

# *E. coli*

## Equipment

12' telescoping pole

Cooler

Ice pack

1 120mL sterilized jar for water sample

1 120mL sterilized jar for duplicate (collect a duplicate every other month)

1 120mL sterilized jar for blank (collect a field blank once a month)

Distilled Water

Data collection sheet

Marker



## **Considerations**

E.coli levels will often be high after periods of rain when sewage outfalls overflow and fecal matter on land is washed into the river. Remember that the sample must remain untainted by the sampler- never touch any surfaces that contact the sample water.

Bottles should have tape over the cap or some seal or marking to indicate that they have been sterilized.

## **Sample Collection**

1. Attach the sterile 120 ml bottle to the sampling pole.



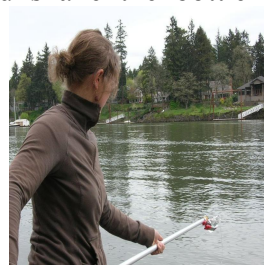
2. Unscrew lid from a clean, sterile 120-ml bottle **without** touching the bottle neck or cap threads if you accidentally touch the inside of the bottle use another one. Do not use bottle if seal is broken.



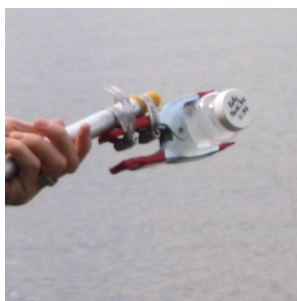
3. Gently fill the bottle. Make sure the opening faces downward and then faces upstream. Collect a water sample 8-12 inches beneath the surface or mid-way between the surface and the bottom if the stream reach is shallow.



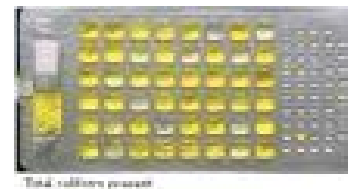
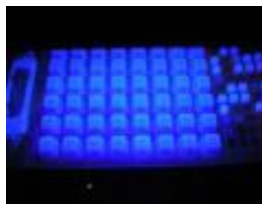
4. Pour out excess water so that the final volume is approximately 100 ml (there is a line around the bottle marking the 100 ml level). Close and shake the bottle to dissolve the sodium thiosulfate powder (neutralizes any chlorine).



5. Write your site name, time, and date on the cap with the marker provided in the box. Keep samples cool and submit samples to laboratory within 24 hours of collection. Samples that are allowed to get too warm cannot be analyzed as they will produce inaccurate test results. Store sample at 4°C.



6. Drop off the sample at Willamette Riverkeeper office.



### Field Blank Collection:

Field blanks should be collected once a month at one of your site. Blanks are used to identify errors or contamination in sample collection and analysis. It is then analyzed with the regular samples. Lab analysis should result in "0" bacteria counts for all blanks. Blanks are used to identify errors or contamination in sample collection and analysis. Collect a field blank the exact way you would collect a sample.

1. Make sure that the bottle is sealed.
2. Attach the sterile 120 ml bottle to the sampling pole.
3. Rather than taking a sample of river water, gently pour sterile water into the bottle to the 100mL mark. Close and shake the bottle to dissolve the sodium thiosulfate powder.
4. Write site name, time, date and the letter "B" to indicate it is a field blank.

### Field Duplicates:

These should be collected every other month at one sampling site along with the regular sample. A field duplicate is a duplicate stream sample collected at the same time and at the same place either by the same sampler or by another sampler. This is labeled as a regular sample, but with a special notation (such as a "D") that indicates it is a duplicate. It is then analyzed with the regular samples. Lab analysis should result in comparable bacteria counts per 100 mL for duplicates and regular samples collected at the same site. Duplicates are used to estimate sampling and laboratory analysis precision.