

RESPONSIBILITY

EH&S must be contacted 30 days prior to the closure of a lab.

WHEN THERE IS PI/LAB MANAGER:

- Notify EH&S in writing before closing, vacating, renovating, or relocating a lab. Send notification to researchsafety@ehs.ufl.edu.

WHEN THERE IS NO LONGER A PI/LAB MANAGER:

- In the absence of a PI/Lab manager, the Department Chair must contact EH&S.
- The Department Chair will be responsible for any deficiencies not corrected by the PI/Lab Manager.

EH&S AND LAB CLOSEOUTS:

- When contacted for a lab closeout survey, EH&S will verify that all closeout activities have been completed appropriately. If contamination or hazards are identified, the PI/Lab manager or Department Chair will be notified.
- PI/Lab Manager or Department Chair will be notified by EHS once the closeout process is complete and verified.

PROCEDURES

LABORATORY EQUIPMENT AND SUPPLIES

LABORATORY EQUIPMENT

- All equipment must be in a condition that is clean and safe for handling.
 - This includes fume hoods, refrigerators, freezers, centrifuges, biological safety cabinets, incubators, ovens, and any other equipment left in the laboratory.
- Equipment that is or may be contaminated with a Chemical, Biological, Radioactive or other hazardous material must be decontaminated before it is moved, disposed of/surveyed out of UF's Asset inventory, shipped offsite, or repaired.
- Decontamination methods may include washing with soap and water followed by wiping down equipment with bleach solution (if biological materials were used).

DECONTAMINATION DOCUMENTATION

- EH&S Equipment Decontamination Form
 - The signature of the person decontaminating the equipment as well as the PI or Dept. Chair is required.
 - Email the signed form to researchsafety@ehs.ufl.edu.
 - EH&S Research Safety will review the form to ensure the decontamination method used is appropriate, will sign the form, and return the signed form to the sender.
 - The completed form must be affixed to the equipment.
 - Proceed with repair, move, pick up, etc.

- If the equipment is to be disposed of through *MyAssets*, upload the fully signed form into the *MyAssets* web portal as part of the pickup request for surplus property.

LABORATORY SUPPLIES

Clean, non-contaminated laboratory supplies (lab glassware, plastic ware, unused gloves, etc.) should be offered to other researchers when possible. Unwanted items that have not been contaminated by chemical, biological, radiological, or other hazards may be disposed of as “Clean Lab Ware”. All supplies that may be potentially contaminated must be handled as either Chemical, Biological, or Radiological waste.

CLEAN LAB WARE

The following non-contaminated laboratory items may be placed into a labeled “Clean Lab Ware” cardboard box (**NOT a biohazard box**) lined with a plastic garbage bag (**any color except yellow or red**):

- Clean lab glassware (empty bottles, beakers, graduated cylinders, flasks, pipettes, etc.)
- Unused lab plastic ware (empty product containers, petri dishes, pipette tips, weighing boats, etc.)
- Clean empty vials (including conical tubes, test tubes, centrifuge tubes, etc.)
- Clean, uncontaminated gloves
- Sharp materials, such as glass slides, clean broken glassware, and unused pipettes.
 - **DOES NOT INCLUDE MEDICAL SHARPS SUCH AS METAL NEEDLES, SCALPELS, OR RAZOR BLADES**

Lab workers should dispose of the taped box as follows:

- **Labs in the Health Science Center (MSB, Communicore, ARB, MBI, CGRC, EPI, BSB, Pharmacy Wing, and Dental Wing)** must write the Principal Investigator’s name and lab room number on the outside of the box and place the box in the hallway for Building Services personnel to remove.
- **Labs not in the Health Science Center can** deliver the labeled, closed and sealed box to the building’s dumpster.

CHEMICALS

LABORATORY CHEMICALS

MOVING CHEMICALS ON UF CAMPUS

Chemicals may be moved between laboratories on campus if the following conditions are met:

- All staff moving chemicals are be trained in the proper handling and packing.
- Adequate personal protective equipment and spill control material must be available in the event of a spill.
 - Staff must be trained in spill control procedures and proper use of PPE.
- Complete an inventory of all chemicals to be moved.
 - Must include chemical names, number of bottles, and volume/weight of each bottle.
 - Complete a separate inventory sheet for each box; uniquely label the box and inventory sheet.
 - Provide a copy of the inventory to the moving crew and in each box.
- Only use containers that are in good condition and strong enough to hold the intended weight.
 - If possible, use boxes that chemicals were received in from vendors.
 - EH&S may be able to loan a limited number of DOT-approved containers and vermiculite.
 - Label all boxes with Hazard Class(es) and unique inventory sheet number.
 - Limit each box weight to 45 pounds.
- Packing Chemical Bottles:

- Only chemical bottles in good condition with readable labels may be moved.
- Damaged containers and those without labels must be disposed of through EH&S Hazardous Waste Management.
- Pack boxes by chemical compatibility. Non-compatible chemicals must be packaged in separate boxes.
- Dry and liquid chemicals must be packaged separately.
- Liquid chemicals should be moved in a leak-proof container, or boxes filled with vermiculite.
- Plastic or unbreakable containers of non-liquid chemicals do not require absorbent material.

