

Instructions for the Laboratory Safety Audit Self Evaluation

The following information provides instructions for completing the Laboratory Safety Audit Form. In the electronic format, these instructions have embedded links that are identified with blue-underlined text that direct you to web sites for additional information. If a comprehensive coverage of the topic is not available within these pages or at the web-site link, an additional listing of all web site addresses is published at the end of these instructions. The corresponding Audit Form is available on the OH&S web-site. It is the same form that the OH&S Laboratory Auditors will use. These laboratory safety items listed in the instructions will be evaluated during the annual laboratory safety audit visit. Please prepare for the audit by completing this self evaluation of your laboratory space by completing the questions on the Audit Form.

Date: The date will be filled in by the auditor and will be the date that the audit starts.

Principal Investigator: The name of the Principal Investigator who is responsible for the laboratory space. Please circle the appropriate titles as presented on the form.

Building and Room(s) Inspected: The abbreviation for the building and the room numbers for all space used by the laboratory group including shared and "common" areas.

Department: The department for which the principal investigator works.

Contact Person: The name of the person to whom correspondence and questions should be addressed. The contact can be the principal investigator, laboratory manager, or any other person designated by the principal investigator.

Ext: The UAB campus telephone extension of the designated contact person.

Campus Address: The campus mailing address of the designated contact person.

Email Address: The e-mail address of the designated contact person.

Auditor: This item will be completed by OH&S staff.

Time in: This item will be completed by OH&S staff.

Time out: This item will be completed by OH&S staff.

Total Time: This item will be completed by OH&S staff.

Lab Type: Clinical/Teaching/Research: This item will be completed by OH&S staff.

Discipline: Chemistry/Chemical Synthesis/Biology/Physics/Other: This item will be completed by OH&S staff.

Section A. Laboratory Demographics

1. Are microbial agents used in this lab?

When giving the name of microbial agents, please give the Genus, species and strain of all microbial agents used in the laboratory as well as the room numbers where they are used and stored.

2. Is recombinant-DNA/RNA used in this lab?

If r-DNA or r-RNA is used in the laboratory, give the names of the hosts and vectors used.

3. Is human and/or non-human primate blood, body fluids, or unfixed tissue used in this lab?

Is any unfixed human or **non-human** primate tissue, blood or body fluids used in the laboratory?

4. Is animal blood, body fluids or unfixed tissue used in this lab? Does the lab use any animal blood, body fluids or unfixed tissue in experiments?

5. Are animals used in this lab?

Circle species: Cat, Dog, Goat, Mouse, Pig, Primate, Rat, Rabbit, Other: _____

Are any animals used in the laboratory? Circle or write in the species. There is no need to report animal-tissue sections that have been received from collaborators.

6. Are animals housed in the animal facility? If no, where? _____

Circle species: Cat, Dog, Goat, Mouse, Pig, Primate, Rat, Rabbit, Other: _____

Other housing areas: _____

If the research group has any animals in the animal facility or anywhere else, circle or write the species and where the animals are housed.

7. Are the following agents administered to animals? Identify.

r-RNA/DNA material _____

human products _____

infectious agents _____

drugs (exclude analgesics, sedatives, anesthetics, etc.) _____

chemicals _____

Inhalational anesthetics _____

If **ANYTHING**, other than analgesics, sedatives or anesthetics used solely for the animals' comfort is administered to animals it should be listed here. For infectious agents give the genus, species and strain. For drugs and chemicals give the chemical name (no acronyms). If the trade name and chemical abstract services (CAS) number are known, please list them as well.

