

BIOMATION ENVIRONMENTAL WATCH

A Newsletter For Professionals Who Test for Radon



Fall - 2007 Volume 2

New
indoor air quality
guideline for
radon

Did You Know.....

HEALTH CANADA HAS ISSUED THE MUCH ANTICIPATED new indoor air quality guideline for radon at 200 Bq/m³. This is significantly lower than the previous guideline of 800 Bq/m³. Since many homes test below 800 but above 200 Bq/m³, the new guideline will mean a large increase in radon testing to determine which homes are safe and which homes will need mitigation to bring them within the new guideline. The guideline for new construction is likely to be set 100 Bq/m³.

Because lung cancer risks from radon gas are significant, home buyers will want to know that their home has been tested and that it is safe. You can find a link to the Health Canada guidelines on the Biomation website www.biomation.com/radon

RADON MEASUREMENT COURSE

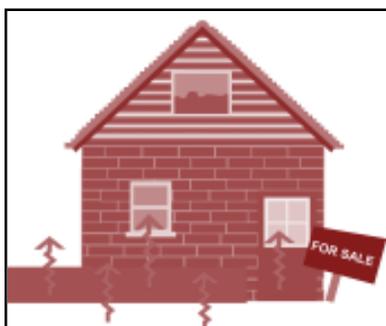
TO HELP YOU GET UP AND RUNNING as quickly as possible in the radon business, BIOMATION is organizing a 2-day technical skills course "Radon Measurement" with well-known instructor Bernie Katz. It is a 2-day certification course for persons such as home inspectors, environmental consultants and safety inspectors.

Course dates: **Oakville, ON Feb 29- March 1, 2008**
Ottawa, ON April 18-19, 2008

The course fee is \$339.00, including lunch both days. Call for a brochure and registration form.

SEE BACK FOR COUPON DETAILS

► Mandatory Radon Testing



ALL HOMEOWNERS SHOULD HAVE THEIR HOUSES TESTED FOR RADON. There are no safe areas. All houses are at risk, in addition, some regions of Canada with known high radon levels, such as Elliot Lake, have mandatory radon testing for new housing.

Builders will need a radon test, after occupancy, to establish the radon level. If

higher than the regulations, either the builder or the owner will need to conduct mitigation to reduce levels to acceptable levels. A confirmatory radon test will verify whether the measures taken are adequate, or if further mitigation is needed.

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Passive Radon Detectors



E-PERM Radon Detector

CONTRACTORS WHO HAVE USED A RANGE OF RADON MEASUREMENT METHODS find the E-PERM system is the overall best method for radon testing. As business grows, you can test multiple locations concurrently. Results are accurate, and are available immediately without needing to wait for outside lab results.

You can increase the validity of your radon tests by increasing the deployment time from 2 - 3 days to 5 - 6 days without significant increases in your costs.

Track-etch detectors can also measure radon. They generally need at least three months exposure at the radon levels usually encountered in buildings, and are not as accurate. Consequently they are not well suited for general radon testing.

Charcoal radon detectors are only suited to short 2 to 4 day tests, and have been plagued by accuracy problems due to fundamental difficulties with the technology. Also, when faced with an increase in test volume, many labs cannot respond quickly enough, resulting in re-tests with added expenses.

The issues with charcoal detectors are well documented in a recent comprehensive report entitled: "Field Comparison of Commercially Available Short-Term Radon Detectors" by William Field at the University of Iowa. Using actual field conditions, charcoal canisters were found to give generally unreliable results. Reading this report is a "must" for anyone contemplating using charcoal radon detectors.

The E-PERM[®] system is accurate and economical for radon testing. It will help you build your professional reputation.

Continuous Radon Monitoring



femto-TECH Meter

TO PROVIDE MORE CHOICE BIOMATION is supplying two superb continuous radon monitors the femto-TECH Continuous Radon Monitor and the Radon Scout. Both are calibrated to produce accurate direct-reading radon measurements.

