0005	0.0005
1,2-Dichloroethane	mg/L	<0.002	0.002
1,1-Dichloroethene	mg/L	<0.002	0.002
Dichloromethane	mg/L	<0.002	0.002
Sulphide	mg/L	<0.010	0.010
Total Organic Carbon	mg/L	<0.50	0.50
<b>Total Metals for Drinking Water</b>			
Total Mercury	ug/L	<0.001	0.001
<b>Total Metals in Water by ICP-MS</b>			
Total Aluminum	mg/L	0.183	0.005
Total Antimony	mg/L	<0.0006	0.0006
Total Arsenic	mg/L	0.00010	0.00008
Total Barium	mg/L	0.033	0.005
Total Boron	mg/L	<0.03	0.03
Total Cadmium	mg/L	<0.00004	0.00004
Total Chromium	mg/L	0.0008	0.0008
Total Copper	mg/L	<0.0008	0.0008
Total Iron	mg/L	<0.02	0.02
Total Lead	mg/L	<0.0003	0.0003
Total Manganese	mg/L	<0.001	0.001
Total Selenium	mg/L	<0.0006	0.0006
Total Silver	mg/L	<0.00007	0.00007
Total Strontium	mg/L	0.164	0.001
Total Uranium	mg/L	0.00027	0.00005
Total Zinc	mg/L	0.007	0.007

\* The detection limit has been adjusted due to sample matrix type and/or insufficient sample volume.

#### Test Methodologies

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Alkalinity in Water: Modified from SM 2320B  
Ammonia in Water: Modified from SM 4500-NH3 F  
Anions in Water: Modified from SM 4110B  
Base/Neutral and Acid Extractable Organic Compounds in Water: Modified from EPA 8270D and EPA 3510C  
Cations in Water: Modified from SM 3030B and SM 3120B  
Cyanide in Water: Modified from SM 4500-CN C and E  
Electrical Conductivity in Water: Modified from SM 2510B  
Glyphosate in Water: Modified from New methods for determination of glyphosate and (aminomethyl)phosphonic acid in water and soil. Journal of Chromatography A  
Herbicides in Water: Modified from EPA 8151A and EPA 3510C  
Microcystin in Water: Modified from Microcystin Tube Kit Instructional Booklet (ELISA), Abraxis Inc.  
Nitrilotriacetic Acid in Water: Modified from Journal of Chromatography A., 690 (1995) 109-118  
Oxyhalides in Water: Modified from SM 4110D  
pH of Water: Modified from SM 4500-H+ B  
Sulphide in Water: Modified from SM 4500-S2- D and HACH Method 8131  
Total Dissolved Solids (calculated): Modified from SM 1030E  
Total Mercury in Water: Modified from EPA 1631 Revision E  
Total Metals in Water: Modified from EPA 200.2 and SM 3125B  
Total Residual Chlorine in Water: Modified from SM 4500-Cl I  
Total/Dissolved Organic Carbon in Water: Modified from SM 5310B  
True Colour in Water: Modified from SM 2120 C  
Turbidity in Water: Modified from SM 2130B  
Volatile Organic Compounds in Water: Modified from EPA 8260B and EPA 5030B/EPA 5021A

Final Review by:



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Loida Agacid  
Client Services Administrator

Note: The results in this report relate only to the items tested and as received. Information is available for any items in 7.8.2.1 of ISO/IEC 17025:2017 that cannot be put on a test report. The report shall not be reproduced except in full without written approval of KaizenLAB. The validity of results may be affected if the information is provided by the customer.