8. Is tissue/cell culture used in this lab?

If you culture primary cells, mark "Primary" and indicate if the cells are human/animal. If they are animal, please indicate the species. If you culture cells and the line is not a primary line, mark "Continuous", list the source (ATCC, In-house, etc.) and indicate if the line was originally human/animal. If the continuous line is considered animal, please indicate the species by circling the appropriate name(s). **Cat, Dog, Goat, Mouse, Pig, Primate, Rat, Rabbit, Other:** _____

9. What animal biosafety level of containment is used in this lab? 1 2 3

Animal Biosafety Levels refer to protections to prevent research animals from contaminating the environment and/or personnel with infectious agents. Please circle the appropriate level. For information on animal biosafety levels, please refer to the [Biosafety Manual](#). Please refer to animal protocols if necessary.

10. What biosafety level of containment is used in this lab? 1 2 3

Biosafety Levels refer to protections to help prevent microorganisms from contaminating the environment and/or personnel. Please circle the appropriate level. For information on biosafety levels, please refer to the [Biosafety Manual](#).

11. Are any of the following classes of chemicals used in the laboratory?

Check all the boxes that correspond to the classes of chemicals that are used and stored in the laboratory. Refer to the [Chemical Safety and Waste Management Manual](#) for help in determining the laboratory chemicals classifications. The choice you make should be based on factors including, but not limited to: toxicity; flammability; reactivity; corrosivity; and the ability to form peroxides or other unstable compounds in the presence of air and/or moisture.

12. Are regulated agents (i.e. select agents, 200-proof ethanol) or controlled substances used in your lab?

Regulated agents include [Drug Enforcement Administration](#) (DEA) scheduled drugs (human or veterinary), select agents, and punctilious (200-proof, un-denatured) ethanol. If controlled drugs (Ex.: ketamine, barbiturates) are being used or stored, the laboratory must have a license from the DEA. If select agents are being used or stored, the laboratory must be registered with the UAB Department of Occupational Health and Safety. It is the responsibility of the principal investigator to insure that the laboratory has the appropriate registrations. Questions about [select agents](#) should be sent to the UAB Department of Occupational Health and Safety, [Biosafety Division](#). Questions about controlled drugs should be sent the U.S. Drug Enforcement Administration.

Section B. Safety Programs and Plans

1. Is there documentation of the required general safety, chemical safety and biosafety training?

Safety training includes sessions like lab orientation or other laboratory or biosafety training as long as it is documented. The documentation should include the date, subject, sign-in or sign-off sheet or a copy of any certificate received as a minimum. The training can be developed by the principal investigator or designee, purchased from a vendor, or obtained from other sources. For your convenience, we have the following courses on-line: [Blood Borne Pathogen Training](#); [Chemical Safety Training](#); [Hazardous Waste Training](#); [Medical Waste Training](#); [Shipping Infectious Substances and Diagnostic Specimens Training](#) and [Use and Care of Laboratory Animals](#). We also have material that can be used for training in the [Safety Shorts](#) section of the OH&S Website.

Remember—If it isn't documented, it never happened.

2. Is there evidence of documented chemical waste handling training?

Federal and state laws require that anyone handling or packaging hazardous chemical waste receive appropriate training. In order to comply with these requirements, UAB now requires that everyone signing chemical waste manifests complete the Hazardous Waste Training course on the OH&S website. Current copies of the training certificates should be kept in the appropriate employee's training file.

3. Is there evidence of documented medical waste training?

Federal and state laws require that anyone handling or packaging hazardous medical waste receive appropriate training. In order to comply with these requirements, UAB now requires that everyone generating and handling medical waste complete the Medical Waste Training course on the OH&S website. Current copies of the training certificates should be kept in the appropriate employee's training file.

4. Is there documented participation in an Occupational Health Program?

Has anyone been contacted by ARP or OH&S for enrollment in the Occupational Health Program? Is anyone in the lab currently enrolled in the Occupational Health Program? Participation in the Occupational Health Program may be required for anyone who works with animals, certain biological agents, or unfixed human/non-human primate tissues, blood or body fluids. Its purpose is to ensure that all employees have appropriate access to medical consultations suitable for the agents to which they may be exposed. The Occupational Health Program is NOT the training program offered by Animal Resources.

