

# SAMPLE COLLECTION TECHNIQUES FOR COLIFORM ANALYSIS

## Sample Containers:

Sample bottles from the Public Health Laboratories contain a chlorine neutralizer that is present in liquid or crystalline form. They are sterile and ready for use when shipped. **Do not rinse contents from the container and keep bottle closed until it is to be filled.**

## Sample Collection Procedures:

- 1. Assemble all of the sampling supplies before you begin and wash your hands thoroughly before handling supplies.**
- 2. Go to the sampling location(s) specified in the sampling plan.** The sample should be taken from a clean smooth-nosed cold water if possible. **If possible, avoid drinking fountains, leaky faucets and frost-proof yard hydrants since it is not practical to sterilize these fixtures.**
- 3. If possible, remove any aerators, strainers, or hoses that are present,** because they may harbor bacteria.
- 4. Open the cold water tap (or hot water if a mixing faucet is used) for about 3 minutes before collecting the sample.** This should adequately clear the water line.
- 5. Flame-sterilize the tap and/or chemically disinfect the tap. Do not flame-sterilize if tap is plastic or if aerators are attached.** Disinfect tap by thoroughly rinsing both the inside and outside of the tap with a mixture of 50% bleach and 50% tap water. Take extreme care with strong bleach (oxidizing) solutions.
- 6. Flush the tap for an additional 3 minutes with cold water and reduce to a gentle flow to about the width of a pencil.** Do not change the water flow once you have started sampling. It could dislodge microbial growth.
- 7. Grasp cap along top edge and remove carefully not to touch the inside with your fingers.** Hold the bottle in one hand and the cap in the other. **Do not lay the cap down or put it in a pocket!** *Also, take care not to contaminate the sterile bottle or cap with your fingers or permit the faucet to touch the inside of the bottle.*
- 8. Fill bottle to the 100 ml line or to a little above the black line.** Hold the bottle so that water entering the bottle will not come in contact with your hands. **Samples will not be tested if there is less than ½ inch air space in the bottle.** Then place the cap on the bottle and screw it down tightly.
- 9. Fill out the water analyses card in waterproof ink.**

## Shipping instructions:

If you use the **Department of Health and Senior Services (DHSS)-Contract Courier** to deliver your samples, the following tip may help. The contract courier cannot pick samples up before 10:30am. Therefore, to be certain of meeting the holding times of **30 hours**, it is important to collect your samples that morning and have them dropped off at the contract courier pickup point by 10:30am. **Contact the PDWB for more information at 573-526-6929. If you use the US Postal Service,** remember that the 30-hour time limit starts when the sample was collected. The Department recommends that you use **Priority Mail or faster to mail water samples.**

**A.** Sometimes in spite of taking all of the precautions, you may get a call from us or results by mail telling you that you have TC or EC bacteria in your water. You will then be given specific instructions that may include collection of repeat samples to confirm that the first routine sample was not a sampling error.

**B. WHENEVER YOU HAVE A SAMPLE WITH COLIFORM BACTERIA IN IT, YOU ARE REQUIRED TO COLLECT 5 ROUTINE SAMPLES THE FOLLOWING MONTH.** A maximum contaminant level violation (MCL) is issued to a facility when two or more monthly bacteriological samples are present for coliform and/or E.coli bacteria. Please call the Regional Office staff and they will discuss the procedure with you.

Sample results are available online within 4-5 days at: <http://www.dnr.mo.gov/env/wpp/dww/index.html>  
 Reorder sample bottles online at: <http://dnr.mo.gov/env/wpp/labs/water-analysis.htm>

## Military time versus 12 hour

24-hour clock	<u>12-hour clock</u>
00:00	12:00 a.m. 12 midnight (start of day)
01:00	1:00 a.m.
02:00	2:00 a.m.
03:00	3:00 a.m.
04:00	4:00 a.m.
05:00	5:00 a.m.
06:00	6:00 a.m.
07:00	7:00 a.m.
08:00	8:00 a.m.
09:00	9:00 a.m.
10:00	10:00 a.m.
11:00	11:00 a.m.
12:00	12:00 p.m. 12 noon
13:00	1:00 p.m.
14:00	2:00 p.m.
15:00	3:00 p.m.
16:00	4:00 p.m.
17:00	5:00 p.m.
18:00	6:00 p.m.
19:00	7:00 p.m.
20:00	8:00 p.m.
21:00	9:00 p.m.
22:00	10:00 p.m.
23:00	11:00 p.m.
24:00	12 midnight (end of day)