

First Alert®

Model RD1 User's Manual Radon Gas Test Kit Short-Term Analysis

IMPORTANT! PLEASE READ CAREFULLY AND SAVE.

This user's manual contains important information about your Radon Gas Test Kit's operation. Meets EPA RMP Requirements.

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BRK Brands, Inc., 3901 Liberty Street Road, Aurora, IL 60504-8122
Consumer Affairs: (800) 323-9005 • www.firstalert.com

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Limited Warranty

BRK Brands, Inc., ("BRK") the maker of First Alert® brand products warrants that for a period of one year from the date of purchase, this product will be free from defects in material and workmanship. BRK, at its option, will repair or replace this product or any component of the product found to be defective during the warranty period. Replacement will be made with a new or remanufactured product or component. If the product is no longer available, replacement may be made with a similar product of equal or greater value. This is your exclusive warranty.

This warranty is valid for the original retail purchaser from the date of initial retail purchase and is not transferable. Keep the original sales receipt. Proof of purchase is required to obtain warranty performance. BRK dealers, service centers, or retail stores selling BRK products do not have the right to alter, modify or any way change the terms and conditions of this warranty.

This warranty does not cover normal wear of parts or damage resulting from any of the following: negligent use or misuse of the product, use contrary to the operating instructions, disassembly, repair or alteration by anyone other than BRK or an authorized service center. Further, the warranty does not cover Acts of God, such as fire, flood, hurricanes and tornadoes.

BRK shall not be liable for any incidental or consequential damages caused by the breach of any express or implied warranty. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose is limited in duration to the duration of the above warranty. Some states, provinces or jurisdictions do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state or province to province.

How to Obtain Warranty Service

Service: If service is required, do not return the product to your retailer. In order to obtain warranty service, contact the Consumer Affairs Division at 1-800-323-9005, 7:30 AM - 5:00 PM Central Standard Time, Monday through Friday. To assist us in serving you, please have the model number and date of purchase available when calling.
303 Nelson Avenue, Neosho, MO 64850-8806.

The charcoal test kit provided in this package is a short-term, do-it-yourself radon test. The test kit contains charcoal (activated carbon) that will "adsorb" and trap radon's radioactive by-products if present.

Once the test has been properly conducted for 2 days (48 hours) as indicated below, the test kit should be immediately (within 24 hours) returned to First Alert®, c/o Alpha Energy Labs, 2501 Mayes Rd, Suite 100, Carrollton, TX 75006, (800) 324-5928 for analysis. The exposed test kit must be received by our laboratory no later than 10 days after the end of the test in order for the test results to be valid.

Since BRK Brands, Inc. the maker of First Alert® brand products has no control over the U.S. Postal Service, we cannot guarantee that your test results will be returned within 21 days. If you do not receive your test results within 21 days, please contact Alpha Energy Labs, (800) 324-5928. **Select a Test Location(s):**

According to the EPA, initial short-term testing should be conducted in the lowest lived-in area of your home. Follow-up testing should be conducted in the same location as the initial short-term measurement.

TEST INSTRUCTIONS: Short-Term Charcoal Kit

DO NOT OPEN PLASTIC BAG UNTIL READY TO TEST.

There is no expiration date on test kit as long as plastic bag is not open.

Closed House Conditions: All windows and doors should be kept closed for at least 12 hours prior to and for the duration of the test, except for normal entry and exit. Please sign test kit to verify "Closed House Conditions" were observed. **Real Estate transactions require 2 kits exposed simultaneously 4 inches apart or 2 kits exposed sequentially.**

1. Record your name, address, phone number, sample kit bar code number, test start date and time, and test location on the information card included with the test kit.
2. When you are ready to begin testing, open the plastic bag and remove the test kit. Place the test kit (paper side up) on a flat surface two (2) or more feet above the floor in the lowest lived in area of your home or test location. Be careful not to tear or puncture the Radon Sampler. Do not disturb the sampler during the measurement period.