With the written approval of a transport plan submitted to the EH&S Chemical and Radioactive Waste Disposal Program (HWM@ehs.ufl.edu; 352-392-8400), chemicals may be moved in a state vehicle only and within campus boundaries only.

- Chemicals may not be transported by personal vehicle or public transport due to insurance liabilities.
- Chemicals may not be transported in the passenger compartment of the state vehicle.
- Additional federal transport regulations apply for transport over public roads.
- Adequate personal protective equipment and spill control material must be available in the event of a spill. Staff must be trained in the proper method of use.

EH&S must be notified of the movement of these chemicals prior to the start and at the completion of the move. Once notified, EH&S will complete the transfer of chemicals from the originating lab's chemical inventory to the receiving lab's chemical inventory.

COMPRESSED GAS CYLINDERS

- Close all gas valves, remove all gas connections, replace cylinder caps, and ensure the cylinder is secured with bench holder, wall chain, or stand.
- Return all rented cylinders to suppliers, unless being transported to a new lab space on campus.
 - If cylinders are non-returnable, consult EH&S Chemical and Radioactive Waste Disposal Program for disposal.
- Any compressed gas cylinder being moved must be secured on a cart or rack.
- Small lecture bottles should be packed as chemical bottles.
- Please contact EH&S Chemical and Radioactive Waste Disposal Program for assistance if you will need to move cylinders by state vehicle at 352-392-8400.
 - It may be easier to return and reorder common gases from AirGas and other distributors.

UNWANTED CHEMICALS

Under no circumstances may any chemical be disposed of through the sanitary sewer or regular trash.

- Determine which chemicals are usable and if another party is willing to accept the materials.
 - If chemicals will be moved to another laboratory, ensure that the EH&S policy [Moving Chemicals on UF Campus](#) is followed.
 - Contact EH&S to complete a bulk transfer of the Gator TRACS inventory from the originating lab to the receiving lab.
- If a recipient cannot be found the chemicals must be disposed of properly through EH&S Chemical and Radioactive Waste Disposal Program.
 - Submit a request for waste pick up through [Chemical Waste Pickup Request Form](#).
 - A complete inventory including number of bottles and their listed weights/volumes is required.
 - All chemical waste containers must be properly labeled, sealed, and handled per [EH&S Laboratory Chemical Waste Management guidelines](#).



- Update the Gator TRACS inventory to reflect disposal of the chemicals.
- Hazardous Waste Labels (both small and large sizes) are available from Chemical and Radioactive Waste Disposal Program: HWM@ehs.ufl.edu; 352-392-8400.
- EH&S Chemical Waste and Radioactive Waste Pickup Request forms are available online and require a GatorLink ID login: http://www.ehs.ufl.edu/programs/chemrad_waste/forms/.

LABORATORY CHEMICAL STORAGE

- Check all refrigerators, freezers, fume hoods, benchtops, and storage cabinets (above and below) for chemical containers and samples.
 - Abandoned or unknown chemicals must be treated as described above ([Unwanted Chemicals](#)).
- Wash down all surfaces with soap and water.

CHEMICAL FUME HOODS

- Remove and decontaminate all equipment stored in the fume hood.
- Remove all chemicals stored in the fume hood.
- Wash all fume hood surfaces and countertops with soap and water.
 - If perchloric acid, hydrofluoric acid, or other acid digestions were performed in the hood, please contact EH&S Laboratory Safety Program for guidance on cleaning the fume hood.
 - If Radioactive Materials were used in the hood, please follow the [EH&S Radiation Safety protocol for decontamination](#).
 - If the fume hood has known or suspected asbestos containing materials, please contact Tom Ladun with EH&S at 352-392-1591.
- Close fume hood sash.
 - If the sash will not close completely, please submit a Work Order through Facility Services or IFAS Facility Planning & Operation.
- Submit [EH&S Decontamination Form](#) to EH&S Research Safety.

BIOLOGICAL MATERIALS

BIOSAFETY/IBC REGISTERED PROJECTS

All registered projects must be closed out with the Biosafety Office, please contact Biosafety at BSO@ehs.ufl.edu.

