

Water and Radon Test Kit Descriptions

The Vermont Department of Health Laboratory (VDH lab) tests drinking and environmental water and radon in the air. Drinking water analyses are performed using EPA approved methods in accordance with the lab's NELAP accreditation.

Ordering Test Kits

We offer multiple ways to purchase drinking water and radon test kits below.

Online: through our webstore <https://vdh.webapps.aidcvr.com/water-test>

Phone: call 802-338-4724 or 800-660-9997 (toll-free in Vermont)

Email: download and email the [drinking water and radon test kit order form](#) to AHS.VDHLabCustomerService@vermont.gov

Mail: download and print the [order form](#)

Fax: download the [order form](#) and fax it to 802-338-4706



Our Drinking Water Sample Acceptance Policy and Instruction Sheets can be found on our website: healthvermont.gov/lab/forms#water. Samples not meeting our acceptance criteria will be rejected or qualified.

Sending in Your Samples

Water samples should be collected the same day that they will be returned to the laboratory. Water samples can be submitted to the laboratory in 3 ways:

1. **Bring the sample to the Laboratory** at 359 South Park Drive, Colchester, VT from 7:45 am – 4:00 pm, Monday – Thursday. On Friday, samples are accepted from 7:45 am – 3:30 pm, with some exceptions noted.
2. **Bring the sample to the nearest Office of Local Health** on Monday – Thursday before the pickup time, typically in the morning. Pickup times are different for each office, and can be found here: [Drinking Water Drop-Off Program \(healthvermont.gov\)](#). Samples are not accepted on Fridays, holidays, or the day before a holiday.
3. **Mail the sample** – to ensure timely arrival, refer to sample collection instructions.
 - a) send USPS to PO Box 1125, Burlington, VT 05402-1125, or
 - b) send FedEx or UPS to 359 South Park Drive, Colchester, VT 05446

Water and Radon Test Kit Descriptions (continued)

Water Testing Packages

The packages below should cover most testing needs.

Name	Description	Cost
Vermont Homeowner Testing Package	Recommended for homeowners. Kit A (bacteria, annually) Kit RA (gross alpha, every 5 years) Kit C (inorganic chemicals, every 5 years)	\$159
New Well or Spring Testing Package for Homeowners	Designed to satisfy Vermont's requirements for new groundwater sources and most residential permit needs. This bundle is composed of 4 kits: Kit A (bacteria), Kit RA (gross alpha radioactivity), Kit NW (selected metals and inorganics), and lead Contains all analytes from tables A 11-5 and A 11-6 of the Wastewater and Potable Supply Rules 2023.	\$151

Microbiological Testing

Samples must arrive at the laboratory within 30 hours of sample collection and should be kept cool. Test results are usually available 1 business day after the lab receives the sample. In cases of severe discoloration, Colisure testing may take 2 business days.

Kit	Description	Cost
A	Total coliform bacteria and <i>E. Coli</i> , presence/absence. Homeowner, Drinking Water	\$14
AA	Total coliform bacteria and <i>E. Coli</i> , presence/absence. Regulated Water Systems	\$14
NU	Enumeration of total coliform and <i>E. Coli</i> in drinking water	\$15
AG	<i>E. Coli</i> in Irrigation Water, Enumeration	\$15
SW	<i>E. Coli</i> in Recreational Water, Enumeration	\$15

These tests are performed using Colisure or Colilert/Colilert-18 (SM 9223 B).

Water and Radon Test Kit Descriptions (continued)

Inorganic Chemical Testing

Most kits must be kept cold at no more than 42 °F (6 °C) and received within 45 hours of sample collection. See the chart on page 13 for specific timelines. Test results are usually available 18 calendar days after the lab receives the sample. Do not freeze.

Kit C	Metals and Inorganics	Cost: \$100
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Recommended for homeowners every 5 years. This kit is a portion of the Vermont Homeowner Testing Package. Keep cold and return within 45 hours of collection.

EPA 200.7 Iron, Sodium

EPA 200.8 Arsenic, Copper, Lead (flush and first draw), Manganese, Uranium

EPA 300.0 Chloride, Fluoride, Nitrate, Nitrite

SM 2340B Hardness

Kit NW	Inorganic Portion of New Well Testing Package	Cost: \$80
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Keep cold and return within 45 hours of collection. This kit is a portion of the New Well or Spring Testing Package for Homeowners.

