

PROJECT Comprehensive Drinking Water List

General Comments:

CARO Analytical Services employs methods which are conducted according to procedures accepted by appropriate regulatory agencies, and/or are conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts, except where otherwise agreed to by the client.

The results in this report apply to the samples analyzed in accordance with the Chain of Custody or Sample Requisition document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.

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Analysis Description	Method Reference	Technique	Location
Alkalinity, Total in Water	APHA 2320 B*	Titration with H2SO4	Kelowna
Anions by IC in Water	APHA 4110 B	Ion Chromatography with Chemical Suppression of Eluent Conductivity	Kelowna
Coliforms, Total (MF-CCA) in Water	APHA 9222*	Membrane Filtration / Incubation on Chromocult Agar	Kelowna
Colour, True in Water	APHA 2120 C	Spectrophotometry (456 nm)	Kelowna
Conductivity in Water	APHA 2510 B	Conductivity Meter	Kelowna
Cyanide, SAD in Water	APHA 4500-CN- C / APHA 4500-CN- E	Distillation / Colorimetry	Kelowna
E. coli (MF-CCA) in Water	APHA 9222*	Membrane Filtration / Incubation on Chromocult Agar	Kelowna
Hardness (as CaCO3) in Water	APHA 2340 B*	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Estimated)	N/A
Mercury, total by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
pH in Water	APHA 4500-H+ B	Electrometry	Kelowna
Solids, Total Dissolved in Water	APHA 1030 E	Calculation: 100 x ((Cations)-[Anions])/([Cations]+[Anions])	N/A
Total Recoverable Metals in Water	APHA 3030E* / APHA 3125 B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	Richmond
Transmissivity at 254 nm in Water	APHA 5910 B	Ultraviolet Absorption	Kelowna
Turbidity in Water	APHA 2130 B	Nephelometry	Kelowna

Method Reference Descriptions:

APHA Standard Methods for the Examination of Water and Wastewater, 22nd Edition, American Public Health Association/American Water Works Association/Water Environment Federation
 EPA United States Environmental Protection Agency Test Methods

Glossary of Terms:

MRL Method Reporting Limit
 < Less than the Reported Detection Limit (RDL) - the RDL may be higher than the MRL due to various factors such as dilutions, limited sample volume, high moisture, or interferences
 AO Aesthetic objective **(Not necessarily a health concern, but may affect taste, color, or odor of water)**
 MAC Maximum acceptable concentration **(health based)**
 OG Operational guideline **(treated water)**
 % T Percent Transmittance
 CFU/100 mL Colony Forming Units per 100 millilitres
 CU Colour Units (referenced against a platinum cobalt standard)
 mg/L Milligrams per litre
 NTU Nephelometric Turbidity Units
 pH units pH < 7 = acidic, pH > 7 = basic
 µS/cm Microsiemens per centimetre

Definition of terms in your report

Standards / Guidelines Referenced in this Report:

Guidelines for Canadian Drinking Water Quality (Oct 2014)
 Website: http://www.hc-sc.gc.ca/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/sum_guide-res_recom-eng.pdf

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user



Red: Above Guideline Bold: Detected in sample, below guideline Regular Text: Below Detection Limit

