



WATER

QUALITY SERIES

Testing to Help Ensure Safe Drinking Water

Public water supplies are tested regularly, so users need not be responsible for water quality or safety of their water. Conversely, owners or users are responsible for all quality and safety aspects of private water supplies. The integrity of well construction, water tests and maintenance is up to the owner or user and is essential for safe water.

Ensuring Safe Drinking Water

Wells and groundwater become contaminated because of poor well location, inadequate well construction, accidents near the well, poor management of activities near the well, and poor maintenance of the well and water system. The most common contaminants are bacteria and nitrate followed by salts (usually sodium chloride), pesticides, and petrochemicals. Much can be done by the owner or user to protect the water by doing a periodic check of the well and water system.

1. Compare well condition with what it should be (see *Safe Domestic Wells*, MF-970).
2. Make improvements as needed.
3. Perform annual preventive maintenance including thorough shock chlorination of the well and water system.
4. Test water regularly to detect changes or problems.

What Tests Are Necessary?

There is no single test for safety of drinking water. Tests are for specific contaminants such as bacteria, nitrate, fluoride, lead, pesticide, etc. Recent surveys of private wells show more than 80 percent are deficient in construction or location. As a result, about 60 percent are contaminated by bacteria, high nitrate, or both. Test annually, as a minimum, for total and fecal coliform bacteria and nitrate. More frequent testing is essential to assure safe water without bacteria. Testing water for basic chemistry (common minerals) every few years is wise. Many other contaminants can be tested for, but these tests often cost more and the contaminants are seldom found. Always compare new tests to previous ones and retain all test results for reference. Some counties and lending institutions require an inspection and water test when property ownership changes. See K-State Research and Extension bulletin, *Suggested Water Tests for Private Systems*, MF-871, for further information.

Which Labs Are Qualified?

The only way to judge the quality of laboratory service is through evaluation by independent organizations. Certification by Kansas Department of Health and Environment provides this evaluation in Kansas. Certification involves evaluation of

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 testing drinking water. For detailed information about specific inorganic and organic chemical certification, contact Extension Biological and Agricultural Engineering (785) 532-5813 or Kansas Department of Health and Environment, Laboratory Improvement (785) 296-1639. A current list of KDHE certified laboratories is on their Website at: <http://www.ink.org/public/kdhe/science/lipo/khelenvl.txt>.

Selecting the Laboratory

Because a laboratory certified for a parameter you want to test should be capable of performing the same service as any other certified laboratory, price should not be used as a reliable gauge of quality. Some laboratories offer nitrate and bacteria tests for less than \$20, while others may charge \$50. Price is one criterion you may want to use as a basis for selection.

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

Collecting and Transporting the Sample

Contact the laboratory to get a sample container. Follow laboratory instructions to collect the sample or contact your local K-State Research and Extension or health office for a copy of *Taking a Water Sample*, MF-963. After collecting a sample, refrigerate, but do not freeze, and protect it from sunlight. Deliver the sample to the laboratory as soon as possible, but within 24 hours.

Related Water Quality Titles:

- *An Action Program for Safe Drinking Water*, MF-1050
- *Groundwater and Well Contamination*, MF-932
- *Safe Domestic Wells*, MF-970
- *Shock Chlorination for Disinfecting Water Systems*, MF-911
- *Understanding Your Water Test Report*, MF-912

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KDHE Certified Laboratories in Kansas and Nearby States for
Coliform Bacteria (C), Nitrate (N), Lead (L), Inorganics (I) and Organics (O) in Drinking Water

Lab Name & City	Delivery/Mail Address	Telephone	C	N	L	I	O	Renew
A & E Analytical Laboratory, Wichita, KS 67213-1810	3031 West Pawnee, Suite 500	(316) 943-3447	-	N	L	-	-	10/98
ACZ Laboratories, Inc., Steamboat Springs, CO 80487-9400	2773 Downhill Drive	(970) 879-6590	C	N	L	I	O	7/98
Continental Analytical Services, Salina, KS 67401-6675	1804 Glendale Road (800) 535-3076 or 324 W. Central, Suite E/P.O. Box 610	(785) 827-1273 (316) 733-2682	C	N	L	I	O	7/98
Dean's Water Lab, Inc., Andover, KS 67002-0612	101 N. Kansas Ave.	(785) 233-1860	C	N	L	-	-	10/98
Environmental Laboratories, Inc., Topeka, KS 66603-3001	11401 Moog Drive	(314) 432-0550	-	N	L	I	O	4/98
Environmetrics, Inc., St. Louis, MO 63146-3560	1202 North Main Street	(316) 663-8314	C	N	-	-	-	10/98
General Laboratories, Inc., Hutchinson, KS 67501-4501	1089 East Collins Blvd.	(972) 238-5591	-	N	-	I	O	10/98
Intertek Testing Services, Richardson, TX 75081-2531	1515 Walnut Street	(816) 471-1515	C	N	L	I	-	10/98
Keystone Laboratories, Inc., Kansas City, MO 64108-1389	600 East 17th Street South	(515) 792-8451	C	N	L	I	O	4/98
Keystone Laboratories, Inc., Newton, IA 50208-4060	Forbes Field Bldg. 281, Suite ABC/P.O. Box 19321	(785) 862-3500	C	N	L	I	-	4/98
M.D. Chemical & Testing, Inc., Topeka, KS 66619-0321	13611 B. Street	(402) 334-7770	C	N	L	I	O	7/98
Midwest Laboratories, Inc., Omaha, NE 68144-3693	210 East First Street/P.O. Box 370	(308) 345-3670	C	N	-	-	-	12/98
Olsen's Agricultural Lab, Inc.† McCook, NE 69001-0370	9608 Loiret Boulevard	(913) 599-5665	-	N	L	I	O	4/98
Pace Analytical Services, Inc., Lenexa, KS 66219-2406	19 East 4th Street/P.O. Box 886	(316) 665-5661	C	N	-	I	O	10/98
Peterson Laboratories, Hutchinson, KS 67504-0886	2911 Rotary Terrace/P.O. Box 562	(316) 232-1970	C	N	L	I	O	1/99
Quality Water Analysis Lab, Inc., Pittsburg, KS 66762-0562	1816 E. Wyatt Earp/P.O. Box 1397	(316) 227-7123	C	N	-	I	-	10/98
Servi-Tech, Inc., Dodge City, KS 67801	1602 Park West Drive, NE 68901	(402) 463-3522	C	N	L	I	-	12/98
Servi-Tech, Inc.†, P.O. Box 169 Hastings, NE 68902-0169	1700 West Albany Street	(918) 251-2858	-	N	L	I	O	10/98
Southwest Laboratory of Okla. Inc., Broken Arrow, OK 74012-1421	115 East Fifth Street/P.O. Box C	(316) 328-3222	-	-	L	I	O	1/99
Trinity Analytical Lab, Inc. Mound Valley, KS 67354-0143								

†Certified by Nebraska Department of Health only; - not certified for these tests

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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