DO NOT PLACE THIS TEST KIT:

- Near heat or air conditioning registers, fans, or other places where it will be subjected to constantly moving air;
 - Where it will get wet or in places of high humidity (i.e. kitchen, laundry room, garage, crawl space or sump pump); • In direct sunlight or near heat sources;
 - In the reach of children.
3. Stop the test after 2 days (48 hours) as follows: **Kits are invalid if exposed longer than 96 hours!**
- Record stop time and date on the information card included with the test kit.
 - **Record the bar code number that is printed on the reverse side of the test kit, the date you returned the test kit for analysis, and the test location in this area.**

BAR CODE NUMBER: _____

DATE RETURNED: _____

TEST LOCATION: _____

- Place the charcoal test kit and the completed card in the return envelope and seal the envelope. For better security, tape the envelope after sealing it.

IMPORTANT!

Any delay in returning the test kit to Alpha Energy Labs may invalidate the test results.

- Place two first class stamps on the envelope and return the test kit immediately to Alpha Energy Laboratories for evaluation. You will receive the results within two weeks of receipt at the laboratory.

FOR FASTER SERVICE – OVERNIGHT YOUR TEST KIT TO THE ADDRESS SHOWN ON THE FRONT OF THE INFORMATION CARD AND PROVIDE AN EMAIL ADDRESS OR FAX NUMBER FOR THE RETURN REPORT.

Normally you will receive your results within 2-3 weeks from the time you mail the kit in to the lab. This accounts for the mailing time to the lab, analysis time, and the time it takes to mail a report back to you.

If you do not receive the test results within 21 days, contact Alpha Energy Labs at (800) 324-5928. **Please have your date of mailing and serial number included with the test kit before calling Alpha Energy Labs. BRK Brands, Inc. the maker of First Alert® brand products has no control over the U.S. Postal Service and cannot guarantee an actual delivery date of results.**

Using This Test Kit

What Do My Test Results Mean?

Radon is measured in picoCuries per liter of air (pCi/L). A picoCurie is equal to 10^{-12} curies, or one trillionth of a Curie. This measurement determines the potential threat of long-term exposure to radon.

EPA Recommendations

The Environmental Protection Agency (EPA) recommends the following guidelines for determining what type of action you should take after receiving your test results:

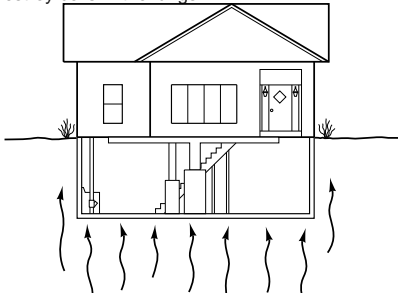
Analysis Reading	Recommendation
Less than 4 pCi/L	If this is an initial short-term test: A follow-up test is not necessary now. Consider testing again in the future. If a lower level (basement) becomes more frequently used, test there also.
	If this is a follow-up short-term test: The EPA recommends you consider reducing the radon level if the average of your first and second tests is 4 pCi/L or higher.
	Even radon levels below 4 pCi/L pose some health risk, and you can reduce your risk of lung cancer by lowering your radon level. Most homes can be reduced to 2 pCi/L or less.
Equal to or greater than 4 pCi/L but less than 10 pCi/L	If this is an initial short-term test: The EPA recommends you conduct a follow-up test using either a long-term test (90 days to one year duration), or a short-term test. A long-term test will provide a better understanding of your year-round average radon level; however, if you need results quickly, conduct a second short-term test. A long-term test may only be purchased through Alpha Energy Labs directly at (800) 324-5928.
	If this is a follow-up short-term test: The EPA recommends you fix your home if the average of your first and second tests is 4 pCi/L or higher.
	If this is an initial short-term test: The EPA recommends you follow up with an immediate short-term test.
Equal to or greater than 10 pCi/L	If this is a follow-up short-term test: The EPA recommends you fix your home if the average of your first and second tests is 4 pCi/L or higher.

General Information About Radon

What Is Radon?

Radon is an invisible, odorless and tasteless radioactive gas that is found in the earth's soil and rocks that contain uranium. Although almost all of the soil in the United States contains uranium, it is usually only found in small amounts. When soil with high concentrations of uranium is located, there is also a noticeable increase in radon levels.

