



**VERMONT DEPARTMENT OF HEALTH LABORATORY**  
Physical: 359 South Park Dr., Colchester, VT 05446  
Mailing: PO Box 1125, Burlington, VT 05402-1125  
1-800-660-9997 (VT only) or 1-802-338-4724

**Water Test Order Form Supplement**  
[Supplement and Kit Descriptions are Subject to Change]

**Test Kit Descriptions 2019**  
Effective May 2019

**IOC's**  
**INORGANIC CHEMICALS**

**Kit IA, Kit IB and Kit C samples are accepted Monday – Friday.** Kit C, nitrate and nitrite samples need to be cooled and should be received **within 48 hours of sampling** - the temperature of the sample when received at the laboratory should be cooling or cooled to less than ~ 42 degrees Fahrenheit (or 6 degrees Celsius), but not frozen. **Please note that testing for Sulfate is being offered in Kit AN and also as an individual test. Estimated turnaround time for test results is 18 calendar days from the time of sample receipt.**

**TRACE METALS AND FLUORIDE -KIT IA**  
**(Regulated Water Systems and Homeowners)**

**Cost: \$125**

- |              |                |
|--------------|----------------|
| 1. Antimony  | 11. Lead       |
| 2. Arsenic   | 12. Manganese  |
| 3. Barium    | 13. Mercury    |
| 4. Beryllium | 14. Molybdenum |
| 5. Cadmium   | 15. Nickel     |
| 6. Chromium  | 16. Selenium   |
| 7. Cobalt    | 17. Thallium   |
| 8. Copper    | 18. Uranium    |
| 9. Fluoride  | 19. Vanadium   |
| 10. Iron     | 20. Zinc       |

For waters with high turbidity: Mercury may not be tested.

**LEAD/COPPER- Kit IB (Regulated Water Systems and Homeowners)**

**Cost: \$ 20**

1. Lead
2. Copper

**INORGANIC CHEMICALS- KIT C (Homeowner)**

**Cost: \$ 100**

- |             |   |
|-------------|---|
| 1. Arsenic  | 7. Lead (Flush)                               |
| 2. Chloride | 8. Lead (First Draw – separate sample bottle) |
| 3. Copper   | 9. Manganese                                  |
| 4. Fluoride | 10. Nitrate and Nitrite                       |
| 5. Hardness | 11. Sodium                                    |
| 6. Iron     | 12. Uranium                                   |

**IOC's  
INORGANIC CHEMICALS (Cont.)**

**INORGANIC CHEMICALS- KIT ID, N3N2 (Nitrate and Nitrite) and Kit AN samples are accepted Monday – Thursday, 7:45 a.m. – 4:30 p.m. and Friday, 7:45 a.m. – 12 noon.** Kits ID, N3N2 need to be cooled - the temperature of the sample when received at the laboratory should be cooling or cooled to less than ~ 42 degrees Fahrenheit (or 6 degrees Celsius), but not frozen (SEE TABLE BELOW FOR MORE INFORMATION). **Samples must be received within 24-48 hours of sampling for odor, nitrate and nitrite tests [Please see table below]. Note: Oxidizers such as chlorine interfere with testing for Nitrite.**

**INORGANIC CHEMICALS- KIT ID Required for some permits and water supplies. Cost: \$ 90**

- |              |              |
|--------------|--------------|
| 1. Arsenic   | 6. Nitrate   |
| 2. Chloride  | 7. Odor      |
| 3. Iron      | 8. pH        |
| 4. Manganese | 9. Sodium    |
| 5. Nitrite   | 10. Uranium  |
|              | 11. Fluoride |

**Coliform testing not included in this kit.**

**Note: For Kit ID or Kit C, sulfate can be added for an additional \$15.00.**

**Kits for Anions:**

**KIT: N<sub>3</sub>N<sub>2</sub> – Nitrate and Nitrite. Nitrate and Nitrite required for some permits and water supplies. Cost: \$ 24**

**Kit: AN – Sulfate, Fluoride, Chloride, Nitrate, Nitrite. Cost: \$ 50**

**Child Care and School Water Testing**

**KIT DC - LEAD FIRST DRAW or LEAD FLUSH: (Public and Private Water Systems)**

**Tests for lead. Cost: \$12**

**KIT DC – INORGANIC (Private Water systems): Tests for arsenic, uranium, nitrite, manganese, nitrate and fluoride. Cost: \$ 74**

**KIT DC – COLIFORM (Private Water systems): Tests for total coliform and *E. coli*. Cost: \$14**

Testing for the inorganic chemicals listed below is available upon request.

