



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

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HSD - HWG - 003

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 of hazardous chemicals before allowing moving contractors to transport the equipment to the Anschutz Medical Campus. It is important to check every piece of laboratory equipment that once held hazardous materials to ensure that any remaining materials have been removed. If any laboratory equipment has significant chemical contamination on the outside surface which would present a hazard to anyone handling it, the equipment needs to be properly decontaminated by the researchers.

Once researchers have properly decontaminated the laboratory equipment, they need to complete, sign, and attach a UCDHSC "Green Tag" to the piece of equipment.

If you intend to discard your refrigerator or freezer, the freon and the door must be first removed by UCDHSC Facilities (303 315-7941) personnel prior to the unit being disposed of. A UCDHSC "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 the Anschutz Medical Campus:

1. **Refrigerators.** Remove all contents such as mercury thermometers, chemical reagents, and radioactive isotopes. Decontaminate the refrigerator if it held radioactive isotopes, infectious agents, or toxic chemicals. See the EH&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, and radioactive isotopes. Frozen tissues and specimens may remain inside freezer while being shipped by the moving contractors. See the UCDHSC Biosafety Officer's (303 724-0235) procedure for shipping freezers holding infectious agents or potentially infectious samples. Decontaminate the freezer if it held radioactive isotopes, infectious agents or toxic chemicals. See the EH&S Radiation Safety guidance for surveying freezers which stored radioactive isotopes.
3. **Broken or Surplus Laboratory Equipment and Computers.** Submit a completed "*Capital Equipment Disposal Form*" to UCDHSC Space & Asset Management to get rid of 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.



4. Ovens. Remove all mercury thermometers or containers holding samples or liquids. For outdated ovens, check the lining for the presence of asbestos. If the oven lining appears to be constructed of asbestos, contact EH&S (303 724-0345) for assistance.
5. Incubators. Remove any remaining samples and thermometers, and drain the water from the jacket. 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 ensure 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 EH&S as hazardous waste.
11. Mercury thermometers. Set aside all mercury thermometers for shipment by the Lab Packing Contractor. Contact EH&S to clean up metallic mercury that has been released or spilled onto the floor. As an alternate way of handling mercury thermometers, contact EH&S to exchange your mercury thermometer for an alcohol-based thermometer free of charge.
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.
13. Mercury containing sphygmomanometers and 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 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 contains three storage tanks holding caustic developer, acidic photographic fixer and rinse water. Drain the storage tanks, supply hoses and drain hoses prior to the move. Discard the photo-processing chemicals through EH&S as hazardous waste.



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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 Anschutz Medical Campus.
17. Gas chromatographs (GC) which have electron capture detectors contain a radioactive source. Contact the UCDHSC Radiation Safety Group (303 724-0345) if your GC has a radioactive source prior to moving the unit to Anschutz Medical Campus.
18. High Performance Liquid Chromatography (HPLC) may have columns that contain solvents. Drain the columns and waste lines prior to shipping the HPLC. Dispose of the solvent wastes through EH&S as hazardous waste.
19. Tissue dehydrating units. Remove or drain all the ethanol and xylene from the storage tanks. Dispose of the solvents through EH&S as hazardous waste. Paraffin wax and tissue samples may also need to be removed from the tissue dehydrating unit.
20. Colorimeters may contain cuvettes holding liquids. If this is the case, the cuvettes need to be removed from the colorimeters before shipping.
21. Spectrophotometers may have automatic sample feeders holding sample containers or standards. Again, if this is the case remove the containers or standards before shipping.
22. Desiccators may contain drying agents (Drierite, sodium hydroxide, phosphorus pentoxide). Assure they are removed prior to shipment. Discard the spent drying agents through EH&S as hazardous waste.
23. Transformers or high voltage regulators may contain oil. Outdated transformers may contain PCB contaminated oil. Contact EH&S whenever oil containing transformers or high voltage regulators are discovered. Do not ship oil containing transformers or high voltage regulators without approval from EH&S.
24. Water purification systems. Remove all the free standing water from the water purification cartridges prior to the move.
25. pH electrodes and other chemical electrode systems may contain water and possibly other hazardous chemicals. Set aside electrodes containing liquids for shipment by the Lab Packing Contractors.