EPA 150.3 pH

EPA 200.7 Iron, Sodium

EPA 200.8 Arsenic, Manganese, Uranium

EPA 300.0 Chloride, Fluoride, Nitrate, Nitrite

Kit AN	Anions	Cost: \$50
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Keep cold and return within 45 hours.

EPA 300.0 Chloride, Fluoride, Nitrate, Nitrite, Sulfate

Kit N3N2	Nitrate and Nitrite	Cost: \$24
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Keep cold and return within 45 hours. EPA 300.0

Water and Radon Test Kit Descriptions (continued)

Inorganic Chemical Testing (continued)

Most kits must be kept cold at no more than 42 °F (6 °C) and received within 45 hours of sample collection. See the chart on page 13 for specific timelines. Test results are usually available 18 calendar days after the lab receives the sample. Do not freeze.

Kit IA **Trace Metals and Fluoride** Cost: \$125

Regulated water systems and homeowners. Return within 5 days of collection.

EPA 200.7 Iron

EPA 200.8	Antimony	Chromium	Lead	Selenium
	Arsenic	Cobalt	Manganese	Thallium
	Barium	Copper	Mercury*	Uranium
	Beryllium	Fluoride	Molybdenum	Vanadium
	Cadmium	Iron	Nickel	Zinc

EPA 300.0 Fluoride

*Mercury cannot be tested if the water is cloudy.

Kit IB **Lead and Copper** Cost: \$20

Regulated water systems and homeowners. EPA 200.8.

Kit ID **Inorganic Chemicals** Cost: \$90

Keep cold and return within 22 hours of collection.

Not accepted after noon on Fridays.

EPA 150.3 pH

EPA 200.7 Iron, Sodium

EPA 200.8 Arsenic, Manganese, Uranium

EPA 300.0 Chloride, Fluoride, Nitrate, Nitrite

SM 2150B Odor

Water and Radon Test Kit Descriptions (continued)

A la carte offerings:

Samples requiring cooling must be received at 42°F (6 °C) or less, but not frozen.

Many of these tests need to be received quickly. See the chart on page 13 for specific timelines.

Individual Test	Method	Cost	Cooling required?
Alkalinity	SM 2320 B	\$12	yes
Antimony	EPA 200.8	\$12	
Arsenic	EPA 200.8	\$12	
Barium	EPA 200.8	\$12	
Beryllium	EPA 200.8	\$12	
Cadmium	EPA 200.8	\$12	
Chloride	EPA 300.0	\$12	
Chlorine residual, free	Hach 8021	\$12	
Chlorine residual, total	Hach 8167	\$12	
Chromium	EPA 200.8	\$12	
Conductivity	SM 2510 B	\$12	yes
Cobalt	EPA 200.8	\$12	
Copper	EPA 200.8	\$12	
Fluoride	EPA 300.0 or LACHAT 10-109-12-2-A	\$12	
Hardness, total	SM 2340 B	\$12	
Iron	EPA 200.7	\$12	
Lead (flush or first draw)	EPA 200.8	\$12	
Manganese	EPA 200.8	\$12	
Mercury (Cannot be tested if water is cloudy)	EPA 200.8	\$25	
Molybdenum	EPA 200.8	\$12	
Nickel	EPA 200.8	\$12	

Water and Radon Test Kit Descriptions (continued)

Individual Test	Method	Cost	Cooling required?
Nitrate	EPA 300.0	\$12	yes
Nitrite	EPA 300.0	\$12	yes
Odor	SM 2150 B	\$10	
pH	EPA 150.3	\$10	
Selenium	EPA 200.8	\$12	
Sodium	EPA 200.7	\$12	
Sulfate	EPA 300.0	\$15	yes
Thallium	EPA 200.8	\$12	
Total dissolved solids	SM 2540 C	\$12	yes
Turbidity	EPA 180.1	\$12	yes
Uranium (Kit RU)	EPA 200.8	\$25	
Vanadium	EPA 200.8	\$12	
Zinc	EPA 200.8	\$12	

Water and Radon Test Kit Descriptions (continued)

Radionuclide Testing

Samples are accepted Monday – Friday, 7:45 am – 3:30 pm.

Kit RC must be received within 48 hours of sample collection. Estimated turnaround times are listed below.

Water test kits

Kit	Description	Method	Cost
RA	Gross Alpha 14 calendar day turnaround time	EPA 00-02	\$45
RC	Radon-222 in Water 10 calendar day turnaround time	SM 7500-Rn	\$25
RU	Uranium by mass 21 calendar day turnaround time	EPA 200.8	\$25

Air test kits

Turnaround time 7 calendar days. Method EPA 402-R-92-004.

