

What is a Radiation Survey?

A survey is an evaluation of work areas, instruments and apparatus, floors, sinks, faucet handles, drawer fronts, doorknobs, telephones, light switches, refrigerators, etc. for the presence of radioactive contamination. The following methods can be used to perform a survey:

- Radiation Field Survey
- Contamination (Wipe) Survey

Survey results should be documented but certain actions within the laboratory require that surveys be performed and documented. Required actions prompting a radiation survey are presented below. All survey records should be kept so that all information is readily obtainable by laboratory staff or members of the Radiation Safety Office.

How Often Are Surveys to be Performed?

Individuals are required to survey themselves and their work areas on an "as used" or "daily basis". The Radiation Safety Office recommends frequent surveys of hands and other skin areas to identify and rectify contamination, thus preventing significant doses and internal exposures. An operating survey meter should be accessible whenever working with radiation.

The Authorized User of the radiation laboratory is required to have a radiation survey conducted under the following conditions:

- After each day of radioactive material usage/experimentation.
- After transfer of radioactive material from stock solutions.
- After each experimental run if there is a possibility of a change in radiation levels or contamination.
- After a minor radioactive spill or emergency.

NOTE: All Radioactive spills or emergencies, unless minor, are to be reported to the Radiation Safety Office ASAP!

What Type of Survey Do I need?

The type of survey that you perform depends on what type of radioactive material is used...

Radiation Emitting Device

If you are using an X-ray machine or other type of radiation emitting device, you should periodically perform a General Radiation Field Survey during machine operations to verify that the machine is operating as expected. If unexpected dose rates are measured, turn off the machine and inform the Authorized User or a member of the Radiation Safety Office.

Radioactive Sealed Source

Sealed sources are radioactive sources which have been encapsulated to prevent potential contamination. The Radiation Safety Office checks such sources for radioactive material leakage

on a semiannual (six month) basis. Similar to radiation emitting devices, users should periodically perform a General Radiation Field Survey for an exposed sealed source. If unexpected dose rates are measured, place the source back into its shielded storage container and inform the Authorized User or a member of the Radiation Safety Office.

Radioactive Material (solid, liquid, gas)

Due to potential contamination issues, laboratories using radioactive material are required to perform both contamination surveys and radiation field surveys. Excess radiation field or contamination results are to be reported to the laboratory Authorized User and Radiation Safety Office immediately. Note: radiation field surveys are not required when Tritium, ^{14}C , or other low energy beta sources are used which are essentially undetectable with any type of portable survey meter; contamination surveys for these isotopes, on the other hand, are required and must be performed using a detector, such as a liquid scintillator or gas flow proportional counter, that can detect these types of radiation.