

Radiation Survey Guide

Please become familiar with the following information and pass it along to the person designated to perform your laboratory surveys. Please call ORCBS if you have questions.

These surveys must contain the following information:

1. Areas surveyed must be clearly noted with dashed lines representing meter surveys and solid lines representing wipe surveys.
2. Record the make, model, and serial number of the instruments used for your surveys.
3. Record the radioisotopes used in the lab and the corresponding efficiency for each separate radioisotope.
4. Record the background radiation detected by your instrument.
5. When contamination is found, record the location, the isotope, and the counts per minute (CPM). Calculate disintegrations per minutes (DPM) and the microcurie (μCi) activity.

$$\text{DPM} = \text{CPM} / \text{Efficiency for that isotope}$$

$$\mu\text{Ci} = \text{DPM} / 2.22 \times 10^6$$

6. For laboratories classified as type B, a survey must be performed for each week 200 μCi or more are handled; otherwise a survey is performed for each month in which any radioactive materials are used in the lab. Type C laboratories must also perform a survey each week 200 μCi or more are handled; however, safety surveys are only required quarterly when any radioactive materials are used. Surveys are not required if isotopes are not used for a period of a month or more. Place a survey sheet or log sheet in your records indicating these inactive times. The frequency of required surveys may be increased if deemed necessary by ORCBS.

Special attention should be paid to the following items when performing radiation surveys.

1. Consumable items (food, drink, medicine), tobacco, cosmetics etc. must be kept out of all rooms in which radioactive materials are used or stored.
2. All equipment used for radioisotope work must be clearly labeled. If the equipment has non-removable contamination, the label must include the radioisotope, date, and amount of activity in **DPM** or **μCi** . A maximum activity may be used for equipment that is consistently contaminated.
3. All radioisotope work areas must be clearly labeled with a radioactive warning sign or outlined with radioactive warning tape. Storage areas must be labeled with a radioactive warning sign.
4. Waste tags must be filled out on front (radioisotope, mCi amount, date) and back (general description, components/concentrations, PI, lab number, phone number) for all radioactive waste receptacles containing waste. Temporary/bench top waste containers need not be tagged, but must be labeled with a radioactive warning sign, the radioisotope, and maximum activity that the container may hold and a date.
5. All sources/stock solutions/samples must be identified with a radioactive warning label that includes the radioisotope, date, and amount of activity in **DPM** or **μCi** . Individual small samples do not need labels if the container that holds them is labeled with the required information.
6. Radioactive material must be secured from unauthorized removal or tampering when lab personnel are not present by locking the laboratory or by securing within the lab all storage areas, waste containers and equipment that contain radioactive material.