



Guidance note: **Decontamination Procedure For Laboratory Equipment**

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This information is for your internal use and as a way of providing consistent information. There is no response required.

Decontamination Procedure for Laboratory Equipment

It is important that researchers properly decontaminate their laboratory equipment from hazardous chemicals (flammable, corrosive, reactive, toxic) prior to allowing the moving contractor to transport the equipment to Fitzsimons. It is important to check every piece of laboratory equipment that once held chemical samples to insure that any remaining samples or standards have been removed. If any laboratory equipment has appreciable chemical contamination on the outside surface which would present a hazard to anyone handling it, the equipment needs to be properly decontaminated with soap and water by the researchers.

Once researchers have properly decontaminated laboratory equipment, they are required to complete, sign and attach a UCHSC "Green Tag".

If you intend to discard your refrigerator or freezer, the Freon must be properly recycled from the coils and the door removed by UCHSC Facilities (x57941) personnel prior to the unit being disposed. A UCHSC "Green Tag" must be placed on these units after being prepared for disposal.

Researchers are responsible for managing laboratory equipment in the following manner, prior to the move to RC-1:

1. **Refrigerators.** Remove all contents, to include mercury thermometers, chemical reagents, radioactive isotopes. Decontaminate the refrigerator if held radioactive isotopes, infectious agents or toxic chemicals. See the Health & Safety's Radiation Safety guidance for surveying refrigerators which stored radioactive isotopes. The refrigerator must be completely empty prior to being shipped by the moving contractor. Defrost the refrigerator if there is a buildup of ice around the freezer compartment.
2. **Freezers.** Remove all mercury thermometers, hazardous chemicals (flammable, corrosive, reactive, toxic) and radioactive isotopes. Frozen tissues and specimens may remain inside freezer while being shipped by the moving contractors. See the UCHSC Biosafety Officer's (x56754) procedure for shipping freezers holding infectious agents or potentially infectious samples. Decontaminate the freezer if held radioactive isotopes, infectious agents or toxic chemicals. See the Health & Safety's Radiation Safety guidance for surveying freezers which stored radioactive isotopes.
3. **Broken or Surplus Laboratory Equipment & Computers.** Submit a completed "*Capital Equipment Disposal Form*" to UCHSC Space & Asset Management to discard all the surplus laboratory equipment or computers. Space & Asset Management will review the form and provide further instructions for disposal. Laboratory equipment which was in contact with radioactive isotopes, infectious agents or hazardous chemicals must be properly decontaminated by the researchers prior to final disposal.



Health and Safety Division

4. Ovens. Remove all mercury thermometers or containers holding samples or liquids. For outdated ovens, check the lining for the presence of asbestos (inhalation hazard). If the oven lining appears to be constructed of asbestos, contact Health & Safety (x55890) for assistance.
5. Incubators. Remove any remaining samples and drain the water from the jacket. Remove mercury thermometers. Laboratory equipment which was used for infectious agents, radioactive isotopes or hazardous chemicals must be properly decontaminated by the researchers and green-tagged prior to the move.
6. Centrifuges. Inspect for centrifuge tubes holding water or samples to insure they have been removed from the rotor system. Centrifuges which were used with infectious agents, radioactive isotopes or hazardous chemicals must be properly decontaminated by the researchers and green-tagged prior to the move.
7. Water baths. Drain the water from the unit and remove any remaining samples or mercury thermometers.
8. Balances or scales. Wipe clean to remove any remaining chemical contamination inside the balance or on the scale.
9. Chemical storage cabinets such as flammable or corrosive cabinets must have all the chemical containers removed prior to moving the cabinet. Decontaminate the chemical storage cabinet of any remaining spills or residues.
10. Vacuum pumps contain vacuum pump oil. Vacuum oil which is grossly contaminated with toxic chemicals or other hazardous materials should be removed prior to shipment. Discard all spent vacuum pump oil through Health & Safety as chemical waste.
11. Mercury thermometers contain metallic mercury which is an inhalation hazard when spilled or broken. Set aside all mercury thermometers for shipment by the Lab Packing Contractor. Contact Health & Safety (x55890) to clean up metallic mercury that has been released or spilled onto the floor. Contact Health & Safety (x55892) to exchange your mercury thermometer for a non-hazardous one for free.
12. Heating blocks need to have samples and mercury thermometers removed. If necessary, decontaminate the heating block. Set all mercury thermometers aside for shipment by the Lab Packing Contractor. Do not use mercury thermometers with heating blocks as it is an unnecessary inhalation hazard (use alcohol thermometer).
13. Mercury containing sphygmomanometers & blood pressure cuffs may contain metallic mercury which is an inhalation hazard when spilled. Seal the units inside clear plastic bags and set them aside for shipment by the Lab Packing Contractor.
14. Mercury barometers contain metallic mercury which is an inhalation hazard when spilled. Completely drain the metallic mercury from the barometer into sealed plastic bottles. Set aside empty barometer and plastic bottles holding metallic mercury for shipment by the Lab Packing Contractor.
15. Photo-processing equipment usually have three storage tanks holding caustic developer, acidic photographic fixer and rinse water. Drain the storage tanks (also supply and drain hoses) prior to the move. Discard the photo-processing chemicals through Health & Safety as chemical waste.



16. Silver recovery cartridges which are connected to photo-processing units contain slightly acidic photographic fixer and silver salts. Have the silver recovery cartridge recycled through your supplier. Order new silver recovery cartridges for photo-processing equipment shipped to Fitzsimons.
17. Gas chromatographs (GC) which have electron capture detectors contain a radioactive source. Contact the UCHSC Radiation Safety Division (x55890) if your GC has a radioactive source prior to moving the unit to Fitzsimons.
18. High Performance Liquid Chromatography (HPLC) may have columns that contain organic solvents. Drain the columns and waste lines prior to shipping the HPLC. Dispose the organic solvent wastes through Health & Safety.
19. Tissue dehydrating units. Remove or drain all the ethanol and xylene from the storage tanks. Dispose the solvents through Health & Safety as chemical waste. Paraffin wax and tissue samples may also need to be removed from the tissue dehydrating unit.
20. Colorimeters may contain cuvetts holding liquids (remove them).
21. Spectrophotometers may have automatic sample feeders holding sample containers or standards (remove them).
22. Desiccators may contain drying agents (Drierite, NaOH, phosphorus pentoxide). Assure they are removed prior to shipment. Discard the spent drying agents through Health & Safety as chemical waste.
23. Transformers or high voltage regulators may contain oil. Outdated transformers may hold toxic PCB contaminated oil. Contact Health & Safety (x55890) whenever oil containing transformers or high voltage regulators are discovered. Do not ship oil containing transformers or high voltage regulators without approval from Health & Safety.
24. Water purification systems. Remove all the free standing water from the water purification cartridges prior to the move.
25. pH electrodes & other chemical electrode systems may contain water and possibly other hazardous chemicals. Set aside electrodes containing liquids for shipment by the Lab Packing Contractors.