



# FOR LABORATORY USE ONLY

DPHHS Environmental Laboratory

## LAB USE ONLY THIS PAGE

### Payment Received

Amount: \_\_\_\_\_

Check #: \_\_\_\_\_

Check Date: \_\_\_\_\_

Payer: \_\_\_\_\_

Received By: \_\_\_\_\_

Date / Time Received: \_\_\_\_\_ @ \_\_\_\_\_

Received By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_

Login Review: \_\_\_\_\_

Sample Temperature: \_\_\_\_\_

Sample Conductivity: \_\_\_\_\_

Delivery:    Walk in    Courier    USPS    UPS    FedEx

### Number of Bottles Received:

BacT	Nutrients	Anions	Metals	WellHerb/ WellPest	WellVOC

Holding times observed?	Y	N	
- Under 48 hours for IC?	Y	N	NA
Sample containers in acceptable condition?	Y	N	
Sufficient sample volume for all tests?	Y	N	
Chain of Custody Level:	1	2	3
- Chain of Custody intact?	Y	N	
VOC zero headspace?	Y	N	NA

### SPLITS: (mL)

Lachat:      50      250  
 IC:            50      250  
 Metals:      50      250  
 SPC:          50      250  
 Commons:    50      250

### pH Check:

	Preserved in?	Preserved with?
Metals:	L   F	HNO <sub>3</sub>
Nutrients:	L   F	H <sub>2</sub> SO <sub>4</sub>
Other:	L   F	

### Test Codes:

Basic Screen  
     TCPA  
     Invalid  
         reason:  
     SPC  
     NO3  
     NO3NO2-IC

### Comments:

### Lab number:

WellScan2  
 Anion Screen  
 WELLVOC  
 WELLPEST  
 WELLHERB

## SAMPLE COLLECTION INSTRUCTIONS FOR BASIC, METALS, & ANION SCREENS

Bacteria Sample bottle: 100-mL plastic bottle with a small white tablet or bit of white powder in it

Other tests: 250-mL or 1-liter plastic bottle with no preservative.

NOTE: Bacteria samples must reach the laboratory within 30 hours of collection time. Check your post office for the best mailing times. Keep the sample cool after collection; don't leave it in a hot vehicle.

1. Remove the screen from an indoor cold water faucet
2. Clean the inside and outside of the faucet with alcohol or a bleach solution
3. Run the water for 2-3 minutes to clean out the lines
4. Reduce the water flow to about pencil size
5. Carefully remove the top from the 100-mL bacteria collection bottle, making sure not to touch the inside of the cap or bottle
6. **Without rinsing the bottle**, fill it to the 100-mL mark; leave the white powder or pill in the bottle.
7. Cap the bottle firmly and write your name and the sample ID on the bottle with a waterproof pen.
8. Fill the other plastic bottle (the 250-mL or 1-liter) to the neck in the same manner.
9. Fill out all the paperwork, include a check for the cost of samples and return the bottle to the lab in the envelope provided.

## SAMPLE COLLECTION INSTRUCTIONS FOR VOLATILE ORGANIC, HERBICIDE & PESTICIDE SCREENS

This sampling kit includes one 1-liter amber bottle and 3 small clear glass vials in packing foam. These bottles should also be kept cool after collection.

1. Freeze the ice packs overnight before sampling. Make sure they freeze flat.
2. Both the glass amber bottle and the vials contains 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 3 to 4 minutes before sampling.
5. Fill the 1-liter amber bottle full to the neck and cap tightly.
6. Fill the vials according to the following instructions:
  - a. Fill the two empty vials one at a time.
  - b. Fill vials just before overflowing, being careful not to flush out the preservative. Cap both vials tightly.
  - c. Shake the samples vigorously for one minute. Invert the vials and observe if any air bubbles are trapped in it. If there are bubbles, uncap the vial and fill with a few more drops of water, cap and recheck for air bubbles, until none are present.
  - d. Air bubbles will invalidate the sample, so make sure to follow instructions in section c above.
  - e. There is one vial that already contains liquid. **DO NOT** empty this bottle. It is called a trip blank. The analytical method requires that this vial be filled in the lab and accompany the other two bottles. Please return it with the other two bottles.
7. Completely fill out the information sheet included with the kit.
8. Repack the cooler so that the bottles will not hit each other and break during transit. The ice packs work well as cushions.
9. Tape the cooler securely closed.

## EXPLANATION OF TESTS

The results are suitable for general knowledge of the quality of your drinking water.

**Basic Screen:** Coliform bacteria are naturally present in the environment and are used as an indicator that other, possibly harmful, bacteria may also be present. E. coli bacteria is an indication of fecal contamination from humans or livestock. Nitrate + nitrite can be naturally occurring, but often is associated with contamination from septic systems, animal corrals or feedlots, or runoff from fertilizers. Specific conductivity provides an estimate of the amount of minerals dissolved in the water – high conductivity indicates a large amount of dissolved minerals, which could adversely affect the quality of the water

**Metals Screen:** Testing includes calcium and magnesium, which contribute to hardness; sodium, which may be of interest to individuals on a sodium-restricted diet; zinc, copper, and high-level lead and high-level arsenic. High metals concentration can affect the taste of water, may indicate a corrosion problem, or may lead to the clogging of pipes by hardness deposits. EPA has set drinking water limits for lead at 0.015 parts per million (ppm), and for arsenic at 0.010 ppm. The SCREEN test will detect both arsenic and lead to about 0.005 ppm. Lead and arsenic can be analyzed by a more sensitive method in order to detect lower levels of the metals, for a cost of \$24.00 each. Uranium is also included, and has an EPA maximum contamination level of 0.03 ppm.

**Anion Screen:** Testing includes sulfate, which can cause intestinal problems for those not accustomed to drinking water with high sulfate concentration; chloride, which can cause a salty taste at high levels; hardness, which can increase the likelihood of corrosion; fluoride (used for dental care and oral health), alkalinity (buffering capacity of the water), and pH (and indication of how acidic or basic the water is)

**Volatile Organic Compound Screen:** Detects the presence or absence of hydrocarbons from fuels, oils and solvents in your water. Use this if you suspect a spill near your water source. Request bottles and collection instructions from the laboratory.

**Pesticide Screen:** Detects the presence or absence of several common pesticides in water. Request bottles and collection instructions from the laboratory.

**Herbicide Screen:** Detects the presence or absence of several common herbicides in water. Request bottles and collection instructions from the laboratory.

**Full Well Screen:** You must collect Volatile Organic, Herbicide and Pesticide Screen samples in glass bottles and vials obtained from the lab. Please call for these bottles.

## GETTING THE SAMPLES TO THE LAB

- Any carrier (Postal Service priority mail, UPS, Federal Express, or bus)
- Laboratory Courier Service (pick-up Monday through Friday, see our website for more information: <http://dphhs.mt.gov/publichealth/LaboratoryServices/CourierRoutesSampleDelivery>). Please call the lab if you plan on using the courier service so we can inform them where they will need to pick up water samples.
- Hand delivery to to the Laboratory's Main Office, Room B206 in the Cogswell Building, 1400 E. Broadway, Helena.