



Water Testing Information- Kansas Produce Growers

Water Testing- Kansas State University is conducting free water analysis using the IDEXX Colilert Test Kit Quanti-Tray 2000 for generic *Escherichia coli* quantification, which is one of the methods that is acceptable to FDA under the Food Safety Modernization Act (FSMA) Produce Safety Rule water testing requirements. These results are also accepted by USDA GAP/GHP auditors. This FREE testing is available to Kansas produce growers until otherwise indicated.

Sampling- Water samples will be collected by the grower following the procedure outlined below in the provided water sampling bottles. Please contact Katelynn Stull (kjstull@ksu.edu or 913 307 7394) if you need empty sample bottles.

Delivery-Kansas growers can now deliver water samples to our KSU laboratory in Olathe or to a location in any Kansas county using the Kansas Department of Health and Environmental Services (KDHE) courier system. More information on both of these systems is listed below.

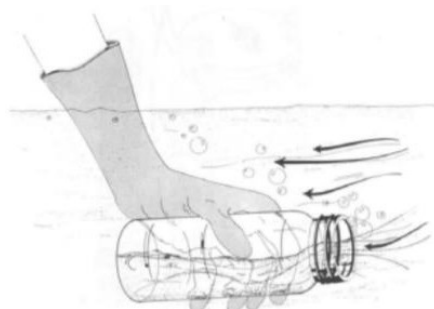
1) Water Samples Delivered to K-State Olathe Research Laboratory

Water samples should be placed on ice and dropped off or it can be mailed to Kansas State University-Olathe, ATTN Dr. Manreet Bhullar, 22201 W. Innovation Drive, Olathe Kansas 66061 so that they will arrive on ice at the KSU laboratory within 24 hours of collection. Please e-mail msbhullar@ksu.edu to notify the laboratory that samples are being delivered. When collecting and mailing, please be sure the samples will arrive at the laboratory on a Monday- Thursday as samples cannot be received on weekends.

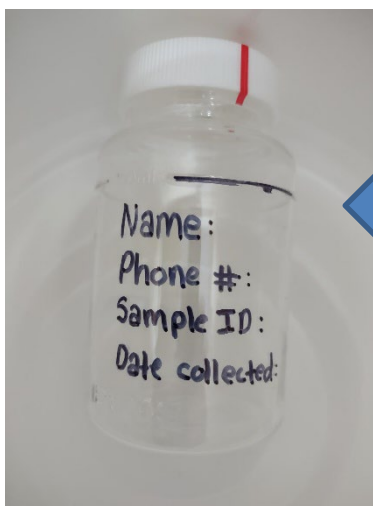
Water Sampling Procedure

1. Complete the KSU Extension Water Testing Submission Form available at: <https://www.ksre.k-state.edu/foodsafety/produce/docs/water-testing-submission.pdf> (for samples brought to Olathe)
2. Label collection bottle with your name, phone number, sample identity (i.e. west well, north pond, etc), and the date that was collected.
3. Wash your hands thoroughly with soap and warm water. Gloves are not required.
4. If using a water sampling stick, place the provided water sample bottle onto it.
5. Remove the lid from the container with care to not touch the inside of the container or lid. **Do not rinse the sample container.** There will be a white powder in each bottle to counteract any chlorine that may be present in the water for testing purposes.
6. For a surface water source, dip the sample bottle down to a depth of 6-12 inches. If water is static, create a current by moving the sample bottle horizontally away from your body under water as shown in the image on p 2.
7. Move the top of the bottle slightly upward to allow air to exit.
8. For well water, run the pump for a few minutes to make sure the water in well riser is not sampled. Make sure the sample represents the current well water.
9. Fill the water a little past the 100 mL fill line on the bottle.
10. Cap the sample container, again with care to not touch the inside of the lid or container.
11. Ensure that the labeling remains on the bottle, as described above.
12. Place the sample bottle inside a sealable plastic bag and store in a cooler (<50F), but do NOT freeze the samples.

