

Thank you for Testing with CARO!

You have come a long way from collecting your sample to receiving your report, and we want to thank you for helping to make the world safer and healthier. Now, you are probably wondering how to interpret the data and insights you have received. Here is a step-by-step guide to reviewing your report.

Page 1 – COVER PAGE

This page includes all reporting and project information we received at the time of sample submission. It will tell you the date, time, and temperature that we received your submission at, as well as the date your results were reported.

Your unique CARO work order number can also be found here. This is a 7-digit number that we use to identify your submission. If you call or email with questions about your report or your submission, be sure to reference this number so we can easily find it. Take a read through this first page, to learn a little more about what CARO is all about. At the bottom of the page, you will find your Account Manager’s information, as highlighted. If you have any questions or concerns about your report, feel free to reach out to them for assistance.



CARO
ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

REPORTED TO	Company Name Address City, Province, Postal Code	WORK ORDER	#####
ATTENTION	Client Name	RECEIVED / TEMP REPORTED	Date, Time, Temp Date, Time
PO NUMBER	##	COC NUMBER	No Number
PROJECT	Project Name		
PROJECT INFO	Project Info		

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

<i>Big Picture Sidekicks</i>		<i>We've Got Chemistry</i>		<i>Ahead of the Curve</i>	
<p>You know that the sample you collected after snowblowing to site, digging 5' meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (shew) is VERY important. We know that too.</p>	<p>It's simple. We figure the more you enjoy working with our fun and engaged team members, the more likely you are to give us continued opportunities to support you.</p>	<p>Through research, regulation knowledge, and instrumentation, we are your analytical center for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.</p>			

Authorized By:
Team CARO
Client Service Representative


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Caring About Results, Obviously.

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Page 2+ – TEST RESULTS

Here is where the science starts, and where you will find your test results. Samples are presented in numerical order; if you do not see the sample you are looking for immediately, keep scrolling!



TEST RESULTS

REPORTED TO Client
PROJECT Client's Project

WORK ORDER #####
REPORTED Date, Time

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Sample (#####-01) Matrix: Water Sampled: 2020-06-24 15:00						
Anions						
Chloride	8.01	AO ≤ 250	0.10	mg/L	2020-06-30	
Fluoride	< 0.10	MAC = 1.5	0.10	mg/L	2020-06-30	
Nitrate (as N)	0.156	MAC = 10	0.010	mg/L	2020-06-30	HT1
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2020-06-30	HT1
Sulfate	20.3	AO ≤ 500	1.0	mg/L	2020-06-30	
Calculated Parameters						
Hardness, Total (as CaCO3)	244	None Required	0.500	mg/L	N/A	
Langelier Index	0.9	N/A	-5.0		2020-07-03	
Solids, Total Dissolved	308	AO ≤ 500	1.00	mg/L	N/A	
General Parameters						
Alkalinity, Total (as CaCO3)	290	N/A	1.0	mg/L	2020-06-29	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2020-06-29	
Alkalinity, Bicarbonate (as CaCO3)	290	N/A	1.0	mg/L	2020-06-29	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2020-06-29	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2020-06-29	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2020-06-27	
Conductivity (EC)	530	N/A	2.0	µS/cm	2020-06-29	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2020-06-26	
pH	8.11	7.0-10.5	0.10	pH units	2020-06-29	HT2
Temperature, at pH	23.2	N/A		°C	2020-06-29	HT2
Turbidity	0.24	OG < 1	0.10	NTU	2020-06-26	
Microbiological Parameters						
Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2020-06-25	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2020-06-25	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2020-06-30	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2020-06-30	
Arsenic, total	< 0.00050	MAC = 0.01	0.00050	mg/L	2020-06-30	
Barium, total	0.0733	MAC = 2	0.0050	mg/L	2020-06-30	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2020-06-30	
Cadmium, total	0.000014	MAC = 0.005	0.000010	mg/L	2020-06-30	
Calcium, total	53.8	None Required	0.20	mg/L	2020-06-30	
Chromium, total	0.00051	MAC = 0.05	0.00050	mg/L	2020-06-30	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2020-06-30	
Copper, total	< 0.00040	MAC = 2	0.00040	mg/L	2020-06-30	
Iron, total	0.028	AO ≤ 0.3	0.010	mg/L	2020-06-30	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2020-06-30	
Magnesium, total	26.6	None Required	0.010	mg/L	2020-06-30	
Manganese, total	0.00112	MAC = 0.12	0.00020	mg/L	2020-06-30	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2020-06-30	