<i>Test</i>	<u>Sample to be Received Within 48 hrs of Sampling?</u>	<u>Cool to 6° C?</u>	<u>Cost</u>	<i>Test</i>	<u>Sample to be Received Within 48 hrs of Sampling?</u>	<u>Cool to 6° C?</u>	<u>Cost</u>
<i>Alkalinity</i>	yes	X	\$12.00	<i>Lead</i>			\$12.00
<i>Antimony</i>			\$12.00	<i>Manganese</i>			\$12.00
<i>Arsenic</i>			\$12.00	<i>Mercury</i>			\$25.00
<i>Barium</i>			\$12.00	<i>Nickel</i>			\$12.00
<i>Beryllium</i>			\$12.00	<i>Nitrate</i>	yes	X	\$12.00
<i>Cadmium</i>			\$12.00	<i>Nitrite</i>	yes	X	\$12.00
<i>Calcium, Titration</i>			\$12.00	<i>Odor</i>	<b>24 HOURS</b>	X	\$10.00
<i>Chloride</i>			\$12.00	<i>pH</i>	yes		\$10.00
<i>Chlorine Residual, Free</i>	yes		\$12.00	<i>Selenium</i>			\$12.00
<i>Chlorine Residual, Total</i>	yes		\$12.00	<i>Sodium</i>			\$12.00
<i>Chromium</i>			\$12.00	<i>Sulfate</i>			\$15.00
<i>Conductivity</i>	yes	X	\$12.00	<i>Thallium</i>			\$12.00
<i>Copper</i>			\$12.00	<i>Total Dissolved Solids</i>		X	\$12.00
<i>Fluoride</i>			\$12.00	<i>Turbidity</i>	yes	X	\$12.00
<i>Hardness</i>			\$12.00	<i>Uranium (Kit RU)</i>			\$25.00
<i>Iron</i>			\$12.00	<i>Zinc</i>			\$12.00

## ORGANIC CHEMICAL TESTING

### VOC'S VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANIC CHEMICALS- KIT OA (EPA Method 524.2)

Cost: \$120

NOTE: Kit OA tests for all regulated and unregulated VOC's.

VOC samples must be delivered or mailed to the laboratory and received Monday – Friday within 48 hours of sampling. Please keep samples cold. Estimated turnaround time for sample results is 21 calendar days from the time of sample receipt.

1	Methyl tert-butyl ether	30	2,2-Dichloropropane
2	Benzene	31	1,3-Dichloropropane
3	Bromobenzene	32	1,1-Dichloropropene
4	Bromochloromethane	33	cis-1,3-Dichloropropene
5	Bromodichloromethane	34	trans-1,3-Dichloropropene
6	Bromoform	35	Ethylbenzene
7	Bromomethane	36	Fluorotrichloromethane
8	n-Butylbenzene	37	Hexachlorobutadiene
9	sec-Butylbenzene	38	Isopropylbenzene
10	tert-Butylbenzene	39	p-Isopropyltoluene
11	Carbon tetrachloride	40	Methylene chloride (Dichloromethane)
12	Chlorobenzene	41	Naphthalene
13	Chlorodibromomethane	42	n-Propylbenzene
14	Chloroethane	43	Styrene
15	Chloroform	44	1,1,1,2-Tetrachloroethane
16	Chloromethane	45	1,1,2,2-Tetrachloroethane
17	2-Chlorotoluene	46	Tetrachloroethylene
18	4-Chlorotoluene	47	Toluene
19	Dibromomethane	48	1,2,3-Trichlorobenzene
20	1,3-Dichlorobenzene	49	1,2,4-Trichlorobenzene
21	1,2-Dichlorobenzene	50	1,1,1-Trichloroethane
22	1,4-Dichlorobenzene	51	1,1,2-Trichloroethane
23	Dichlorodifluoromethane	52	Trichloroethylene
24	1,1-Dichloroethane	53	1,2,3-Trichloropropane
25	1,2-Dichloroethane	54	1,2,3-Trimethylbenzene
26	1,1-Dichloroethene	55	1,2,4-Trimethylbenzene
27	trans-1,2-Dichloroethene	56	1,3,5-Trimethylbenzene
28	cis-1,2-Dichloroethene	57	Vinyl chloride
29	1,2-Dichloropropane	58	m+p-Xylene
		59	o-Xylene

ORGANIC CHEMICAL TESTING (cont.)

Disinfection By-Products

TRIHALOMETHANES-KIT OB (EPA METHOD 524.2)

Cost: \$120

Trihalomethane samples must be delivered or mailed to the laboratory and received Monday – Friday within 48 hours of sampling. Please keep samples cold. Estimated turnaround time for sample results is 21 calendar days from the time of sample receipt.  
Note: HALOACETIC-KIT OK may need to be sampled at the same time and at the same location as THM sampling occurs.