5. Has training for shipping and receiving infectious agents or infectious specimens/samples been provided if required?

Federal regulations require training for the shipping and receiving of infectious agents, infectious specimens or infectious samples. Training is provided by a CD available from OH&S.

6. Has a lab specific safety plan been written for the laboratory?

The laboratory specific safety plan includes components common to the Chemical Hygiene Plans, Blood Borne Pathogen Exposure Control Plans, General and Life Safety Plans, granting agency requirements, and other guidelines promoting safe working environments in research. A sample [chemical hygiene plan](#) is available in Appendix J of the Chemical Safety and Waste Management Manual (pages 171-176). A sample exposure control plan is available in Appendix C of the Biosafety Manual (pages 35-43). The safety plan should be specific to a laboratory or research group, written, and readily available. More information can be found in the [chemical safety manual and biosafety manual](#) at the OH&S Website Manual section.

Is the lab specific safety plan reviewed annually?

The safety plan should be reviewed yearly by all lab employees. The PI or designee should review and update the safety plan on an annual basis. Documentation of this review must be recorded.

Section C. General and Life Safety

1. Do personnel wear appropriate shoes and clothing and PPE for work being performed?

Open-toed shoes, canvas shoes and shoes with mesh uppers are never appropriate in the laboratory. Skin exposed by wearing shorts or short skirts should be protected by wearing a lab coat of an appropriate length to afford protection to exposed skin. PPE (personal protective equipment) should be chosen based on the laboratory hazard assessment. [Glove information](#) is available in the Chemical Safety and Waste Management Manual, Appendix G, pages 159-161. PPE, especially gloves, should never be taken from labs into “clean” areas such as break rooms, bathrooms and elevators.

2. Are the following PPE available, in good condition and used by employees as needed: lab coats, gloves, eye protection, face shields, respirators and hearing protectors?

Check boxes for all PPE provided and used in the laboratory by employees.

3. Are chemical and biological spill kits: properly stocked, available, accessible and marked where appropriate? Employees trained? Yes No

Spill kits should be available anywhere that hazardous chemicals or potentially infectious materials are stored or used. They should be able to handle the contents of the largest chemical or biological container used in the lab (Ex.: if the lab orders ethanol in 5 gal/20 L containers, the spill kit should be able to handle 5 gallons). Guidelines for making a [small chemical spill kit](#) are available as well as instructions for a [biohazard spill kit](#). Spill kits can also be purchased from laboratory supply vendors. Employees should be trained in spill response procedures.

4. Are instructions for cleaning up biological and chemical spills posted in the lab?

Instructions for cleaning up spills can be found on the [OH&S web site](#). These instructions should be posted prominently in the lab

5. Are first aid kits: properly stocked, contain no expired items, available, accessible and marked where appropriate?

Each group must have access to a first-aid kit that is stocked, available at all times when the lab is occupied, and prominently marked. The contents should be appropriate for the hazards present in the lab and the appropriate training level of the laboratory personnel. First-aid kits can be purchased “ready-made” or assembled. First-aid kit information and suggested supplies list can be obtained from the [American Red Cross](#).

6. Are electrical circuits properly loaded? No cords across aisles? Electrical cords free of breaks or exposed wires?

The use of a multiple-plug adaptor (e.g., power strip) is acceptable only when a circuit will not be overloaded if ALL of the equipment plugged into it is turned on at the same time. If you do not know if a circuit will be overloaded, contact the maintenance department for assistance (telephone: 934-5353). It is also inappropriate to run cords in aisles, across exits or anywhere

else where they may present a hazard. Electrical cords should be free of breaks and exposed wires.

7. Are fire extinguishers: available, type: ABC, BC, D, tested, charged, unobstructed, and mounted?

The maintenance department is responsible for testing fire extinguishers. However, it is the responsibility of laboratory personnel to insure that fire extinguishers in their area are not blocked or hidden. Fire extinguishers must also be mounted preferably at or near an exit. Laboratories using pyrophoric or finely divided metals should also be equipped with appropriate class D fire extinguishers.

