



Public water supplies are tested regularly, thus users do not need to be concerned about the quality or safety of their drinking water. Conversely, people who have a private water supply are responsible for all quality and safety aspects of their water supply. The well's location, construction, maintenance (including water tests), and protection are essential for safe water. The owner or user must assure that these 4 elements are met to have safe water.

Ensuring Safe Drinking Water

Wells and groundwater become contaminated because of poor well location, inadequate well construction, poor maintenance of the well and water system, accidents near the well, and lack of protection for the well and groundwater. The most common contaminants are bacteria and nitrate followed by salts (usually sodium chloride), petrochemicals, and pesticides. Safe water requires action by the owner or water user to ensure a safe well. Begin with an annual check of the well and water system, including these steps:

1. Check safety of well location and construction (see MF-970) and make necessary improvements.
2. Do annual preventive maintenance including thorough shock chlorination of the well and water system.
3. Test water, keep test reports for reference and compare reports to detect changes or problems.
4. Develop and carefully follow a plan to protect well and groundwater from contamination (see MF-2396).

What Tests Are Necessary?

There is no single test for safe drinking water. Tests are for specific contaminants including bacteria, nitrate, fluoride, lead, pesticides, etc. Recent surveys of private wells show more than 80 percent are deficient in construction or location. As a result, about 60 percent of wells are polluted by bacteria and/or high nitrate, both of which have potentially serious health risks.

Tests should have a purpose (see MF-871), such as detecting a change in quality (contamination). Test water every few years for common minerals to detect changes. Confirm safety of drinking water after maintenance by an annual test for coliform bacteria. However, more frequent testing is essential to assure safe, bacteria-free water. The quality of water for drinking or irrigation is evaluated by a suitability test for that purpose. Other contaminants can be tested if there is reason to suspect their presence.

Which Labs Are Qualified?

The only way to judge the quality of laboratory service is through independent evaluation. Certification by Kansas Department of Health and Environment (KDHE)

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provides this evaluation in Kansas. Certification involves performance tests, personnel training, record keeping, and laboratory visits. We recommend only laboratories certified for the tests you want. This leaflet lists laboratories in Kansas and nearby states certified for drinking water tests. For detailed information about specific inorganic and organic chemical certification, contact KDHE, Laboratory Improvement program office (785) 296-1639 or www.kdhe.state.ks.us/envlab/index.html. All states have a laboratory certification program similar to Kansas. Those in surrounding states are listed below the table on the back page.

Selecting the Laboratory

Because any laboratory certified for the test you want should be equally capable to do the test, price is not a reliable gauge of quality. Nitrate and bacteria tests from one laboratory may be \$20, yet others may charge \$50. The trade association, American Council of Independent Laboratories, at www.acil.org may help in choosing a laboratory.

We recommend selecting a laboratory within overnight shipping by U.S. Postal Service or other carrier. The bacteria test must be started within 24 hours of sample collection for accurate results. Though the test may be run after 24 hours, results may not be meaningful.

Collecting and Transporting the Sample

Contact the laboratory to get a sample container. Follow laboratory instructions to collect the sample or the K-State Research and Extension publication (MF-963). After collecting, refrigerate the sample, but do not freeze, and protect it from sunlight. Be sure the sample reaches the laboratory within 24 hours.

Related K-State Water Quality Titles:

- *An Action Program for Safe Drinking Water*, MF-1050
- *Kansas Home*A*Syst-Environmental Risk Mgmt. for Homes*
- *Organic Chemicals and Radionuclides in Drinking Water*, MF-1142
- *Private Water Well - Owner/Operator Manual*, MF-2409
- *Private Well Maintenance and Protection*, MF-2396
- *Private Wells—Safe Location and Construction*, MF-970
- *Recommended Water Tests for Private Systems*, MF-871
- *Shock Chlorination for Disinfecting Water Systems*, MF-911
- *Taking a Water Sample*, MF-963
- *Understanding Your Water Test Report*, MF-912

