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| Title | Radioactive Materials Disposal Procedure |
| Purpose | Guidance for laboratory disposal of radioactive materials consistent with Environmental Health and Safety radioactive waste processing procedures. |
| References | Iowa State University Radioactive Materials Safety Manual Iowa State University Waste and Recycling Guidelines Liquid Radioactive Waste Disposal Chart (key) Solid Radioactive Waste Disposal Chart (key) Iowa State University Laboratory Equipment Disposal Form |
| Frequency | Daily or as needed |
| Equipment | Step cans, disposal bags, waste tags, tape, carboys and secondary containers, solvent bottles and secondary containers, portable meters, standard PPE. |
| Notes | Radioactive waste is any radioactive material (RAM) or RAM contaminated material or item that is spent, no longer needed or has no planned or purposeful use. Contact EH&S prior to creating materials that fall outside this procedure. |

Hazard Control Measures

Avoid direct handling of radioactive materials (RAM) or RAM contaminated items. Use secondary containment for liquids when possible. Mark radioactive or RAM contaminated materials with the words "Radioactive."

Procedure

1. Wear personal protective equipment including: laboratory coat, gloves, eye protection, and full shoes.
2. Monitor potentially contaminated materials prior to committing them to radioactive waste. If no detectable RAM is found, dispose of the item as non-radioactive trash. Items may include: worn gloves, bench paper, Kim wipes, glass wear, etc.
All materials used with H-3, C-14, S-35 shall be committed to radioactive waste.
3. Using the solid and liquid radioactive waste charts shown in the [Radioactive Materials Safety Manual](#) below segregate RAM or RAM contaminated items. Do not mix incompatible wastes.
 - a) **Solids:** Place solid materials into the corresponding step can. When the bag is full, remove and securely close the waste bag with tape or a plastic tie. Attach a completed radioactive waste tag to the bag. Store the full waste bag in the designated waste storage area. **Bag RAM source vials separate from other solid wastes.** [Solid Radioactive Waste Disposal Chart](#)
 - b) **Aqueous:** Using a funnel, if needed, place aqueous radioactive wastes into the 20 liter carboy. There is no need to segregate aqueous waste by isotope. Immediately attach a completed radioactive waste tag to the carboy. Assure that

the carboy remains in its secondary tray. [Liquid Radioactive Waste Disposal Chart](#)

- c) **Mixed/Solvent:** Using a funnel, if needed, place chemical wastes that also include radioactive materials into glass bottles, preferably a bottle similar to the original container. Immediately attach a radioactive waste tag and a hazardous waste tag to the carboy. Fill out both tags with the required information. Assure that the carboy remains in its secondary tray. **Do not generate chemical wastes that contain isotopes other than H-3 (tritium), C-14, Cs-137 or Co-60.**
 - d) **Equipment:** Dispose of potentially contaminated lab equipment according to the steps outlined in the Iowa State University's [Waste and Recycling Guidelines](#).
4. Make sure all materials are properly packaged and tagged prior to making a waste collection request. Request a waste collection from the [EH&S website](#).