



BIOVIR LABORATORIES, INC.

**EXAMPLE PROCEDURE FOR COLLECTING FILTERED WATER
SAMPLES (Using HV Envirochek Capsule Filters)
FOR
METHOD 1622/23 ANALYSIS**

NOTE! The EPA method 1623: Cryptosporidium and Giardia in Water by Filtration/IMS/FA December 2005
Sample arrival temperature requirement is 0° C to < 20°C *
EPA target arrival temperature <10°C

* Adapted from EPA Document. See <http://www.epa.gov/microbes>

Example Procedure for Collecting Filtered Water Samples for Method 1622/1623 Analysis

1.0 Required Materials

Have the following materials available prior to sampling:

- Several pair of new latex gloves*
- Sample Data sheet*
- HV Envirochek capsule Filter and Filer Sampling Equipment w/ 10L cubitainer*
- Small Return cooler w/ 250 mL Temperature blank
- Waterproof Sample label*
- Waterproof Pen
- Cooler / vessel for chilling of sample prior to shipment
- Ice for chilling of sample prior to shipping
- 2 plastic liners (bags)*
- 4-5 Gel Pacs (Frozen)* or
- Ice (cubes or crushed) for shipping
- 5 large ziplocks bags*
- Strapping or duct tape to seal cooler prior to shipping
- Shipping air bill (completed by utilities)

2.0 Collecting the Sample from a Pressurized Source

- Put on a pair of latex gloves.
- Flush the system for 2 to 3 minutes until any accumulated stagnant water or debris has cleared, or temperature and turbidity has become visibly uniform before connecting the sampling unit to the tap.
- While system is flushing record following information on the sample data sheet:
 - Public Water System (PWS) Name and Address
 - Sampler Name
 - PWS ID Number
 - Facility Name and PWS facility ID number
 - Sample collection point name and ID number
 - Sample collection date
 - Source water type (required for E. Coli sample forms)
 - Assay Requested (indicate if Regular or Matrix sample)
- After system has flushed, measure and enter water quality parameters such as temperature, turbidity, pH.
- Connect assembled sampling unit to the sample tap (**without capsule filter**) to sample tap, flush sampling unit for 2-3 minutes and test for leaks, and slowly adjust up an adequate flow. (**maximum** values 100 psi w/ flow restrictor).
- Turn off sample tap, install filter capsule (**retain blue vinyl caps**), insert three (3) foot length tubing into effluent 10L cubitainer .
 - Record start time on sample data sheet. Slowly turn on sample tap. When 10L cubitainer has reached fill mark, turn off sample tap. Record stop time
- **If taking a Matrix spike sample with this sample the two volumes must be the same (within 10%)**
- Hold Capsule filter (inlet pointing up), remove tubing allowing water to drain through the “out port” of the filter. Open bleed valve to speed draining process, and disconnect tubing from capsule filter.
- Seal capsule filter ends with blue caps, close bleed valve, and place into gallon ziplock bag. Seal and place into a second ziplock bag (ie. Double bag)

3.0 Pre-Chilling of Filter

*Supplied if Requested

- Place bagged filter and temperature blank into an ice bath. The filter will float semi- submerged in the ice water.
- A 25°C filter and temperature blank will chill to approximately 6°C in 1.5 hours
- Filter and temperature blank should be stored between 0 - 8°C from time of filtration.
- Sample testing must be completed within 96 hours of sample collection.

4.0 Packing and Shipping the Sample Using Ice Cubes/Crushed Ice

- Create a double liner by inserting one plastic liner into the other. Line the cooler with the liners
- Divide 8-lbs of ice(cubes or crushed) into the ziplock bags, expel as much air as possible then seal. Secure the ends with tape.
- Place the chilled filter and temperature blank into the sample cooler, cover with a layer of bubble wrap or similar material. Place an ice pack on top of the insulating material.
- Seal each liner by twisting the top of each bag, and secure with tape.
- Place the completed sample data sheet (chain of custody) into a ziplock bag, seal and tape to the inside cooler lid.
- Close and seal the cooler lid.
- Attach your completed air bill to the cooler, retain sender copy. Send to processing lab
- Alert BioVir at least 24 hours prior to sample shipment date. Indicate courier used and request BioVir contact client if sample not received.
- If problems are encountered with the shipment, communicate with the shipping company and BioVir to resolve.

5.0 Packing and Shipping Sample Using Frozen Gel Pacs

- Create a double liner by inserting one bag liner into the other. Line cooler with the liners.
- Place each **FROZEN** gel pac into a ziplock.
- Place the pre-chilled filter and temperature blank into cooler, cover with a layer of bubble wrap or similar material. Place a frozen gel pac on each side and on top of the filter and temperature blank.
- Seal each liner by twisting the top of each bag, and securing with tape.
- Place the completed sample data sheet (chain of custody) into a ziplock, seal and tape to the inside cooler lid.
- Close and seal the cooler lid.
- Attach your completed air bill to the cooler, retain sender copy. Send to processing lab
- Alert BioVir at least 24 hours prior to sample shipment date. Indicate courier used and request BioVir contact client if sample not received.
- If problems are encountered with the shipment, communicate with the shipping company and BioVir to resolve.

NOTE ! It is very important to use the double liners and ziplocks to prevent leakage from the sample cooler. Shipping companies may delay shipment if leakage occurs.