

GET WET!

SAMPLING AND LAB PROCEDURES FOR WATER CHEMISTRY

<http://www.umaine.edu/waterresearch/outreach/getwet/index.htm>

Homes on town water do not need sample bottles. Only homes with wells will be sampled. If you have town water you may substitute a sample from a relative that uses a well. Complete a GET WET! Private Well Inventory Sheet for every well that is being sampled.

Procedure

Each home will collect 1 sample in a 500 mL bottle. If the home has a filter or a softener the samples must be taken from a faucet that is *not influenced* by the filter or softener. You may be able to achieve this from an outdoor faucet. If a sample is taken from the tap, the aerator must be removed *prior to samples being taken*.

1. Run the cold water at a medium speed for ten minutes to remove all water from the system that may have been stagnant in the pipes. This will give a cleaner water sample that is collected directly from the well.
2. As the water is running you can perform a preliminary wash. Fill a small amount of the sample bottle with tap water, place the cap on, swirl the water within the bottle, and then dump the water down the sink. Repeat three times.
3. After the initial wash, fill the entire 500 mL bottle from the faucet. Leave **no air** in the bottle. Cap the bottle tightly and place in refrigerator.
4. Place bottle in a brown paper bag and transport to school **without opening**.
5. Upon arrival at school, place bottles in a cool dark place until time of laboratory technique.
6. Some bottles will be transported to a professional laboratory for additional testing.

Excellent job!

THANK YOU

US EPA DRINKING WATER FROM HOUSEHOLD WELLS

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Quick Reference List of Noticeable Problems

Visible

- Scale or scum from calcium or magnesium salts in water
- Unclear/turbid water from dirt, clay salts, silt or rust in water
- Green stains on sinks or faucets caused by high acidity
- Brown-red stains on sinks, dishwasher, or clothes in wash points to dissolved iron in water
- Cloudy water that clears upon standing may have air bubbles from poorly working pump or problem with filters.

Tastes

- Salty or brackish taste from high sodium content in water
- Alkali/soapy taste from dissolved alkaline minerals in water
- Metallic taste from acidity or high iron content in water
- Chemical taste from industrial chemicals or pesticides

Smell

- A rotten egg odor can be from dissolved hydrogen sulfide gas or certain bacteria in your water. If the smell only comes with hot water it is likely from a part in your hot water heater.
- A detergent odor and water that foams when drawn could be seepage from septic tanks into your ground water well.
- A gasoline or oil smell indicates fuel oil or gasoline likely seeping from a tank into the water supply
- Methane gas or musty/earthy smell from decaying organic matter in water
- Chlorine smell from excessive chlorination.

Note: Many serious problems (bacteria, heavy metals, nitrates, radon, and many chemicals) can only be found by laboratory testing of water.