1. Chloroform
2. Dibromochloromethane
3. Bromodichloromethane
4. Bromoform

Note: Reported as total trihalomethanes.

HALOACETIC ACIDS - Kit OK (EPA METHOD 552.2)

Cost: \$ 150

Haloacetic Acid (Kit OK). Please order approximately one month before compliance monitoring is needed. Subject to laboratory capacity.  
Note: TRIHALOMETHANES-KIT OB may need to be sampled at the same time and at the same location as haloacetic acid sampling occurs.  
Haloacetic samples must be delivered or mailed to the laboratory and received Monday – Friday within 48 hours of sampling. Please keep samples cold. Estimated turnaround time for sample results is 21 calendar days from the time of sample receipt.

1. Chloroacetic Acid
2. Bromoacetic Acid
3. Dichloroacetic Acid
4. Trichloroacetic Acid
5. Dibromoacetic Acid

Note: Also reported as total Haloacetic acids.

Samples will be accepted the first full week of the month in November through April and accepted anytime May through October. Kits will be sent out about one week prior to schedule sample receipt dates unless alternate arrangements are made.

ORGANIC CHEMICAL TESTING (cont.)

**SOC's**  
**SYNTHETIC ORGANIC CHEMICALS**  
Kits OL, OE, OH and OG

**Please order approximately one month before compliance monitoring is needed.**  
Samples will be accepted the second full week of each month. The kits must be ordered in advance and will be sent out about 1 week prior to schedule sample receipt dates.  
SOC Kits OE, OG, OH samples must be delivered or mailed to the laboratory and received Monday – Friday within 48 hours of sampling. **Please keep samples cold.** Estimated turnaround time for sample results is 21 calendar days from the time of sample receipt.

**HERBICIDES in WATER – KIT OE (EPA Method 515.4)**

**Cost: \$200**

1. Dalpon
2. Dicamba
3. Dinoseb
4. Pentachlorophenol
5. Picloram
6. 2,4-D
7. 2,4,5-TP (silvex)

**CARBAMATE PESTICIDES – KIT OG (EPA METHOD 531.2)**

**Cost: \$100**

- |                       |                         |
|-----------------------|-------------------------|
| 1. Aldicarb           | 6. Aldicarb sulfone     |
| 2. Aldicarb Sulfoxide | 7. Baygon (Propoxur)    |
| 3. Carbaryl           | 8. Carbofuran           |
| 4. Methiocarb         | 9. Methomyl             |
| 5. Oxamyl (Vydate)    | 10. 3-Hydroxycarbofuran |

**EDB/DBCP-KIT OH (EPA METHOD 504.1)**

**Cost: \$ 80**

1. Ethylene dibromide (EDB)
2. Dibromochloropropane (DBCP)

**Pentachlorophenol-KIT OP (EPA METHOD 515.4)**

**Cost: \$ 75**

1. Pentachlorophenol

ORGANIC CHEMICAL TESTING (cont.)

SOC's  
SYNTHETIC ORGANIC CHEMICALS (cont.)

Semi volatile Chemicals and Pesticides - Kit OL (EPA METHOD 525.2)

Cost: \$250

**Please order approximately one month before compliance monitoring is needed.**

**Samples will be accepted the second full week of each month. The kits must be ordered in advance and will be sent out about 1 week prior to schedule sample receipt dates.**

**SOC Kit OL samples must be delivered or mailed to the laboratory and received Monday – Friday within 24 hours of sampling. Please keep samples cold. Estimated turnaround time for sample results is 21 calendar days from the time of sample receipt.**

**Compounds in method:**

Aldrin  
alpha-Chlordane  
gamma-BHC (lindane)  
Heptachlor  
Methoxychlor  
Simazine  
Bis-(2-ethylhexyl) phthalate  
Hexachlorocyclopentadiene  
2,4,5-Trichlorobiphenyl  
2,2',3',4,6-Pentachlorobiphenyl  
Benzo[a]pyrene  
Propachlor  
Metolachlor  
Dieldrin

di-n-Butyl phthalate  
Dimethyl phthalate  
2,3-Dichlorobiphenyl  
2,2',3,3',4,4',6-Heptachlorobiphenyl  
Anthracene  
Benz[b]fluoranthene  
Benzo[ghi]perylene  
Dibenz[a,h]anthracene  
Indeno[1,2,3-cd]pyrene  
Pyrene

