

Collecting and Shipping SWQM Bacteriological Samples

This document supplements the sample collection information provided in Chapter 4 of the SWQM Procedures Manual, Volume 1 (RG-415) and applies to TCEQ SWQM staff.

E. coli

All TCEQ regions may ship their bacteria samples to the Houston Lab. EPA approved a holding time extension of 30 hours ***for ambient samples only***. This holding time applies only when transport conditions cause delays longer than 6 hours. Samples should not be held beyond 6 hours for convenience.

The revised hold time may require some adjustment to your sampling schedule. Also, the use of overnight shipping (if not already using this method) is recommended. Other strategies may be used that work best for your region and sampling runs.

Procedures

1. Always collect samples in IDEXX bottles, not Whirlpak bags.
2. To facilitate tracking quality assurance information, SWQM staff must use IDEXX sample bottles. Each region will purchase both 120 mL and 290 mL (for lab duplicates) bottles with sodium thiosulfate and download the IDEXX “Certificates of Quality”. Details are available in the updated SWQM Procedures Volume 1 (RG-415).
3. Fill containers to the top—not the 100 or 250 mL line—leaving sufficient headspace for air and shaking. This provides the lab enough volume to process the sample according to their procedures.
4. Include your routine bacteria samples on the same RFA as the routine water samples when shipped to the same lab.
5. Label samples the same as routine water samples making sure to note the collection time.
6. On the RFA, include recommended dilutions for laboratory use. Examples—1 mL, 10mL, 25mL, 50mL, or 100mL. Avoid using ratios or percentages.
7. Always include field conductivity on the RFA.
8. Submit lab within six hours of sampling. Additional time is permitted when transport times are long. Samples must be analyzed within 30 hours of collection.
9. *E. coli* samples shipped to Houston Lab on Wednesday must arrive no later than Thursday. Only ship samples Monday through Wednesday. If necessary, ship to LCRA on Thursday or Friday and only by prearrangement.
10. For lab duplicates, provide one 290 mL container for every 10 samples collected or one per month (< 10 samples). This serves as your sample and the lab duplicate. Lab duplicates are used for lab purposes only. Field splits and field duplicates are not required for bacteria. When possible collect lab duplicates where elevated bacteria levels have occurred in the past.

Enterococci

There is no extension of holding times for Enterococci. Therefore, regions needing this analysis must contract with local labs that are NELAP accredited.

Procedures

1. Always collect samples in IDEXX bottles, not Whirlpak bags.
2. To facilitate tracking quality assurance information, SWQM staff must use 100 and 290 mL sample bottles purchased from IDEXX.
3. Fill containers to the top—not the 100 or 250 mL line—leaving sufficient headspace for air and shaking. This provides the lab enough volume to process the sample according to their procedures.
4. Label samples the same as routine water samples making sure to note the collection time.
5. Submit to contract lab within six hours of sampling.
6. Enter data in SWQMIS as “Accredited” once reported from contract lab.
7. Splits or field blanks are not required for bacteria and lab duplicates are not necessary unless the lab requests them.
8. If you are collecting and analyzing samples in your region for screening purposes, continue to maintain your bacteria logs and enter the data in SWQMIS as “Non-Accredited”.