Kit	Description	Exposure Time	Cost
RF	Radon in Air – Short Term	2 – 7 days	\$50
RG	Radon in Air – Medium Term	1 – 3 months	\$25
RH	Radon in Air – Long Term	3 – 12 months	\$25

Water and Radon Test Kit Descriptions (continued)

Organic Chemical Testing

Kits must be kept cold at no more than 42 °F (6 °C) and must be received within 45 hours of sample collection. Do not freeze. Test results are usually available 21 calendar days after the lab receives the sample.

Kit OA	Volatile Organic Compounds	Cost: \$120
EPA 524.2		
Benzene	1,1-dichloropropene	
Bromobenzene	cis-1,3-dichloropropene	
Bromochloromethane	trans-1,3-dichloropropene	
Bromodichloromethane	Ethylbenzene	
Bromoform	Fluorotrichloromethane	
Bromomethane	Hexachlorobutadiene	
n-butylbenzene	Isopropylbenzene	
sec-butylbenzene	P-isopropyltoluene	
tert-butylbenzene	Methylene chloride	
Carbon tetrachloride	Methyl tert-butyl ether	
Chlorobenzene	Naphthalene	
Chlorodibromomethane	n-propylbenzene	
Chloroethane	Styrene	
Chloroform	1,1,1,2-tetrachloroethane	
Chloromethane	1,1,2,2-tetrachloroethane	
2-chlorotoluene	Tetrachloroethylene	
4-chlorotoluene	Toluene	
Dibromomethane	1,2,3-trichlorobenzene	
1,3-dichlorobenzene	1,2,4-trichlorobenzene	
1,2-dichlorobenzene	1,1,1-trichloroethane	
1,4-dichlorobenzene	1,1,2-trichloroethane	
Dichlorodifluoromethane	Trichloroethylene	
1,1-dichloroethane	1,2,3-trichloropropane	
1,2-dichloroethane	1,2,3-trimethylbenzene	
1,1-dichloroethene	1,2,4-trimethylbenzene	
cis-1,2-dichloroethene	1,3,5-trimethylbenzene	
trans-1,2-dichloroethene	Vinyl chloride	
1,2-dichloropropane	m+p-xylene	
1,3-dichloropropane	o-xylene	

Water and Radon Test Kit Descriptions (continued)

Disinfection By-Products

Kits must be kept cold at no more than 42 °F (6 °C) and must be received within 45 hours of sample collection. Test results are usually available 21 calendar days after the lab receives the sample.

Regulatory haloacetic acids and trihalomethane samples may need to be sampled at the same time and at the same location.

These kits are not recommended for homeowners as they are primarily for regulatory testing.

Kit OB	Trihalomethanes	Cost: \$120
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Reported individually and as total trihalomethanes

EPA 524.2	Chloroform	Dibromochloromethane
	Bromoform	Bromodichloromethane

Kit OK	Haloacetic Acids	Cost: \$150
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Reported individually and as HAA5

EPA 552.2	Bromacetic Acid	Dibromoacetic Acid
	Bromochloroacetic Acid	Trichloroacetic Acid
	Chloroacetic Acid	Total Haloacetic Acids (HAA5)
	Dichloroacetic Acid	

Water and Radon Test Kit Descriptions (continued)

Synthetic Organic Chemicals – SOC's

Kits must be kept cold at no more than 42 °F (6 °C) and must be received within 45 hours of sample collection. Test results are usually available 21 calendar days after the lab receives the sample.

These kits are not typically recommended for homeowners.

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Kit OE	Herbicides in Water			Cost: \$200
EPA 515.4	Dalapon	Dicamba	Dinoseb	
	Picloram	Pentachlorophenol	2,4-D	
	2,4,5-TP (silvex)			

Kit OG	Carbamate Pesticides			Cost: \$100
EPA 531.2	Aldicarb	Aldicarb sulfoxide	Carbaryl	
	Methiocarb	Oxamyl (Vydate)	Aldicarb sulfone	
	Baygon (Propoxur)	Carbofuran	Methomyl	
	3-Hydroxycarbofuran			

Kit OH	EDB/DBCP/123-TCP	Cost: \$80
EPA 504.1	1,2-Dibromoethane (EDB)	
	1,2-Dibromo-3-chloropropane (DBCP)	
	1,2,3-Trichloropropane (123-TCP)	

Water and Radon Test Kit Descriptions (continued)

Synthetic Organic Chemicals (continued) – SOC's

Kits must be kept cold at no more than 42 °F (6 °C) and must be received within 45 hours of sample collection. Test results are usually available 21 calendar days after the lab receives the sample.