2,4-Dinitrotoluene  
Acetochlor  
EPTC (Torbin, Stauffer, R1608)  
DCPA (Dacthal)

Alachlor  
Atrazine  
gamma-Chlordane  
Endrin  
Heptachlor epoxide-isomer B  
trans-Nonachlor  
Bis-(2-ethylhexyl) adipate  
Hexachlorobenzene  
Pentachlorophenol  
2,2',4,4'-Tetrachlorobiphenyl  
2,2',3,3',4,5',6,6'-Octachlorobiphenyl  
Toxaphene  
Metribuzin  
Butachlor  
Total chlordane

Butyl benzyl phthalate  
Diethyl phthalate  
2-Chlorobiphenyl  
2,2',4,4',5,6'-Hexachlorobiphenyl  
Acenaphthylene  
Benz[a]anthracene  
Benz[k]fluoranthene  
Chrysene  
Fluorene  
Phenanthrene

2,6-Dinitrotoluene  
4,4'-DDE (Dilene, Rhothanel)  
Molinate  
Terbacil

## RADIONUCLIDES

Samples are accepted Monday – Friday within 5 days of sampling, \* except Kit RC, which are accepted Monday – Thursday, 7:45 a.m. – 4:30 p.m. and Friday, 7:45 a.m. – 3:30 p.m. and must be received within 48 hours of collection. Estimated turnaround times are listed below for each method.

### WATER

#### **GROSS ALPHA IN WATER- KIT RA (EPA METHOD 900.0 or EERF 00-02)**

**COST: \$ 45**

Test for gross alpha in water.

[Turnaround time – approximately 14 calendar days]

#### **\*RADON-222- KIT RC (SM 7500 Rn)**

**COST: \$ 25**

Test for radon-222 in water.

[Turnaround time – approximately 7-10 calendar days]

#### **URANIUM IN WATER – KIT RU (EPA METHOD 200.8)**

**COST: \$ 25**

Test for uranium in water reported as mass.

[Turnaround time – approximately 21 calendar days]

### AIR

#### **RADON IN AIR-KIT RF (EPA METHOD 402-R-92-004)**

**COST: \$ 50**

Test for radon-222 in air – 2 to 7-day sample.

[Turnaround time – approximately 7 calendar days]

*It is recommended that two testing devices be placed side by side when conducting short term radon in air testing. Kit RF is configured this way.*

#### **RADON IN AIR-KIT RG (EPA METHOD 402-R-92-004)**

**COST: \$ 25**

Test for radon- 222 in air – 1 to 3-month sample.

[Turnaround time – approximately 7 calendar days]

#### **RADON IN AIR-KIT RH (EPA METHOD 402-R-92-004)**

**COST: \$ 25**

Test for radon-222 in air – 3 to 12-month sample.

[Turnaround time – approximately 7 calendar days]



## MICROBIOLOGICAL TESTING

Samples are accepted Monday – Friday (7:45 a.m. – 4:30 p.m.) within 30 hours of sampling. Please keep samples cool.

TOTAL COLIFORM BACTERIA AND *E. coli* - Presence/Absence -KIT A (Homeowner) COST: \$ 14

TOTAL COLIFORM BACTERIA AND *E. coli* - Presence/Absence -KIT AA COST: \$ 14  
(Regulated Water Systems)

ENUMERATION OF TOTAL COLIFORM AND *E. coli* in drinking water -KIT NU COST: \$ 15

IRRIGATION WATER- *E. coli* -KIT AG COST: \$ 15

RECREATIONAL WATER- *E. coli* -KIT SW COST: \$ 15

TOTAL *E. coli* COUNT from SOURCE WATER (Regulated Systems only)-KIT LT COST: \$ 15

**SPECIAL REQUEST: HETEROTROPHIC PLATE COUNT- KIT HPC COST: \$ 15**

**Samples are only accepted Monday – Thursday (7:45 a.m. – 3:00 p.m.) and within 24 hours of sampling. Please keep the samples cool. Estimated turnaround time is up to 4 calendar days.**

## GENERAL INFORMATION

Sampling instructions and sample acceptance criteria can be found at the VDH website, click on [www.healthvermont.gov](http://www.healthvermont.gov), Public Health Laboratory.

For a complete listing of laboratories certified within the state of Vermont, please contact Vermont Department of Health Laboratory at (800) 660-9997 in state or (802) 338-4724 or the list can be found at the VDH website, click on <http://www.healthvermont.gov/lab/certification>

For public water supply questions please call the Department of Environmental Conservation, Drinking Water and Groundwater Protection Division, 802-828-1535.

Records relating to water testing and radon in air 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).