

Appendix F: Collection and Submission of Water Samples

- 1) Important Information to Review Prior to the Collection of Water Samples**
- 2) Collection and Submission of Water Samples for Bacteriological Examination**
- 3) Lab Form 507**

Water collection procedures and water submission times vary per suspected pathogen and technique used by the Kentucky Department for Public Health (KDPH), Division of Laboratory Services (DLS). For this reason, **the DLS must be consulted before any water samples are collected or submitted** in a waterborne illness outbreak.

DLS Phone Number: 502-564-4446

Important information to review prior to the collection of water samples

When investigating a waterborne illness outbreak, the collection and submission guide for bacteriological examination is a general guide for testing recreational water or private water supplies, which includes wells or cisterns. The DLS will test the water samples for coliforms. These are indicator organisms only, which suggest the water is contaminated with fecal material.

When a specific pathogenic bacteria or parasite is suspected as the cause of a waterborne outbreak, approval should be obtained from the Environmental Management Branch at (502) 564-4856 and the Division of Epidemiology and Health Planning, Infectious Disease Branch, Reportable Disease Section at (502) 564-3261 or at (888) 973-7678 (if calling after business hours) before collection of any water samples. Once approval is given, contact the DLS at (502) 564-4446 for guidelines on the collection and submission of water samples based on the suspected pathogen.

Collection and Submission of Water Sample for Bacteriological Examination

Collection and Submission of Water Sample for Bacteriological Examination



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Supplies Needed for Water Sample Collection



Sterile, clear plastic sample bottle containing Sodium Thiosulfate Powder inside Zip seal bag with absorbent



Refrigerated Cooler with Ice Pack



Outreach Lab Form or Lab Form 507

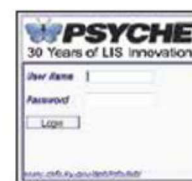


- ☞ Check expiration date on water collection bottle. Samples will not be tested if they do not have an expiration date on the bottle or it is expired.
- ☞ Samples not requiring chain of custody precautions must arrive in the laboratory within 30hrs of collection and are to be kept at <8°C during transport. Use FedEx label provided. Recommend sample collection on Monday, Tuesday, or Wednesday and mail the same day.
- ☞ Samples requiring chain of custody precautions must arrive in the laboratory (DLS or another certified laboratory) within 6hrs of collection and are to be kept at <8°C during transport.

1. Identify sample source, Authorized Collector and Sanitarian ID, Date and Time of Collection, Owner/Occupant, County, and Submitter ID on sample form (LAB 507) to be entered into the Division of Laboratory Services' OUTREACH system at <http://chfs.ky.gov/dph/info/lab>.
2. Select a tap or hose bib which has been in use and does not leak. Do not sample from a drinking fountain or gate valve or at a swivel faucet. Remove all attachments from sample tap prior to sampling.
3. Flush tap for 25 minutes before collecting sample. Do not flush tap if source of contamination is suspected to be within the lines of the sampling site.
4. Fill the sample bottle to the 100 mL line and close the bottle securely.
5. Check the bottle for leaks by shaking and inverting several times.
6. Insert water bottle in the zip seal bag with absorbent provided with the water sample kit and seal.
7. Place sample bag/s on top of frozen ice pack in cooler and replace styrofoam lid.
8. Place printed OUTREACH form on top of styrofoam cooler lid.
9. Seal box and place mailing label on top.



Swimming pools and Beaches require 1 (one) 100 mL sample. Testing that will include Pseudomonas, for Public spas, whirlpool, hot tub or other therapeutic pools requires 2 (two) 100 mL samples.



If you have questions about submission of water samples, contact the Division of Laboratory Services at (502)-564-4446

03/2017

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx> Collection and Submission of Water Sample for Bacteriological Examination



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LAB 507
REV. 9/2018


KY Division of Laboratory Services 100 Sower Blvd. Suite 204 Frankfort, Kentucky 40601 Phone: 502/ 564-4446 Fax: 502/ 564-7019	 Kentucky Public Health <small>Prevent. Promote. Protect.</small> Water Bacteriology Analysis Report		
<i>(Please complete a separate form for each sample.)</i>			
Authorized Collector: _____ Collectors Phone #: _____ Sanitarian Number: _____ Collection Date: _____ Collection Time: _____ Occupant or Owner: _____ Request Identifying No: _____ Site No.: _____ Sample No.: _____ Sample Seq. No: _____ County: _____ Submitter (Use LHN Site#): _____			
<input type="checkbox"/> Drinking Water <input type="checkbox"/> Recreational Waters <input type="checkbox"/> Spas/Therapeutic Pools			
<input type="checkbox"/> Check here if accompanied by Chain-of-custody form			
Collector's Remarks:			
Laboratory Findings:			
Date & Time Received	Laboratory Number	Date & Time Reported	Technologist

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx> Form 507

[Reference List of Tests](#)

Note: For bacteriological water analyses, all samples must be collected and submitted by authorized collectors. Samples not requiring chain of custody precautions must arrive in the laboratory within 30hrs of collection and are to be kept at <8°C during transport. Use FedEx label provided. Recommend sample collection on Monday, Tuesday, or Wednesday and mail the same day. Samples requiring chain of custody precautions must arrive in the laboratory (DLS or another certified laboratory) within 6hrs of collection and are to be kept at <8°C during transport.

If you have any questions about submission of water samples, contact DLS at 502-564-4446.

WATER BACTERIOLOGY ANALYSIS

Qualifying Water Sources:

E.coli and Total Coliforms

- Private drinking water; wells, cisterns, springs
- Public Swimming Beaches
- Public Swimming Pools
- Dairy Water

Legionella

- Private drinking water; wells, cisterns, springs
- Recreational water
- Commercial water

Methodology:

- E. coli and Total Coliforms - LTB/BGBB(SM9921D), Colilert(SM9223B)
- Legionella – Legiolert and culture

Specimen:

- 1 (100 ml) bottle (provided in the kit and filled just over the 100ml fill line with headspace)

Mailing Label:

- FedEx label

Environmental Microbiology: pages 32 and 33 of DLS Reference List of Tests

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

Collection Kit Furnished by:**Kentucky State Public Health Lab (DLS) (502)564-4446**

- Idexx Bottle in zip bag with absorbent
- Refrigerated Cooler
- FedEx Label

Collection and Packaging Instructions:

<https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

Water Collection

	Outreach Test Code	CPT Code	Reference Range
Water Bacteriology	WATERB	NA	<p>Acceptable limits for drinking water: <1 per 100ml (none detected)</p> <p>Acceptable limits for recreation water</p> <ul style="list-style-type: none"> • Total Coliform limit not established for beach water • E. coli content shall not exceed 130 colonies per 100ml as a geometric mean based on not less than 5 samples taken during a 30-day period. <p>Acceptable limits for Dairy water: Presence of total coliforms is unacceptable in dairy or food manufacturing source/processing water.</p>
Legionella	WLEG	NA	<1 per 100ml (none detected)

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>