

Disinfection By-Product Submission Form

STATE OF MONTANA ENVIRONMENTAL LABORATORY P.O. Box 4369, Helena, MT 59604 (406) 444-3444, Toll-Free (800) 821-7284 2019 Revision.

Prices effective April 1, 2018.

https://dphhs.mt.gov/publichealth/LaboratoryServices/EnvironmentalLaboratory

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		Send Report Via:	Email	Mail
Account # (G #):	Phone:			
Name of Payee:				
Address:				
Email Results To:				
*Samples should be chilled to abo extraction. Samples must be packa	ut 4°C when collected and maintained a aged for shipment with sufficient ice to a	at that temperature un ensure that they will a	ntil analysis arrive at the	s or Ə

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. <u>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</u>

<u>Test</u>

Select Test

Total Thrihalomethanes (TTHM)

Haloacetic Acids (HAA5/DW552)

		FOR LABORAT	ORY USE ONI	LY		
Payment Received				Loh #		
Amount:	Date / Time Re	ceived:	@			
Check #:	Recei	ved By:				
Check Dated: Paver:	Review	wed By:				
Rec By:	Login I	Review:				
Delivery: Walk in Courier	USPS UPS	6 FedEx	Holding time	s observed?	Y	N
	THM	DW 552	Sample cont	ainers in acceptable condition?	Y	Ν
Number of Bottles			Sufficient vol	ume for all tests?	Y	Ν
Received:			Chain of cus	tody level:	1	2 3
			- Cł	nain of custody intact?	Y	Ν
Sample Temperature: °C			THM zero headspace?		Y	Ν

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 know 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 $\leq 10^{\circ}$ C when they are received by the lab.

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