8. Are aisles, passageways, corridors and exits within the lab clear from obstructions and trip hazards?

Aisles and passageways must be clear of all obstructions and at least 30 inches wide at the narrowest point in the laboratory. Exits may not be blocked or partially blocked. They must also be free from trip hazards or anything that may slow or prevent egress. Items are not to be stored in the general access corridors and/or stair wells; this includes red/yellow waste container barrels.

9. Are all gas cylinders securely restrained? Yes No All compressed gas cylinders must be restrained except when actively being moved. The cylinders may be clamped or chained to walls, lab benches or other secure items. If there is nowhere to mount cylinder clamps or chains, a floor stand should be used. **Bungee cords and similar elastic restraints are NOT appropriate for securing cylinders.**

10. Are valve covers or valve guards on unused cylinders? Yes No Valve covers should be in place on all cylinders that are not currently in use and not equipped with valve guards.

11. Are stored properly if the contents are hazardous? Yes No

Cylinders that contain hazardous contents should be stored appropriately.

12. Are foods and beverages restricted from where laboratory work is being performed?

Food and beverages must not be consumed in laboratory work areas regardless of whether work is being performed at the time. Foods and beverages for human consumption should never be stored in cold rooms or laboratory refrigerators or prepared in microwaves or other equipment used for laboratory work.

13. Are laboratory refrigerators labeled as unsuitable for the storage of food and drink?

Refrigerators that are used to store chemical, biological or radioactive materials cannot be used to store food and drink and must be labeled accordingly?

14. Are eyewashes: UAB approved, tested, easily accessible, marked and available? Employees trained? Yes No

Eyewashes should be tested and flushed by laboratory personnel weekly. The testing and flushing should be documented. More [eyewash information and a weekly inspection checklist](#) is available on the OH&S Website. Safety showers and eyewashes must be clearly marked (signs

on walls, floors, etc.) and easy to access. Glassware and other laboratory supplies must never be stacked on or around eyewashes: Remember that when you need the eyewash, you will probably not be able to see, so it must be easy to find.

15. Are safety showers: UAB approved, tested, easily accessible, marked and available. Employees trained? Yes No

Safety showers are tested and flushed by maintenance annually. Activation handles for safety showers must be easy to reach. Nothing, including hand carts must be left in, under or around the safety shower.

16. Are fume hoods functioning properly and certified?

Fume hoods must be certified annually. The identification of fume hoods for certification is the responsibility of UAB OH&S. Each hood should have a colored sticker indicating when it was last certified and when it is due to be recertified. If your hood certification is out of date, contact the UAB OH&S at 934-2487.

17. Are housekeeping practices good? Yes No. Benches clean with no excessive clutter or litter present? Yes No. No chemical or water spills? Yes No. No broken glass? Yes No.

Items stored in the laboratory must not pose trip hazards or block aisles, passageways or exits. Materials must be stored in a manner such that they will not pose a hazard by falling or being crushed. Clutter on the bench spaces, in cabinets and in storage areas should be avoided. Too much clutter may lead to potential fire hazards.

18. Are items stored within 18in of the ceiling?

Items should not be stacked within 18 inches of the ceiling in buildings with sprinkler systems.

19. Are laboratory fire doors kept closed?

Local fire code requires that laboratory fire doors be kept closed at all times. It is also important to keep laboratory doors closed because the heating and air-conditioning system is designed to operate that way. When doors are left open the building cannot be heated or cooled as efficiently and the air pressure differential is disrupted. Lab space air pressure should be more negative than the corridor air pressure.

20. Do laboratory fire doors have the required self closing hardware in place?

Fire doors have self closing hardware which must not be removed or tampered with.