Biological materials associated with your registered projects must be:

- Properly inactivated and disposed of before departure.
- Shipped to another institution; or
- Transferred to another UF PI who is, or can be, registered with the Biosafety/IBC for these materials.

REQUIREMENTS FOR TRANSPORT OF BIOLOGICAL MATERIALS WITHIN THE UF CAMPUS

- Personnel transporting biological materials shall be appropriately trained, including spill handling, decontamination and packaging of clean up materials. Bloodborne Pathogen training is mandatory for those transporting human blood/OPIM. Agent-specific training is also required for their transport.

- The preferred transport method is to use a clean, leak-proof utility cart with deep trays/shelves to prevent spillage. All agents must be kept in sealed container(s), clearly labeled with the contents and applicable hazard(s) decals.
- If hand-carried or transported on a cart that does not meet the above requirements, the container must be sealed, clearly labeled as above, and packaged within ANOTHER tightly sealed, clean, leak-proof, shatter-proof container (double containment), OR packaged as it was when first shipped to the laboratory.
- Provide double-containment for storage and transport of infectious/potentially infectious material between labs.
 - Place the items in a leak-proof container within a durable leak-proof container, such as a Tupperware or Rubbermaid box using "absorbent material within the primary and secondary containers. Add padding around the first container to minimize its movement within the outer packaging.
 - Before transporting from the laboratory, decontaminate the exterior with an appropriate disinfectant, apply a biohazard sticker, and label the container with the researcher's name and contact information.
- Biological materials shall be transported from laboratory to laboratory without any stops in public areas such as offices, cafeterias, or restrooms. Limit transport through public or highly traveled areas and use freight elevators when possible.
- If a vehicle must be used, please contact the EH&S Biosafety Office for instructions. Note that materials classified by the US Dept. of Transportation (DOT) as hazardous materials ("dangerous goods") may not be transported in a personal vehicle or public transportation. This is both a safety and liability issue.

DISPOSAL OF BIOLOGICAL MATERIALS

The generator must segregate biological waste from other types of waste at the point of origin into the following categories.

INFECTIOUS, POTENTIALLY INFECTIOUS, OR R-DNA BIOLOGICAL WASTE

Laboratory waste containing infectious, potentially infectious, or recombinant organisms must be inactivated **PRIOR** to leaving the facility.

- Any material containing or contaminated with human, animal, plant pathogens or recombinant DNA or recombinant organisms
- Laboratory and clinical wastes containing human or primate blood, blood products, tissue, cell cultures, and other potentially infectious material (OPIM) including:
 - Used, absorbent materials contaminated with blood, blood products, or OPIM
 - Non-absorbent, disposable devices that have been contaminated with blood, body fluids or OPIM
 - All cultures
 - Filled or partially filled biological waste containers and boxes should not be held for more than 30 days.

The preferred method is steam sterilization (autoclaving), but chemical inactivation (e.g. treatment with 1:10 solution of *freshly* prepared household bleach) may be appropriate in some cases.

NON-INFECTIOUS BIOLOGICAL WASTE

This material does not require inactivation prior to leaving the facility.

- **USED** labware (tissue culture dishes and flasks, petri dishes, centrifuge tubes, test tubes, pipettes, vials, etc.) from clinical or biomedical labs that are NOT contaminated with any of the biological wastes listed above
- Gloves used in clinical or biomedical labs that are NOT contaminated with any of the biological wastes listed as infectious, potentially infectious, or rDNA biological waste

- Disposable personal protective equipment used in clinical or biomedical labs that are NOT contaminated with any of the biological wastes listed above
- Items contaminated with blood from animals not known or expected to contain pathogens
- Note that chemically contaminated material (i.e. DNA extraction tubes contaminated with phenol/chloroform, specimen cups containing formalin, chemically contaminated gloves, etc.) must be handled as chemical waste.

This material must be placed in the red liner-protected, cardboard biohazardous/biomedical waste box. Off-campus UF facilities should contact the Biosafety Office at 352-392-1591 for guidance on this category of waste.