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To Note:

- Your results are presented in the “Result” column (the second column from the left)
- Any parameter not detected by our instrument will be reported as a < result and are often referred to as “non-detect.” In the testing world, there is always a limit to how low we can see (think of the last time you tried the limbo!), which is why you will almost never see a value of zero. You can rest assured that we are VERY good at the limbo – the lowest we can see is often well below any guideline or regulatory limit.

- Any results bolded in black (ie. **"8.01"**) are parameters that our instruments did detect in your sample(s) but were not above the associated regulatory standard or guideline (if applicable). You can tell if a Guideline has been applied by looking for the "Guideline" column (see the image above and keep reading.)
- Any results bolded and in red (ex. **500** ug/L) are parameters that we detected in your sample(s) and were found in amounts above the guideline that you are comparing to.
- The "Guideline" column is where you will find the regulatory limit or guideline that you have chosen to compare your results to. Many of our drinking water clients opt to have the Canadian Drinking Water Quality Guidelines included on their report, so they can determine how their water stands up to the national standards. If you have not chosen to have your results compared to any standard, this column will be blank.
- The next column to the right is the "RL" column. RL stands for Reporting Limit. This is essentially the lowest amount of that specific analyte that our instruments can detect. In keeping with the limbo theme, this is the closest to the floor that we can get.
- The "Qualifier" column on the far right is reserved for any special notes that our lab needs to share. For example, you may have a qualifier if your sample was received after its recommended holding time (HT), or if the correct preservative was not used (PRES). If any qualifiers were applied, you will find a legend at the end of your results page that will help you understand what the code means.

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO Client
PROJECT Client's Project

WORK ORDER #####
REPORTED Date, Time

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Sample (#####-01) | Matrix: Water | Sampled: 2020-06-24 15:00

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO Value Contracting
PROJECT Comprehensive

WORK ORDER 0062647
REPORTED 2020-07-03 15:18

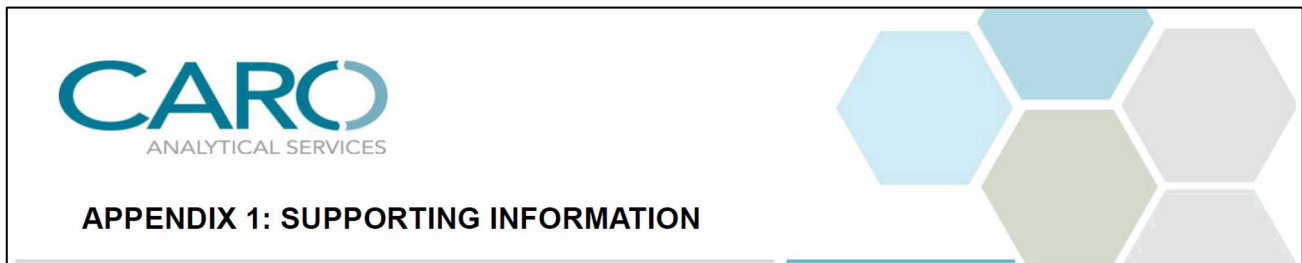
Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Sample (#####-01) Matrix: Water Sampled: 2020-06-24 15:00, Continued						
<i>Total Metals, Continued</i>						
Molybdenum, total	0.00247	N/A	0.00010	mg/L	2020-06-30	
Nickel, total	< 0.00040	N/A	0.00040	mg/L	2020-06-30	
Potassium, total	0.93	N/A	0.10	mg/L	2020-06-30	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2020-06-30	
Sodium, total	21.3	AO ≤ 200	0.10	mg/L	2020-06-30	
Strontium, total	0.768	7	0.0010	mg/L	2020-06-30	
	0.000871	MAC = 0.02	0.00020	mg/L	2020-06-30	
	< 0.0040	AO ≤ 5	0.0040	mg/L	2020-06-30	

Sample Qualifiers:

HT1 The sample prepared and/or analyzed past the recommended holding time.
HT2 The 15 min recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommend

