Water Sample Collection Procedure

1. Take your water sample from a rigid faucet or spigot.

   If you are sampling from an **outside water source**, you will need to sterilize the spigot with bleach or fire and then you must allow the water to run at a moderately slow flow for about 3 minutes before collecting the sample (do not adjust the flow for collection).

   If you are **sampling indoors**, select a non-swiveling faucet, use the cold-water side, and remove the aerator, if present. Again, you must allow the water to run for 3 minutes before sampling. Do not collect from: water softeners, charcoal filters, leading faucets, hot water faucets, or sill cocks, whenever possible.

2. Run the cold water at a steady rate for about 3 minutes before sampling. During this time, wash your hands or use an appropriate hand sanitizer.
3. Sampling can be accomplished using several types of sample containers:
   - **Sampling with (preserved) bacteria bottle supplied by the Lab**: Open the lid of the sample bottle. Holding the lid in your free hand, fill the bottle to BETWEEN the lines without letting the water splash out of overflow. Replace the lid, tightening securely. (There may be a small amount of liquid or dried preservative in the bottle. It is very important that you leave this in the bottle.
   - **Sampling with a non-preserved bottle supplied by the Lab**: Remove the lid and, holding the lid in your free hand, fill the bottle to the neck. Replace the lid and tightening securely.
   - **Sampling with a NEW drinking water bottle**: Remove the lid from a NEW drinking water bottle (not a vitamin water or water that has been fortified with minerals). Hold the lid in your free hand. Pour the contents out and rinse 2-3 times with your tap water. Then, fill and recap the bottle.
   - **CAUTION** – DO NOT set the lid down as this can introduce contamination into your sample.
4. Return the water sample to the Lab as soon as possible. We need to begin testing the sample within 24-hours. We recommend sampling between LATE Sunday evening and Thursday noon, with delivery to the lab as soon as possible after collection. If you bring the sample to the lab on a Friday there is a weekend surcharge of $50.

MERIDIAN
Analytical Labs, LLC

Wichita Facility
2626 South Rock Rd., Suite 124
Wichita, Kansas 67210
316-618-8787

Mound Valley
111 East 5th Street
Mound Valley, Kansas 67354
620-328-3222

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General Water Report Guidelines[1]

pH: Normal range 6.5-8.5 with Reverse Osmosis/Distilled Water having a range of 5.0-6.0

Calcium and Magnesium: Cause the "Hardness" of the water.

Chloride: Levels above 250 mg/L may cause a "salty taste". Levels above 1000 mg/L are not recommended for livestock.

Electrical Conductivity: A measurement of the conductivity of the water. Typically, the higher the electrical conductivity of the water, the higher the dissolved salts/solids.

Iron: Levels above 0.3 mg/L may cause taste, odor and staining on fixtures and laundry.

Manganese: Levels above 0.05 mg/L may cause taste and black/grey staining on fixtures and laundry.

Nitrate-Nitrogen:

- Levels between 0-10 mg/L are acceptable.
- Levels between 20-40 mg/L may pose a risk to some livestock.
- Levels above 40 mg/L are not recommended for livestock.

Sodium: Levels above 100 mg/L are considered high. Water softeners recharged with sodium chloride (salt) will increase the sodium level.

Sulfate: Levels above 250 mg/L may cause a mild taste and levels above 500 mg/L may cause diarrhea in both humans and livestock.

TDS-Total Dissolved Solids: Levels above 1000 mg/L may cause taste. Shortened water heater life may be caused by levels above 400 mg/L. Levels above 7000 mg/L are not recommended for livestock.

Total Hardness:

- "Soft Water": 0-85 mg/L (0-5 grains/gallon)
- "Moderately Hard Water": 85-150 mg/L (5-9 grains/gallon)
- "Hard Water": 150-300 mg/L (9-18 grains/gallon)
- "Very Hard Water": 300-500 mg/L (18-30 grains/gallon)
- Levels above 2000 mg/L are not recommended for livestock.

[1] Source: Michael H. Bradshaw, and G. Morgan Powell, Understanding your Water Test Report, Kansas State University, October 2004 Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992