Kit OL	Semivolatile Organic Compounds	Cost: \$250
Semivolatile chemicals and pesticides		
EPA 525.2	Acenaphthylene	Fluorene
	Alachlor	gamma-BHC (lindane)
	Aldrin	gamma-Chlordane
	alpha-Chlordane	Heptachlor
	Atrazine	Heptachlor epoxide
	Anthracene	Hexachlorobenzene
	Bis-(2-ethylhexyl) adipate	2,2',4,4',5,6-Hexachlorobiphenyl
	Bis(2-ethylhexyl) phthalate	Hexachlorocyclopentadiene
	Benz[a]anthracene	Indeno[1,2,3-cd]pyrene
	Benz[b]fluoranthene	Methoxychlor
	Benz[k]fluoranthene	Metolachlor
	Benzo[a]pyrene	2,2',3,3',4,5',6,6'-Octachlorobiphenyl
	Benzo[ghi]perylene	2,2',3',4,6-Pentachlorobiphenyl
	Butyl benzyl phthalate	Pentachlorophenol
	Dibenz[a,h]anthracene	Phenanthrene
	Dieldrin	Pyrene
	Diethyl phthalate	Simazine
	2,3-Dichlorobiphenyl	Total Chlordane
	Dimethyl phthalate	trans-Nonachlor
	di-n-Butyl phthalate	2,4,5-Trichlorobiphenyl
	Endrin	Toxaphene

Water and Radon Test Kit Descriptions (continued)

Lead Testing for Schools

School lead kits must be ordered through the Vermont Tap Inventory Management System. Find more information here: [Testing for Lead in Drinking Water at Schools | Vermont Department of Health \(healthvermont.gov\)](https://healthvermont.gov/testing-for-lead-in-drinking-water-at-schools)

Kit SL	Lead (flush and first draw)	Cost: \$12 per bottle
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For schools performing Act 66 testing. EPA 200.8.		
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Child Care Water Testing

Child care licensure regulations now include public and private drinking water testing requirements. For more information about these regulations, contact the [Vermont Department for Children and Families](https://healthvermont.gov/children-and-families) at 800-649-2642.

Kit	Description
DC - Lead	Lead first draw or lead flush. Public and Private Water Systems
DC - Coliform	Total coliform bacteria and <i>E. Coli</i> , presence/absence. Private Water Systems
DC - Inorganic	Tests for Arsenic, Uranium, Manganese, Nitrate, Nitrite and Fluoride. Private Water Systems

Water and Radon Test Kit Descriptions (continued)

When do my samples need to arrive at the lab?

Timelines given below are from the time of sample collection to receipt at the lab. Please make sure your samples arrive within the following timeframes. All kits not listed here should be received within 5 days of collection.

If you are planning to use the Drinking Water Drop-Off program at your local Health office, plan to take your water sample the morning you drop it off.

22 Hours

Kit ID	Chlorine residual, free and total
Odor	pH

30 Hours

Homeowner Testing Package
Microbiological Testing (all kits)
New Well Package

45 Hours

Kit AN	Kit OB	Kit OL
Kit C	Kit OK	Nitrate
Kit N3N2	Kit OE	Nitrite
Kit NW	Kit OG	Turbidity
Kit OA	Kit OH	

48 Hours

Kit RA	Kit RC
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Water and Radon Test Kit Descriptions (continued)

Additional Information

If you have questions about this guide, please call the Vermont Department of Health Laboratory at 802-338-4724 or 800-660-9997 (VT only).

Records relating to water and radon testing are public. Public records may be used for statistical purposes, and may be released upon request in writing, pursuant to Vermont access to public document law (1 VSA §315-320).

Instruction Sheets and Drinking Water Sample Acceptance Policy can be found on our website: healthvermont.gov/lab/forms#water.

Public water systems are regulated by the Vermont Department of Environmental Conservation. Learn more at dec.vermont.gov/water/drinking-water.

Private wells and springs should be tested regularly. Learn more at www.healthvermont.gov/water/testing.

For information on drinking water contaminants and treatment options, visit www.healthvermont.gov/water-a-z.

Find information on bacteria and radon in the environment at www.healthvermont.gov/lab/environmental.

Find information on school and child care lead testing requirements at <http://www.HealthVermont.gov/lead-testing>