



Disinfection By-Product Submission Form

January 2024

STATE OF MONTANA ENVIRONMENTAL LABORATORY

P.O. Box 4369, Helena, MT 59604
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<https://dphhs.mt.gov/publichealth/LaboratoryServices/EnvironmentalLaboratory>

Prices subject to change

Sampling from Distribution System Only (DBP Sampling Site)

Test information and collection instructions are provided on the back of this form.

Sample Information

PWS #:
System Name:
Sample ID (DBP #):
Collection Date: _____ Collection Time: _____ AM / PM
Collected By: _____ Phone: _____

Billing Information

Account # (G #): _____ Phone: _____
Name of Payee:
Address:
Email Results To:
Send Report Via: Email Mail

*Samples should be chilled to about 4°C when collected and maintained at that temperature until analysis or extraction. Samples must be packaged for shipment with sufficient ice to ensure that they will arrive at the laboratory with a substantial amount of ice remaining in the cooler. If an ice pack is used, it should be frozen at the time of sampling and the sample should be chilled before packing. Samples will be confirmed to be at or below 10°C when they are received at the laboratory (samples may not be frozen); samples received at higher temperatures may be rejected

Test

Total Trihalomethanes (THM) \$145

Haloacetic Acids (HAA5/DW552) \$212

FOR LABORATORY USE ONLY

Payment Received
Amount: _____
Check #: _____
Check Dated: _____
Payer: _____
Rec By: _____

Date / Time Received: _____ @ _____
Received By: _____
Reviewed By: _____
Login Review: _____

Lab #

Delivery: Walk in Courier USPS UPS FedEx

	THM	DW 552
Number of Bottles Received:		

Holding times observed?	Y	N	
Sample containers in acceptable condition?	Y	N	
Sufficient volume for all tests?	Y	N	
Chain of custody level:	1	2	3
- Chain of custody intact?	Y	N	
THM zero headspace?	Y	N	

Sample Temperature: _____ °C

GENERAL INFORMATION ABOUT DISINFECTION BY-PRODUCTS

What are disinfection byproducts and how are they formed?

Chlorine is added to drinking water to kill or inactivate harmful organisms that cause various diseases. This process is called disinfection. However, chlorine is a very active substance and it reacts with naturally occurring substances to form compounds known as disinfection byproducts (DBPs). The most common DBPs that form when chlorine is used are trihalomethanes (THMs) and haloacetic acids (HAA5).

- Trihalomethanes include four chemicals: chloroform, bromoform, bromodichloromethane, and dibromochloromethane. The maximum annual average of THMs detected in local water supplies cannot exceed 80 parts per billion (ppb) per EPA regulations.
- Haloacetic acids are another form of disinfection byproducts associated with chlorination. This group consists of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid. Currently, the maximum annual average of HAA5 permitted by EPA regulations is 60 parts per billion (ppb).

What types of water systems are most likely to have DBPs?

Water systems using sources with higher amounts of organic substances will form more DBPs when disinfected than those that do not. Sources with higher organics levels include:

- Surface waters, such as lakes, rivers, and streams.
- Springs and wells that are shallow and/or located near surface waters.

Groundwater, especially those from deep wells, tend to contain little organic substances. Even if they chlorinate the water, lesser amounts of DBPs are typically found.

COLLECTION INSTRUCTIONS

General Instructions

1. Freeze the ice packs overnight before sampling. Make sure they freeze flat.
2. Amber glass bottle and glass vials contain preservatives. **Do not rinse them out.**
3. Take samples from a cold water tap indoors (do not take samples from a hose).
4. Remove the aerator, and allow the water to run for 5 to 10 minutes or longer before sampling. **Haloacetic**

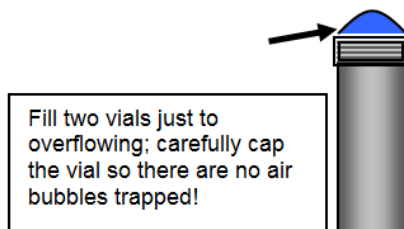
Acid (Amber Glass Bottle)

Fill the amber bottle full to the neck and cap tightly.

Total Trihalomethanes (3 VOA vials)

Fill the vials according to the following instructions:

1. One vial has water in it already; this is a "trip blank" and **must not be opened.**
2. Without flushing out the preservative, fill the other two vials just to overflowing.
3. Recap the vials tightly, making sure **no air bubbles** are trapped in the vials. Mix the vials vigorously for several seconds. If bubbles are evident, uncap the vials and add several more drops of water. Repeat this step until no bubbles remain in the mixed vials.



If shipping the samples back to the lab, pack the cooler securely with the ice packs to prevent the bottles from moving during shipment and send as soon as possible. **The temperature of the samples must be $\leq 10^{\circ}\text{C}$ when they are received by the lab.**

If you have any questions, please call 406-444-3444