

QUICK GUIDE: RIVERTRENDS MONITORING

BEFORE SAMPLING

1. Check weather conditions for safety.
2. If sampling bacteria, take agar out of the freezer to thaw and turn on incubator.
3. Calibrate pH meter. Keep buffer solutions for your post-sample check.
4. Complete your sodium thiosulfate check for your dissolved oxygen test. Your check must pass between 9.4 and 10 mg/L.

IN THE FIELD

1. If sampling by bucket, rinse bucket 3 times, emptying downstream.
2. Collect **bacteria** sample(s) by scooping sterile bottle once in a u-motion $\frac{3}{4}$ of the way full, then place sample in a cooler on ice until plating.*
3. Take **air temperature** reading out of direct sunlight.*
4. Take **water temperature** reading.*
5. Fill up two **dissolved oxygen** sample bottles at each sampling event.
 - a. Rinse each bottle 3 times, then fill the bottles slowly with no air bubbles. Cap bottles underwater.
 - b. Fix samples by adding the appropriate reagents.
6. Take **pH** reading with Oakton pH meter. Do not press any buttons, just turn on and take reading.*
7. Take a **salinity** reading using refractometer if in a tidal area.*
8. Take **water clarity** reading, either by secchi disk (meters) or turbidity tube (cm).*
9. If able, take **total depth** of stream by placing secchi disk or turbidity tube on bottle of stream.*

*denotes replicate samples should be taken in March and October

IN THE LAB/AT HOME

1. Plate bacteria sample and place in incubator.
2. Complete post-sample check on pH meter. Do not press any buttons to calibrate, just take readings of buffer solutions.
3. Titrate both dissolved oxygen samples.
4. Clean, let dry, and properly store equipment.
 - a. Rinse DO bottles and test tubes, store pH meter in small amount of buffer 4 or vinegar.

UPLOAD DATA

1. Look up rainfall data (in mm) for 7 days prior to sampling and 48 hrs prior to sampling. Use the Wunderground guide on the RiverTrends Resource Page for guidance.
2. Upload data to the Chesapeake Data Explorer
3. Mail in/scan/e-mail your datasheets to the RiverTrends Coordinator.