SHARPS

- Sharps are instruments that are intended to cut or penetrate the skin and include metal lancets, scalpel blades, needles, or syringe/needle combinations. These must be placed in red, hard plastic sharps boxes, even if unused.
- If these sharps are contaminated with infectious, potentially infectious, or rDNA materials, the sharps box must be steam sterilized before disposal.
- Close the sharps box when it is $\frac{3}{4}$ full. Do not store closed sharps boxes for more than 30 days. Sharps boxes must be placed in the red liner-protected, cardboard biohazardous/biomedical waste box. Off-campus UF facilities should contact the Biosafety Office at 352-392-1591 for guidance on this category of waste.
- Biological waste items that can cut, but are not intended to do so, should be disposed of in a manner that prevents harm; a bag does not provide adequate protection. Examples of these materials include fragile glass, glass slides and coverslips, razor blades, pipettes, and pipette tips. Options for their disposal include a pipette tip box or media bottle placed in a biohazard bag.
- A plastic sleeve that will hold serological pipettes together in a bundle may be placed in a biohazard bag.

Boxed, sleeved or bagged items containing infectious, potentially infectious, or r-DNA material must be inactivated before disposal.

MIXED RADIOACTIVE/BIOLOGICAL WASTE

The infectious, potentially infectious, or r-DNA component(s) of mixed radioactive/biohazardous waste need to be inactivated (if possible) *prior* to its release to Radiation Safety Services for disposal as radioactive waste. **Please check with the Radiation Safety Office, 392-7359, regarding the best method of inactivation.**

MIXED CHEMICAL/BIOLOGICAL WASTE

- Note that the chemical components of mixed waste may inactivate the biohazard components (e.g. as in the case of fixative solutions). Tissues/specimens in liquid preservatives require that the tissue and liquid be separated, and the liquid disposed of as a hazardous (chemical) waste through EH&S. The preservative may not be poured down the drain.
- The infectious, potentially infectious, or r-DNA component(s) of mixed chemical/biohazardous waste shall be inactivated (if possible) prior to turning it over to EH&S Chemical and Radioactive Waste Disposal Program for chemical disposal. Precautions should be taken to prevent the generation and release of toxic chemicals during the inactivation process.
 - In general, steam sterilization is to be avoided.
 - Chemical inactivation requires confirmation of chemical compatibility of agents prior to use. Use extreme caution!

Please contact the Chemical and Radioactive Waste Disposal Program Facility (392-8400) or the Biological Safety Office (392-1591) for guidance regarding particularly hazardous chemicals and inactivation of biohazardous waste in mixed waste.



ANIMAL CARCASSES AND OTHER ANIMAL MATERIAL

- Animal carcasses and other animal material that may contain infectious animal or human pathogens require containment (bags and sealed containers labeled with the biohazard symbol) before transport to Animal Care Services or the Veterinary Medicine disposal facilities.
- No animal carcasses or tissue pieces shall be disposed of as regular trash or through the biomedical/biological waste box.
- Material obtained from the Animal Science slaughter facility may be returned there for disposal if not contaminated with infectious, potentially infectious, or r-DNA material.
- The disposal of animal carcasses and other animal materials and tissue shall be through Animal Care Services or the Veterinary Medicine disposal devices only.

Please contact Animal Care Services (392-9210) or the EH&S Biosafety Office (392-1591) for further information.

BIOLOGICAL CONTAMINATED LABORATORY EQUIPMENT

Please contact the Biological Safety Office for guidance on moving refrigerators and freezers with biological materials still inside. Projects operating at BSL2+ or BSL3 must contact the Biosafety Office for specific requirements.

REFRIGERATORS, FREEZERS, CENTRIFUGES, AND OTHER BIOHAZARD LABELED EQUIPMENT

- Clear all equipment of biological materials and prepare for transportation to the new lab or disposal.
- Unplug all electrical equipment, and empty of any water.
- Prepare a 1:10 solution of household-grade bleach in either a spray bottle or bucket.
- Wear appropriate PPE for the Biological Safety Level of the material handled.
- Wipe or spray all surfaces, starting on the outside of the equipment and working towards interior surfaces.
- Allow appropriate contact time of at least 30 minutes.
 - For non-bleach safe surfaces, remove excess bleach with 70% ethanol.
- Remove or deface all biohazard labels.
- Submit [EH&S Decontamination Form](#) to EH&S Research Safety.

BIOLOGICAL SAFETY CABINETS

1. All Biological Safety Cabinets must be professionally decontaminated with an approved gas/vapor method before moving, surveying out/disposing of, or repairing contaminated plenums within the cabinet.
 - a. Contact Precision Air Technologies at 352-332-4653
2. Submit [EH&S Decontamination Form](#) to EH&S Research Safety.

RADIOACTIVE MATERIALS

The following conditions must be completed prior to a Radiation Safety Lab Closeout.
Contact Radiation Safety for details and assistance at 352-392-7359 or RSO@ehs.ufl.edu.

TRANSFER OR DISPOSAL OF RADIOACTIVE MATERIALS

- If the radioactive material is to be transferred to an approved user at UF:
 - Contact the Radiation Safety Office *prior* to the transfer to complete the appropriate documentation.