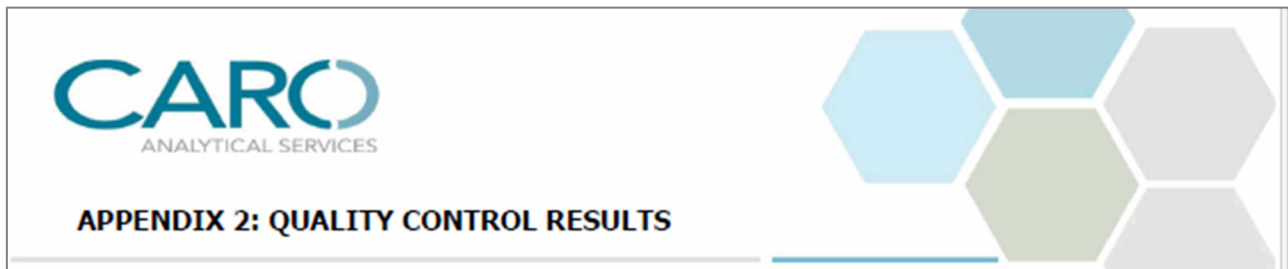
Appendix 1: Supporting Information

The last few pages of your report include additional information about what was run, where and how it was run, as well as a glossary of terms that you might find scattered throughout your report. It also goes through a few of the interpretation items we cover in this document.



Appendix 2: Quality Control

Some reports may carry a "Quality Control" Section – this section shows the results of the checks and balances the lab performs to ensure that the data we report is within control limits. You can tell you are looking at the Quality Control section by looking for this header:



Or looking at the sample names. Our most common quality control samples will be called "Blank" or "LCS" (Laboratory Control Standard), to name a couple. These are NOT your sample results but are extra tests we perform at no cost to you. Your sample results will always be found on the pages carrying the header: TEST RESULTS.

What's Next?

What you do with your test results is up to you. If you do have any results bolded red, it is recommended that you contact a water technician, consultant, or your local Health Officer to discuss strategies to reduce contamination. If you require further assistance, please connect with us by emailing teamcaro@caro.ca, or calling 1-888-311-8846.

***A Special Note about Asbestos Reports**

Asbestos is the general term used to refer to a group of fibrous minerals. These natural fibers include 6 types of asbestos: actinolite, amosite, anthophyllite, crocidolite, tremolite [amphibole minerals]. and chrysotile [serpentine mineral].

Please note that your report will not contain all the asbestos analytes listed above, unless those materials are present.

On the CARO report, if your sample DOES NOT contain asbestos you will see the result as Asbestos Fibres "Absent" under the "Result" header. Your report will also show the make-up of the sample, categorized as Fibrous or Non-Fibrous. Common Non-Fibrous materials are particles such as silica, aluminum silicates, metals, and talc.

Following is an example of a sample "Roofing Material" that does not contain Asbestos, but does contain other Fibrous Material:

Analyte	Result	RL	Units	Analyzed	Qualifier
1 - Roofing Material (██████████) Matrix: Solid Sampled: 2021-12-23					
<i>Polarized Light Microscopy Analysis</i>					
Asbestos Fibres	Absent	0.5	% dry	2022-01-04	
Non-Asbestos Fibres	(30 - 40)	1.0	% dry	2022-01-04	
Non-Fibrous Materials	(60 - 70)	1.0	% dry	2022-01-04	

If your sample DOES contain asbestos, your report will show the type of asbestos and the approximate percentage in your sample. It will also contain information on the approximate make-up of the rest of the material, and if it is "Fibrous [but non-asbestos]" or "non-Fibrous materials."

In the example shown here, the sample "Bdrm 2" contains 1-5% Chrysotile Asbestos, and the rest of the sample is Non-Fibrous Materials:

Analyte	Result	RL	Units	Analyzed	Qualifier
7 - █████ - Bdrm 2 (██████████) Matrix: Solid Sampled: 2021-12-23, Continued					
<i>Polarized Light Microscopy Analysis</i>					
Chrysotile Asbestos	(1 - 5)	0.5	% dry	2022-01-04	
Non-Asbestos Fibres	< 1	1.0	% dry	2022-01-04	
Non-Fibrous Materials	(95 - 99)	1.0	% dry	2022-01-04	