21. Are after hours contacts phone numbers posted on exterior laboratory doors and near laboratory telephones?

[Emergency Notification Information](#) signs (download the template signs from OH&S website) must be posted outside of every laboratory. It is important to keep the information current so that the proper person can be notified in case of fire, burglary, water leak or other emergencies.

22. Are emergency response numbers phone numbers posted near lab telephones?

Emergency response phone numbers will be posted near laboratory phones.

23. Are appropriate discard containers available for used syringes, needles, scalpels, etc.?

All needles, scalpels, razor blades and syringes (with or without needles) must be disposed of in appropriately labeled discard containers. Broken glass must be discarded in puncture-resistant containers and appropriately sealed for discard transport. Sharps containers must not be filled above the manufacturer's identified "full" line.

24. Are emergency evacuation routes posted in each lab?

Emergency evacuation routes are to be posted in a prominent location in the lab. The emergency egress routes should be indicated clearly on the signs such that staff and visitors will have no difficulty locating exit routes from the lab and building.

25. Are portable electric space heaters present in the laboratory areas?

Portable space heaters pose a fire hazard and are prohibited from use in the laboratory.

Section D. Chemical Safety

1. Is a current chemical inventory maintained in the lab?

Each research group or laboratory should have a complete and up-to-date chemical inventory. The inventory should include ALL chemicals kept in the laboratory. It can be on paper or preferably in an electronic format. A copy should be given to the auditor when she/he arrives. The Chemical Inventory List may be submitted as an electronic file to OH&S.

2. Are 3E MSDS On Demand stickers posted on or at telephones and readily visible?

3E MSDS On Demand stickers can be obtained from the Department of Occupational Health and Safety by calling 934-2487.

3. Is chemical waste disposal documented and records maintained by the laboratory for three years?

Federal and state laws only require that chemical waste manifests be kept for three years. However, it is prudent to keep copies of manifests for as long as the laboratory is in operation. The manifests will have to be shown to the auditors, if requested, when a laboratory is audited by an outside environmental agency (Ex., U.S. EPA, ADEM).

4. Are chemicals properly and legibly labeled?

All chemical containers must be labeled in accordance with the [Chemical Safety and Waste Management Manual](#) (pages 17-22, Section 4). This rule applies to ALL chemical storage containers, not just containers received from manufacturers. Whenever a material is transferred to a second container, or a stock solution is prepared, the container must be labeled. Please see section 4 of the Chemical Safety and Waste Management Manual for complete labeling requirements:

5. Are hazardous chemicals properly segregated by hazard class?

Chemicals must be sorted by hazard class to prevent incompatible chemicals from being stored together. In most cases, simply storing chemicals alphabetically will result in incompatible materials being stored together. A Safety Short entitled: "[Making Sense Out of Chemical Storage](#)" is available. For any additional information, please refer to [Chemical Management](#), (pages 17-22, Section 4) of the **Chemical Safety and Waste Management Manual**.

6. Are chemical storage areas properly posted with signage indicating hazard classes (i.e. acids, flammables)?

Chemical storage areas must have signs indicating the basic class of chemicals stored within the designated area. Signs for chemical storage areas can be obtained [here](#).

7. Are corrosive liquids stored below eye level?

Corrosive liquids must always be stored below eye level.

8. Is the fume hood restricted from being used for the storage of chemicals?

It is alright to store chemicals in the storage cabinets underneath the fume hood. It is not acceptable to store chemicals, equipment or anything else in the hood itself. If too much material is placed in a hood, or if it is placed incorrectly, there may be eddies ejecting vapors, etc. back into the room.

9. Is secondary containment present for chemicals stored in containers of 5 gallons or larger?

Any container of 5 gallons (20 liters) or greater capacity holding liquid chemicals must have some sort of secondary containment in case the primary container leaks. The secondary container must be compatible with the material that it may have to contain. Many flammable storage cabinets have secondary containment built in as a design feature.