- If the radioactive material is to be transferred to another licensee or returned to the manufacturer:
 - Make arrangements with the Radiation Safety Office for the material's shipment.
- All radioactive material must be disposed of as radioactive waste through EH&S Chemical and Radioactive Waste Disposal Program.
 - EH&S Chemical Waste and Radioactive Waste Pickup Request forms are available online and require a GatorLink ID login: http://www.ehs.ufl.edu/programs/chemrad_waste/forms/.

RADIATION PRODUCING DEVICES

Notify the Radiation Safety Office if any radiation producing devices or major components will be moved, sold, transferred, or disposed of. Failure to do so may qualify as a breach of registration requirements with the State of Florida Department of Health.

- **On-Campus Transfers:** Devices shall not be transferred from one area to another or to another individual without the prior approval of the Radiation Safety Office as all approvals for radiation-producing device are based on the supervising PI's working area and proposed research.
- **Off-Campus Transfers:** Radiation producing devices shall not be shipped or transferred to, or from any University facility, or outside organization without prior approval of the Radiation Safety Office.
- **Disposal of Radiation-Producing Device:** Prior to the disposal of obsolete or irreparable equipment, the Radiation Safety Office must be notified to amend inventories.

DECONTAMINATION PROCEDURE

Do not decontaminate the lab until all radioactive materials have been removed from the lab through transfer or disposal.

- Perform a swipe survey (and if appropriate, a radiation level survey for gamma emitters) of all former storage and use areas within the laboratories.
- Decontaminate all areas measuring more than 100 dpm/100cm².
- Equipment that cannot be decontaminated must be disposed of as radioactive waste.
- Perform a new swipe survey (and if appropriate, a radiation level survey for gamma emitters) for all decontaminated area.
- Continue decontamination and swipe survey cycle until all use and storage areas measure less than 100 dpm/100cm².
- Schedule an official Closeout Survey with Radiation Safety.
- Radiation Safety Personnel will remove all radioactive materials posting.

CONTROLLED SUBSTANCES

The U.S. Drug Enforcement Administration (DEA) issued controlled substance registrations for individual researchers, which prohibit both the abandonment and transfer of unwanted controlled substances.

NOTE: Abandonment of a controlled substance can be a criminal violation of DEA regulations.

RETIRING PRINCIPLE INVESTIGATORS

All Controlled Substances must be disposed of prior to their last day of service with the University.

- Retiring PIs may not transfer drug products to another PI.

- A valid DEA registration must be maintained until all controlled substances are disposed of through a reverse distributor.
 - Reverse distributors will not take controlled substances without an active registration.

LAB RELOCATING WITH THE UNIVERSITY OF FLORIDA CAMPUS

Labs are required to send an addendum to both the Florida Department of Business & Professional Regulation (DBPR) and DEA with the new locations and expected move date.

- Controlled Substances **CANNOT** be moved until the DEA Division Control Program has approved the new location.

PRINCIPLE INVESTIGATORS MOVING FROM UF TO ANOTHER UNIVERSITY

Since the DEA registration for research does not allow interstate or intrastate movement of controlled substances, all registered drug products must be disposed of prior to the lab's move date.

- The Principle Investigator is responsible for notifying both the DEA and any relevant State regulatory program about their planned move.

DISPOSAL OF CONTROLLED SUBSTANCES

- EH&S Chemical and Radioactive Waste Disposal Program **cannot take possession** of DEA controlled substances.
- All disposal of controlled substances **MUST** occur through a DEA Registered Reverse Distributor.
 - Contact EH&S to obtain information on proper disposal methods through reverse distributors.
 - The PI disposing of the Controlled Substance must have a current DEA Registration in their name.
- The PI **MUST** retain records of disposal for at least two years. The records will require the date, manner of disposal, and quantity of substance for disposal.

SHARED AREAS

All shared space (laboratories, equipment rooms, storage areas, cold rooms, dark rooms, autoclave rooms, etc.) must be cleared of materials and cleaned by the departing staff. Otherwise, the Department Chair or another PI must assume responsibility for the space and its contents.

CONTACT INFORMATION

- Research Safety: Researchsafety@ehs.ufl.edu; 352-392-1591
- Chemical and Lab Safety: Labsafety@ehs.ufl.edu; 352-392-1591
- Biological Safety: BSO@ehs.ufl.edu; 325-392-1591
- Radiation Safety: RSO@ehs.ufl.edu; 352-392-7359 or 352-392-1589
- Chemical and Radioactive Waste Disposal Program: HWM@ehs.ufl.edu; 352-392-8400