

D. Practical Radiation Protection

1. Wear appropriate personal protective equipment (PPE) consisting of fully fastened lab coat, protective eyewear, and gloves when manipulating radioisotopes or sources of ionizing radiation.
2. Wear assigned radiation dosimeter(s) when working with sources of ionizing radiation.
3. Acquire information on applicable shielding and handling practices **before** using an unfamiliar radioisotope.
4. Monitor hands, shoes and clothing frequently for evidence of contamination. Decontaminate as appropriate. Thoroughly wash hands after manipulating radioactive materials.
5. Cover surfaces in the immediate vicinity of work involving radioactive materials with plastic-backed absorbent paper, plastic side down.
6. Properly label all radioactive materials and display proper signage designating radioisotope usage in the laboratory.
7. Maintain complete and accurate records of all radioisotopes received, used, and disposed of.
8. Ensure that the laboratory is surveyed for radiation contamination frequently, and ensure that a formal monthly contamination survey is performed and documented within all authorized use areas. For more information see [section IV: G. Surveys and Contamination Control](#).
9. Do not eat, drink, or pipette by mouth in any laboratory area.
10. Do not store food or drink in any area in which radioactive materials are authorized to be used or stored.
11. Dispose of radioactive waste only in designated, labeled, and appropriately shielded radioactive waste containers.
12. Do not dispose of radioactive waste down drains or sinks at NCI-Frederick. ANY RADIATION ABOVE BACKGROUND LEVELS FOUND IN SINKS AT NCI-FREDERICK IS IN DIRECT VIOLATION OF NRC LICENSE CONDITIONS.
13. Perform work with volatile radioisotopes or with other radioactive materials that may become airborne in a hood approved for low-level radioactive materials. Contact Radiation Safety **before** beginning any work involving unbound (free) radioactive iodine. Specific hood requirements must be met before performing iodinations.
14. Report accidental inhalation, ingestion, injury, or spills involving radioactive materials to the appropriate PI/RAS and to the RSO immediately.

15. Maintain constant surveillance of unsecured radioactive materials at all times. Radioactive material that is not in use must be secured from unauthorized removal or access at all times.