

IMPORTANT SAMPLING CONTAINER UPDATES - MAXXAM ALBERTA

TECHNICAL BULLETIN

Summary

Water Samples Requiring Preservation: Pre-Charged Sampling Containers

Inorganic Water Samples Requiring Preservation: Special Instructions

Sample Volume and Container Reductions

Maxxam has always fostered a commitment to sustainable innovation in the field of environmental and analytical sciences. In support of these values, Maxxam would like to notify you of upcoming modifications to: sample volumes, container sizes, required quantities, and preservation. Bottle orders and sampling supplies will start to ship on Tuesday, May 19, 2015 with these changes incorporated. This initiative is intended to be a gradual phase-out of larger volume containers, so Maxxam will continue processing and analyzing all submissions, regardless of container size. Consequently, there is no need to discard or return to Maxxam any containers that have been stocked. If you choose to return containers, please contact us for economical shipping options.

Summary

Although the volume container reduction is a national initiative at Maxxam, the information in this document is only reflective of changes taking place in Alberta. Each province will be issuing technical memorandums to outline regional specific changes. For samples received by our laboratories in Alberta from other regions, we will continue accepting containers and preservatives as prescribed in those regions.

The upcoming container volume improvements will not impact data accuracy, precision, method sensitivity (i.e. - no change to RDLs) or our ability to provide regulatory and project specific detection limits. These improvements are a result of extensive efforts by our Calgary and Edmonton teams during the winter season to increase analytical efficiency.

These changes will have the following benefits for your sampling and analytical programs:

- Reduced sampling time for field personnel.
- Decreased weight of sampling supplies transported to and from project sites.
- Reduced shipping costs, as less weight is required per sample.
- Reduced waste as vials for preservative transport will no longer be used.

Water Samples Requiring Preservation: Pre-Charged Sampling Containers

Below are the select analytical requests that will be affected by this change:

Analysis	Sample Bottle	Pre-charged Preservative
Chlorite	150mL P	1.5mL EDA
TKN, COD, NH ₄ , Total P, TOC/DOC	250mL P	2mL 50% H ₂ SO ₄
Metals Scan	125mL P	1mL 50% HNO ₃
Mercury	100mL CG	1mL 50% HCl
Manganese 2+	250mL P	1mL of 50% HCl

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Analysis	Sample Bottle	Pre-charged Preservative
Hexavalent Chromium - Cr (VI)	60mL P	1mL 10N NaOH
Iron (Ferric-Fe ³⁺ /Ferrous-Fe ²⁺)	250mL AG	10mL 50% HCl
Phenolics (4-AAP)	100mL AG	2mL 50% H ₂ SO ₄
Cyanide (WAD / SAD)	125mL P	1mL 10N NaOH
Sulphide	250mL P	1mL 10N NaOH/1mL 2N ZnAc
Sulphite	125mL P	1.25mL of glycerol
OGIR/TPHIR/OGH (Gravimetric)	250mL AG	1mL 50% H ₂ SO ₄

P – Plastic; CG – Clear Glass; and AG – Amber Glass

Inorganic Water Samples Requiring Preservation: Special Instructions

For **total** parameters: fill container with sample, **without** removing preservative.

For **field-filtered dissolved** parameters: fill container with **filtered sample**, **without** removing preservative.

For **lab-filtered dissolved** parameters: **Remove preservative** from container and **dispose of in accordance with environmental regulatory guidelines**. Fill **empty container** with sample and **indicate laboratory filtration is required**.

Sample Volume and Container Reductions

Parameter	Old Container	New Container as of May 19
Water		
Nitrate / Nitrite	60 mL P	No bottle ¹
Metals	250 mL P	125 mL P
Cyanide	250 mL P	125 mL P
Oil & Grease by Gravimetric	500 mL AG	250 mL AG
Oil & Grease by IR	500 mL AG	250 mL AG
Total Petroleum Hydrocarbons by IR	500 mL AG	250 mL AG
CCME F2-F4 ²	2 x 250 mL AG	2 x 100 mL AG
PAH	2 x 250 mL AG	2 x 100 mL AG
CCME BTEX, F1	3 x 44 mL V	2 x 44 mL V
VOC	3 x 44 mL V	2 x 44 mL V
Glycols	3 x 44 mL V	2 x 44 mL V
Alcohols	3 x 44 mL V	2 x 44 mL V
Soil		
Organic Analyses ³	2 x 120 mL J	1 x 120 mL J

AG - Amber Glass; P – Plastic; V – Vial; and J - Soil Jar

1. Nitrate / Nitrite in water will no longer have a separate container. This will be sub-sampled in the lab from the "Routine" unpreserved bottle.
2. Fractionation analysis will still require 2 x 250 mL bottles.
3. Two soil jars will still be required if Class 2 landfill analysis is requested.

Maxxam is the Canadian market leader in analytical services and solutions to the energy, environmental, food and DNA industries and a member of the Bureau Veritas Group of companies – a world leader in testing, inspection and certification services. We support critical decisions made by our customers through the application of rigorous science and the knowledge and expertise of our over 2500 employees.

If you have any further questions or concerns regarding these sustainability initiatives, please do not hesitate to contact your Maxxam representative.

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