

Laboratory Safety Information Sheet 5

The use of Radioactive Materials in Teaching Laboratories Instructions for Students

The radioactive materials that you will be handling in your laboratory sessions are of a reasonably low activity, and usually less than 1 μ Curie.

Despite this, you should take adequate safety precautions to remove any possibility of contamination or injury. Students who do not adhere to these simple precautions will not be allowed to use these radioactive materials, and will be unable to complete the relevant laboratory session.

1. When using radioactive materials, the following handling procedures **must** be followed:
2. The lecturer/demonstrator will distribute radioactive sources to students as required.
3. All sources should be handled with care. Disposable latex gloves and safety glasses/over glasses should be worn and forceps used when handling these sources. These are provided by the School in all laboratories.
4. Sources should be kept in their container when not in use, and the container kept as far away from the experiment as is practicable. As well as safety considerations, this is also required to prevent changes in background count which would interfere with your experimental results.
5. **Liquid Sources:** Laboratory coats should be worn when using liquid sources. Experiments should be performed inside a plastic tray lined with absorbent material, so that if spillage of radioactive material occurs, it can be contained immediately. Under no circumstances should the plastic container containing the liquid source be opened. Leaking containers should be reported and cleaned up immediately. Liquid sources should not be pipetted by mouth.
6. **Spillage Procedure:** In the event of spillage of a liquid radioactive source occurring, immediately inform the lecturer/demonstrator, or the technical staff member assigned to your laboratory session.
7. You should return the radioactive sources to the lecturer/demonstrator immediately you have completed your laboratory tasks.
8. Latex gloves should be placed in the correct waste container upon completion of your work.
9. You should not leave the laboratory until all sources that have been issued are returned to the class instructor and accounted for.
10. **Hand Washing:** You should wash your hands before leaving the laboratory. This is essential as you will generally be handling lead as well as the radioactive material. Note that you should remove your laboratory coat **before** washing your hands.