Both have large internal memories for data logging applications, and connect to a PC for storing data and printing reports. Ambient temperature pressure, relative humidity and barometric pressure are also recorded to aid in interpreting the results. Both need annual calibration.

The femto-TECH CRM-510LP is a high sensitivity unit. It is ideal for data logging where accurate hourly readings are needed. The Radon Scout is an economy model that produces accurate readings every 4 hours. It can also be set to hourly recording if radon levels are high.

The femto-TECH monitor is also available in a combination radon/carbon monoxide configuration. This model will give you measuring capability for both of the two life-threatening gases that can be present in homes: radon and carbon monoxide. It will accurately measure the low levels of carbon monoxide that are dangerous and can become a health threat.

With an E-PERM system, a continuous radon monitor and a KATA gamma monitor you can respond to your clients needs by producing complete and comprehensive radon surveys, inspections and reports.

Gamma Monitoring

BILL HAS JUST MOVED INTO A 10 YEAR OLD BUNGALOW and has asked about radon testing. Some of his new neighbors have talked about radon, but the air in his home seems fresh and clean, so he doesn't think there is a problem.

You notice that Bill's furnace has just been running so you open the access panel, remove the filter and place your KATA radiation meter on the filter. Bill is amazed and shocked to hear the increased count rate. When you explain that the radioactive dust particles cause lung cancer and are coming from the air his family is breathing, he signs up for radon testing!



KATA Meter

The KATA meter is also important for measuring another hazard associated with radon gas: the gamma radiation emitted by radium, radon gas and radon's decay products.

The KATA radiation meter is ideal for the home inspector, environmental engineer, geologist, radiation technician and mitigation contractor. Where radon levels are high, the KATA meter can be used in an exploratory manner to help identify sources of radon entry. Sump pump wells, basement corners, cracks and water softeners are good places to check.

The meter is pocket-size, and also serves as a gamma dosimeter.

Spiking Service

Being able to verify the accuracy of your radon test program and to demonstrate this to others is important. BIOMATION operates a spiking service for E-PERM detectors. In a blinded test, we expose your E-PERM detectors in the Rad Elec test chamber with a known level of radon gas activity. Your measurement results should agree with the known radon level.

Radon in Building Lots

LAND DEVELOPERS NEED TO KNOW if the land they are interested in buying will have a radon problem. Your E-PERM system is ideal for measuring the radon levels in soil gas. Because radon levels in soil are high, the "L" chamber with a Long-Term electret is the preferred choice for a 2-day test. Provided that you give some protection from ground water and soil, results will be accurate.



E-PERM Environmental Gamma Monitor

YOUR E-PERM MONITORS also respond to gamma radiation. You can measure environmental gamma levels if they are kept from radon gas. We supply radon-proof bags for this purpose. They replace the conventional TLD gamma dosimeters because of the E-PERM's better accuracy, ease-of-use, and lower cost. Deployment times are typically one to three months.

Measurements are energy independent. For faster response we can supply direct reading gamma dosimeters having a deployment time of 2 - 3 days.

For indoor radon measurements, the background gamma level will contribute slightly to the E-PERM measurement but only the equivalent of about 25 Bq/m³. You subtract this amount from your reading to give the true radon level.

For course participants

Valid to June 30, 2008

5% OFF YOUR PURCHASE

of an
**E-PERM System, Continuous Radon Monitor,
Gamma Monitor or E-PERM Detectors
up to a maximum of \$8,000.00 purchase**

All of our radon measuring equipment is supplied with a radon testing protocol that you can follow to produce valid results, and a model Quality Assurance Plan that you can use to set up your testing procedures.

ISO 9001:2000 Certified

[®] E-PERM is a registered trademark of Rad Elec, Inc.

Contact BIOMATION for your Radon Equipment needs.

- ✓ **E-PERM Monitoring Products and Equipment**
- ✓ **Continuous Radon Monitors**
- ✓ **Gamma Monitoring Systems**

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