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KDHE Certified Laboratories in Kansas and Nearby States for Drinking Water Testing
Coliform Bacteria (B), Lead (L), Metals/Minerals (M), Nitrate (N), Organic (O), Radiochemistry (R), Trihalomethane (T), and Unregulated Organics (U)

Laboratory Name, Location Address and City	Mail Address and City	Telephone	B	L	M	N	O	R	T	U	Renew
Analytical Management Lab Inc, Olathe, KS 66062-2760	15130 S. Keeler, Suite B	(913)829-0101	–	L	M	–	O	–	T	U	4/2004
Continental Analytical Services Inc, Salina, KS 67401-6675	1804 Glendale Road (800-535-3076)	(785)827-1273	B	L	M	N	O	–	T	U	10/2003
Dean's Water Lab Inc, 401S. Alleghany, El Dorado, KS 67042	P O Box 610, Andover, 67002-9780	(316)733-2682	B	–	–	–	–	–	–	–	10/2003
Environmental Lab Inc, 101 N Kansas Ave., Topeka, 66603-3001	P O Box 2368, Topeka, KS 66601-2368	(785)233-1860	B	–	–	N	–	–	–	–	4/2004
General Laboratories Inc, Hutchinson, KS 67501-4501	1202 North Main Street	(620)663-8314	B	–	–	–	–	–	–	–	10/2003
Hazen Research Inc, Golden, CO 80403-1895	4601 Indiana Street	(303)279-4501	–	–	–	–	–	R	–	–	10/2003
Keystone Laboratories Inc, Kansas City, KS 66103-1359	1304 Adams Street	(913)321-7856	B	–	–	N	–	–	–	–	4/2004
M D Chemical & Testing Inc, Topeka, KS 66619-0321	Forbes Field, Bldg 281, Suite AB, PO 19321	(785)862-3500	–	L	M	N	–	–	–	–	4/2004
Midwest Laboratories, Inc,* Omaha, NE 68144	13611 "B" Street	(402)334-7770	B	L	M	N	–	–	–	–	12/2003
Olsen Agricultural Laboratory Inc,* McCook, NE 69001-0370	210 East First Street / P O Box 370	(308)345-3670	B	L	M	N	–	–	–	–	12/2003
Pace Analytical Services Inc, Lenexa, KS 66219-2406	9608 Loiret Boulevard	(913)599-5665	–	–	M	N	O	–	T	U	4/2004
Paragon Analytics Inc, Fort Collins, CO 80524	225 Commerce Drive	(970)490-1511	–	–	M	N	O	R	–	U	7/2004
SDK Laboratories Inc, 1000 Corey Road (877-464-0623)	P O Box 886, Hutchinson, KS 67504-0886	(620)665-5661	B	–	M	N	–	–	–	–	10/2003
Servi-Tech Laboratories Inc, 1816 East Wyatt Earp Blvd.	P O Box 1397, Dodge City, KS 67801-1397	(620)227-7123 (800)557-7509	B	–	M	N	–	–	–	–	10/2003
Servi-Tech Laboratories Inc,* 1602 Park West Drive	P O Box 169, Hastings, NE 68902-0169	(402)463-3522 (800)468-5411	–	L	M	N	–	–	–	–	12/2003
Southwest Laboratory of OK, Inc, Broken Arrow, OK 74011	1700 West Albany Street	(918)251-2858	–	–	–	–	O	R	T	U	10/2003
STL - Denver, Arvada, CO 80002-4517	4955 Yarrow Street	(303)726-0100	–	L	M	N	O	–	T	U	4/2004
STL - St. Louis, 13715 Rider Trail North	Earth City, MO 63045-1205	(314)298-8566	–	–	–	–	–	R	–	–	10/2003

*Certified through State of Nebraska, Nebraska Health and Human Services System

Laboratory Certification Program: National EPA Web site: www.epa.gov/safewater/faq/sco.html; Adjacent states: Colorado (303)692-3291; Missouri (573)751-1077 Web site: www.dnr.state.mo.us/wpscd/pdwp/labs/clabs.htm; Nebraska (402)471-0562; and Oklahoma (405)702-1022 Web site: www.deq.state.ok.us/csdnew/labcert.htm

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