From the natural breakdown of uranium comes radium. A radioactive gas (called "radon") is emitted from radium, which is passed up through the soil. This gas, in its original form, is inert—it can be breathed in and out again with no harmful effects. However, within thirty minutes of the formation of this gas, its natural decay process begins forming radioactive particles, commonly called "the daughters of radon." The "daughters" are tiny particles that attach themselves to dust and smoke in the air. Once these "daughters" are breathed into the lungs, they lodge themselves in the walls of the lungs and, because of their natural radioactivity, begin to emit bursts of radiation that can destroy cells in the lungs.

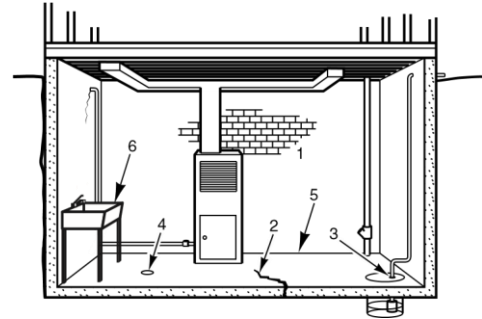


If Radon Comes From Soil, Isn't The Outside Air Contaminated With Radon?

When radon escapes into the outside air, it is quickly diluted by many other particles in the air. In essence, the amount of radon that is being emitted from the soil is only a very minute portion of the atmosphere. The outdoor radon level is generally between 0.2-1.0 pCi/L, with the average level being around 0.5 pCi/L.

When radon becomes "trapped" within a home, there is no means to dilute or distribute the gas. The gas enters the home through cracks in the foundation, loosefitting pipes, drains, and even cement floors, but has no means of escape. This can result in indoor radon concentrations many times higher than outdoor levels.

Are There Any Other Ways For Radon To Enter My Home?



Potential Radon Entry Points

1	Cinder block basement walls	4	Floor drain
2	Cracks in cement floor	5	Edge between wall and cement floor
3	Sump pump	6	Sink

Radon can also enter a home through its water supply. If you drink water that is contaminated with radon, the EPA believes there is no real health threat. However, radon gas can escape from the water and either create or add to a potential radon problem. Radon escapes from water when the temperature of the water is hot and its surface area is large (i.e. dishwashers, washing machines, showers, etc.). In some cases, especially when water is obtained from a private well, this "radon entry point" can be a major contributor to radon in the home.

What Risks Do I Face If Radon Is In My Home?

The risk of long-term exposure to radon is lung cancer. The Environmental Protection Agency (EPA), an agency of the U.S. government, has estimated that there are between 5,000 and 30,000 radon-related lung cancer deaths each year, and that radon is the #1 cause of lung cancer in non-smokers.

Since there are no "symptoms" of lung cancer in the early stages, and there may be a "lag time" of between 10 and 40 years between initial exposure to radon and onset of the disease, there are no clues as to whether or not the "daughters" are destroying cells in your lungs at this very moment. Because radon is invisible, odorless and tasteless, the only way to evaluate whether or not you face the risk of radon exposure is to test your home for radon.

When Is The Best Time To Test My Home For Radon?

Since radon levels can vary according to the weather and the season, it is important that you test your home for radon when all windows and doors can be kept closed, except for normal entry and exit, prior to and for the duration of the test. For northern climates, the winter months are the optimum time to test. For southern climates, the test should be performed at a time when windows and doors will not be opened for ventilation. Also, it is acceptable to continue operation of central air conditioning systems that recycle interior air during the test period.

It is also important that you conduct the test when the weather is calm. Testing during high winds (30+ mph) or during thunderstorms can seriously alter radon levels. If you begin testing when weather is calm and severe weather conditions arise during the test, BRK Brands, Inc. the maker of First Alert® brand products recommends completing the test, but conducting another test as soon as possible during calm weather conditions. If the test results indicate different radon levels, the level of the test conducted during severe weather should be discarded.

The Risk Of Living With Radon...

Like other environmental pollutants, there is some uncertainty about the magnitude of radon health risks. However, more is known about radon risks than risks from most other cancer-causing substances. This is because estimates of radon risks are based on studies of cancer in humans (underground coal miners). Additional studies are being conducted on more typical populations.

Smoking combined with radon is an especially serious health risk. Stop smoking and lower your radon levels to reduce the risk of lung cancer.

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