13. Deliver the samples on ice to the addresses listed above so that they will arrive within 24 hours of sampling.



Water sampling technique for still surface water.



Fill bottle to line and label as described.

2) Water Samples Delivered Using Kansas Department of Health and Environmental Services (KDHE) Courier System

Please follow the instructions listed below. Each sample bottle will need its own submission form and barcode from the KDHE test kit. Please contact Katelynn Stull if you need a KDHE water test kit. Samples can be dropped off in each Kansas county at the locations listed [here](#): or visit <https://www.ksre.k-state.edu/foodsafety/produce/testing.html> and scroll to KDHE Courier System Schedule listed under 'For Kansas Growers.'

Kansas Department of Health and Environmental Laboratories

SAMPLE COLLECTION INSTRUCTIONS

Most Probable Number (MPN) counts coliform/*E coli*

KDHE water test kit contents:

- Sample Submission Form- need one for each bottle- includes bar code stickers
- One 150 mL sterile sample bottle(s)
- KDHE Sample Collection Instructions

Note: Only collect samples on Monday, Tuesday, or Wednesday. **DO NOT** drop off samples on **Thursday** or **Friday**. The sample must be analyzed by the laboratory within 24 hours of collection. The times listed on the courier pick up schedule are approximate. You may want to plan to have your sample at the local health department 1-2 hours before the time listed to be sure. For best results, call ahead to your closest drop off location to let them know you are planning to bring a sample and they can advise you on the best time to drop the sample off.

COLLECTION INSTRUCTIONS:

1. Peel the barcode sticker from the submission form and attach one (1) sticker vertically to the side of a sample bottle. **Only use one (1) barcode sticker per bottle** and **do not use the same barcode number on multiple bottles** (unless you are submitting composite samples from multiple locations in the same water source, such as multiple locations from one pond. Then you can put stickers with the same bar code

number on all those bottles). The number on the bottle **must** be the same number that is on the submission form. *Note-these are the smaller barcode labels with the barcode, number, and MPN for growers label. The larger barcodes are for shipping directly to the laboratory.*

2. **Run the cold water** at a steady rate for 3-5 minutes before sampling. During this time, **wash your hands** or use an appropriate hand sanitizer.
3. **Open the lid** of the sample bottle. Holding the lid in your free hand, fill the bottle **between the 100 mL line and the 120 mL line**, without letting the water splash out or overflow. **Replace the lid**, tightening securely. (There may be a small amount of liquid or dried preservative in the sample bottle. Leave this in the sample bottle, **DO NOT RINSE OUT**).
4. **Complete the submission form information.** Print the collection information neatly with blue or black pen (*NOT WATER SOLUBLE OR ERASABLE INK AND NOT PENCIL*). **Please include your email or other contact information in the comment section of the KDHE submission form as this will be necessary to receive your results.** Please also include in the comments identifying information about the sample (e.g. “north pond” or “south well”, etc). Please see [example form](#) for guidance on completing the form.

Please fill out the following places on the form: Collection Location, Collected By, Date & Time of Collection, & Collection Signature, comments section and the Identification section indicating the water type.

Circle the appropriate water source on the submission form (Identification):

SW – surface water

GW – ground water

MW – municipal water

Results-The sample analysis results will be used only for research purposes and if reported, would only be reported in scientific journals and scientific meetings in aggregate (NO individual test results shared outside the research team). You will receive your results (only of the level of generic *E. coli* in the water) within one week of the sample arriving at the laboratory.

References/ resources available:

This document is based on a fact sheet from Iowa State University On Farm Food Safety Extension Team-Voluntary Water Testing

Other resources available:

-Kansas State University/University of Missouri Extension Produce Safety website: www.ksre.k-state.edu/foodsafety/produce/

- in particular, more information on water testing, including videos on how to collect samples properly are available on this page: www.ksre.k-state.edu/foodsafety/produce/testing.html

-FDA’S FSMA Website: www.fda.gov/Food/FoodSafety/FSMA/default.htm

-Cornell Produce Safety Alliance: <http://producesafetyalliance.cornell.edu/>

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