

How to get the Leak Test Kit Analyzed and Receive a Completed Certificate

1. Follow all Radiation Safety and License Conditions at your facility.
2. Follow the Leak Test Kit directions on the other side of this page or the Manufacturer's Specific Instructions.
3. Use only 1 Leak Test Kit per sealed source or device containing a sealed source.
4. Include or have in place a Purchase Order from your company, credit card information or send a check for the full amount. Please include applicable information on attached Method of Payment Form.
5. Attach correct postage to self-addressed envelope to return kit for analysis. (Dade Moeller will not be held responsible for test kits that do not arrive at our Laboratory.)

Note: If sending multiple kits for analysis, grouping them together in one shipment is recommended. Sending kits individually can result in incomplete or partial shipments. (Packages can be sent U.S. Postal Service, FedEx, or UPS).

6. Provide all device/source information described on the Leak Test Datasheet provided to avoid processing delays. Also include information to whom and where the completed Leak Test Certificate(s) should be sent.
7. Terms and Conditions of Sale:
 - 7.1. OPERATING INSTRUCTIONS – The Leak Test Kit is furnished to you with directions for use. Dade Moeller believes that these directions are clear and easy to understand. If you do not understand the directions, STOP! Do not perform the leak test until you understand how to properly use the Leak Test Kit for your device / source.
 - 7.2. WARRANTY – Laboratory analytical services will be performed using manufacturer's published or recommended standards, procedures and operations and maintenance manuals. Laboratory Standard Operating Procedures and Quality Assurance / Quality Control Information are available upon written request to the Laboratory.
 - 7.3. LIMITATIONS of LIABILITY – Dade Moeller & Associates shall not be liable for deficiencies, errors, delays, or inaccurate testing methods which results from Purchaser supplying insufficient or incorrect information which is, or must be, relied upon by Dade Moeller in completion of the service.

Each Leak Test Kit contains the following in a pre-addressed standard size envelope:

1. Paperwork
 - a. Page 1 – How to get the Leak Test Kit Analyzed and Receive a Completed Certificate
 - b. Page 2 – Radioactive Device/Source Leak Test Kit Directions for Use
 - c. Page 3 – Leak Test Datasheet
 - d. Page 4 – Method of Payment Form
2. Two (2) six (6) inch cotton swabs
3. Two (2) re-sealable plastic bags with pre-affixed label.
4. One (1) moistened towellette

Radioactive Source/Device Leak Test Kit Directions for Use

This Leak Test Kit is designed for use with alpha emitting sources or beta emitting sources that can be safely handled behind a plastic shield and low activity gamma emitting sources where the total radiation exposure to the whole body during the leak test procedure is calculated not to exceed 1 millirem.

Always read and follow the device or source manufacturer's instruction manual for specific leak test procedures. If there are any questions, contact the manufacturer or Dade Moeller & Associates before the test procedures is started.

Leak Test Kit Procedures

1. Record the device or source type, device model, device serial number, radionuclide, activity, the source serial number, date collected and collectors name on the Leak Test Sample Data Sheet. Please sign and date the form where indicated to avoid delays in processing.
2. Record the device or source type, device model, device serial number, radionuclide, activity, and the source serial number on the re-sealable plastic bags.
3. Moisten the cotton swab with the towelette (as applicable). Do not use the towelette to wipe the source.
4. Wipe test collection procedures:
 - 4.1. **Alpha emitting sources** must be handled with extreme care. Do not touch the surface of the source when performing the leak test. This may damage the source since alpha sources are not protected by a cover. Wipe only the source holder and support, **DO NOT WIPE THE SURFACE OF THE SOURCE.**
 - 4.2. **Beta emitting sources** in excess of 1 mCi should be handled with 12 inch tweezers or forceps and the leak test performed behind a plastic shield with a minimum thickness of 1 cm. Rubber gloves should be worn to help minimize the dose to the hands and to prevent contamination if the source is leaking. Take care to prevent puncturing thin covers that may be protecting the source. Wipe surfaces of the source such as support rings, holders, and storage cases. Always keep the source at a maximum distance from you and never expose yourself to the direct radiation of the source. In cases where the source is permanently fixed into a device, the closest and most easily accessible surface such as conical port source housing etc. may be taken as the smear area. Do not remove sources from their source holders. Electron capture detectors (ECDs) should be leak tested by wiping the outside of the source housing and the carrier gas inlet and outlet port.
 - 4.3. **Gamma emitting sources** can be leak tested using this kit if the whole body exposure will not exceed 1 milliroentgen (mR). This test can be used for unshielded ^{60}Co sources up to 40 mCi and unshielded ^{137}Cs or ^{192}Ir sources up to 150 mCi. The time required to collect the sample should be determined by going through a "dry run" and should take less than 30 seconds. Always use tongs, tweezers, forceps or handles with a minimum length of 12 inches. Always work with your arms fully extended to reduce the radiation dose to the whole body. Return sources immediately to their shielded storage containers. Gamma emitting sources of higher activity must be leak tested by wiping the closest accessible surface of the source without being exposed to the direct radiation from the source. For high activity sources always use calibrated survey meter during the leak test.
5. Allow the swab to dry, monitor the swab with a survey meter with a thin window G-M detector (if available), place it in the bag and seal. If removable activity was detected contact your Radiation Safety Officer immediately.
6. Use the 2nd swab to repeat the procedure.
7. Mail the kit to:
Dade Moeller Analytical Laboratory
704 S. Illinois Ave., Suite C-101
Oak Ridge, TN 37830

Questions call:
865-481-6050

Leak Test Datasheet

Contact Information

Name	_____
Company	_____
Address	_____
City, State Zip	_____
Phone	_____
Email	_____

Instructions:

1. Contact your Radiation Safety Officer if there are any questions.
2. Collect the leak test according to the instructions provided. Follow the manufacturer's instructions when applicable.
3. Record the information requested below. **Use 1 Leak Test Kit per device or source.**
4. Return completed paperwork and the samples in the return envelope.
5. Mail the kit to Dade Moeller at the address provided in the instructions above. There must be a Purchase Order on file with Dade Moeller & Associates or payment mechanism available to avoid processing delays.

Source Information:

Device Type or Source Type Make and Model (Description)	Device Serial #	Radio- nuclide	Activity (mCi)	Source Serial #	Date Sample Collected	Sample Collected By
Samples Relinquished By:				Date/Time:		
Samples Received By:				Date/Time:		
Analysis #:						

Shaded area for use by Dade Moeller Only