Parameter Tested	Concentration of Analyte	Canadian Drinking Water Quality Guidelines (October 2014)			
Analyte	Result I Recovery	Standard I Guideline	MRL I Limits	Units	Source (CDWQG, October 2014)
Sample ID: Kitchen Tap (0000000-01) [Water] Sampled: YYYY-MM-DD HH:MM					
Anions					
Chloride	19.6	AO :: 250	0.10	mg/L	▪ Naturally occurring; based on taste
Fluoride	0.49	MAC = 1.5	0.10	mg/L	• Naturally occurring
Nitrate (as N)	0.094	MAC = 10	0.010	mg/L	• Naturally occurring from agricultural land use
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	• Naturally occurring from agricultural land use
Sulfate	18.0	AO :: 500	1.0	mg/L	• Naturally occurring; based on taste
General Parameters					
Alkalinity, Total (as CaCO ₃)	162	N/A	1	mg/L	
Colour, True	< 5	AO :: 15	5	CU	• Naturally occurring organic substances, metals
Conductivity (EC)	389	N/A	2	µS/cm	•
Cyanide, Total	< 0.010	MAC = 0.2	0.010	mg/L	• Industrial and mining effluents
pH	8.07	6.5-8.5	0.01	pH units	• Influence on formation of disinfection by-products
Turbidity	< 0.1	OG < 0.1	0.1	NTU	• Naturally occurring particles
UV Transmittance @ 254nm	98.7	N/A	0.1	% T	
Calculated Parameters					
Hardness, Total (as CaCO ₃)	194	N/A	5.0	mg/L	• Naturally occurring, varies according to local conditions
Solids, Total Dissolved	230	AO :: 500	2.0	mg/L	• Naturally occurring
Total Recoverable Metals					
Aluminum, total	< 0.05	OG < 0.1	0.05	mg/L	• Naturally occurring in groundwater; Operational guideline applies to treatment plants
Antimony, total	< 0.001	MAC = 0.006	0.001	mg/L	• Naturally occurring
Arsenic, total	< 0.005	MAC = 0.01	0.005	mg/L	• Naturally occurring
Barium, total	0.09	MAC = 1	0.05	mg/L	• Naturally occurring
Beryllium, total	< 0.001	N/A	0.001	mg/L	•
Boron, total	< 0.04	MAC = 5	0.04	mg/L	• Naturally occurring
Cadmium, total	< 0.0001	MAC = 0.005	0.0001	mg/L	• Leaching from pipes; waste
Calcium, total	64.1	N/A	2.0	mg/L	• Naturally occurring
Chromium, total	< 0.005	MAC = 0.05	0.005	mg/L	• Naturally occurring
Cobalt, total	< 0.0005	N/A	0.0005	mg/L	•
Copper, total	0.021	AO :: 1	0.002	mg/L	• Naturally occurring
Iron, total	< 0.10	AO :: 0.3	0.10	mg/L	• Naturally occurring ; based on taste
Lead, total	< 0.001	MAC = 0.01	0.001	mg/L	• Leaching from plumbing
Magnesium, total	8.1	N/A	0.1	mg/L	• Naturally occurring
Manganese, total	0.003	AO :: 0.05	0.002	mg/L	• Naturally occurring
Mercury, total	< 0.00002	MAC = 0.001	0.00002	mg/L	• Industrial effluents, waste disposal, pesticide use
Molybdenum, total	0.005	N/A	0.001	mg/L	•
Nickel, total	< 0.002	N/A	0.002	mg/L	•
Phosphorus, total	< 0.2	N/A	0.2	mg/L	•
Potassium, total	4.0	N/A	0.2	mg/L	•
Selenium, total	< 0.005	MAC = 0.05	0.005	mg/L	• Naturally occurring
Silicon, total	9	N/A	5	mg/L	•
Silver, total	< 0.0005	N/A	0.0005	mg/L	• Naturally occurring
Sodium, total	16.7	AO :: 200	0.2	mg/L	• Naturally occurring ; based on taste
Uranium, total	0.0740	MAC = 0.02	0.0002	mg/L	• Naturally occurring ; industrial activity
Vanadium, total	< 0.01	N/A	0.01	mg/L	•
Zinc, total	< 0.04	AO :: 5	0.04	mg/L	• Naturally occurring ; based on taste



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Analyte	Result I Recovery	Standard I Guideline	MRL I Limits	Units	Interpretation (CDWQG, October 2014)
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Sample ID: Kitchen Tap (0000000-01) [Water] Sampled: YYYY-MM-DD HH:MM, Continued

Microbiological Parameters

Coliforms, Total	< 1	MAC = None Detected	1	CFU/100 mL	Potable: < 1; Not Potable: > 1
E. coli	< 1	MAC = None Detected	1	CFU/100 mL	Potable: < 1; Not Potable: > 1

SAMPLE REPORT