10. Is there less than 10 gallons of flammable material currently outside of the flammable storage cabinets?

Local fire codes only permit a total of 10 gallons (40L) of flammable liquids to be outside of the flammable storage cabinet at any time. This rule applies to each laboratory room, not each group within a laboratory.

11. Are conventional refrigerators labeled as unsuitable for storage of flammable materials?

Refrigerators and freezers that are **NOT** designed and identified by the manufacturer for the storage of flammable materials must be labeled as "Unsuitable for the Storage of Flammable Materials".

12. When flammable materials are stored in a refrigerator, is it a spark-proof refrigerator?

Local fire codes state that flammable materials may only be stored in refrigerators and freezers that are designed and identified by the manufacturer as suitable for the storage of flammables.

13. Are chemicals within the manufacturer's expiration date?

Some chemicals (particularly those that easily form peroxides or self-polymerize) are given expiration dates by the manufacturer. The date is based on the manufacturer's estimate of when the added inhibitor will no longer be effective. It is important to dispose of chemicals that have passed the expiration date regardless of whether or not the container has been opened.

14. Are chemical containers undamaged and in good condition?

Chemical containers should have properly fitted caps that are not cracked, otherwise damaged and compatible with the material in the container. Likewise, the container itself must be undamaged and compatible with the material stored in it. Labels must not be degraded to the point that they cannot be read easily.

15. Are chemicals free of signs of physical or chemical change (i.e., crystals, discoloration)?

Many chemicals exhibit physical signs such as color change (Ex., sodium amide) or the formation of crystals when they become unstable or contaminated.

16. Is the laboratory free of chemical damage to the facility or equipment?

Signs of damage are a good indicator of problems in chemical handling and storage. It is also important to check the shelving and cabinets where chemicals are stored to prevent a catastrophic failure. Rust must be removed and structural integrity maintained.

17. Are containers of ethers, aldehydes, benzylic hydrogen compounds, allylic compounds, vinyl compounds and other peroxide-forming chemicals dated when received and when opened?

All containers of ether and other peroxide-forming chemicals must be dated when received. They must also be dated when opened. If in doubt about a materials' ability to form peroxides, consult the MSDS. Additional information is available regarding [Highly Reactive Compounds](#) (pages 59-62, Appendix B, Chemical Safety and Waste Management Manual).

18. Are containers of ethers, aldehydes, benzylic hydrogen compounds, allylic compounds, vinyl compounds and other peroxide-forming chemicals tested for peroxide formation and disposed of as required in the Chemical Safety and Waste Management Manual (Appendix B)?

After a container of a peroxide-forming chemical is opened, it must be tested for the presence of peroxides at certain intervals. For a list of peroxide-forming chemicals, the required testing schedules, and maximum storage times, see the Chemical Safety and Waste Management Manual (pages 59-62, [Appendix B](#)).

19. Are work areas for carcinogens or agents of high or unknown toxicity posted with a sign denoting a high hazard area?

Signs must be posted at the entrance of work areas where extremely toxic or carcinogenic materials are used or stored. Materials of unknown toxicity must always be assumed to be extremely hazardous.

20. Are waste containers used for high-risk chemicals (i.e. yellow barrels for carcinogen contaminated material, etc.)?

Hazardous chemical waste must be placed into the appropriate container. Ethidium bromide, as a solid or in liquid form, is one example of this type of material.

21. Are chemical waste containers kept closed except when actively adding waste?

Federal and state laws require that chemical waste containers be kept closed except when actively adding or removing waste. This is one of the most frequently cited environmental violations and one of the most inexcusable. See this [Safety Short](#) for more information

22. Are chemical waste containers properly labeled?

Federal and state laws require that chemical waste containers be properly labeled as chemical waste and that the contents be identified on the label. For more information, consult the [Hazardous Waste Training Program](#).

23. Are satellite accumulation areas properly marked and maintained?

Federal and state laws mandate the way that satellite accumulation areas are managed. For more information, consult the [Hazardous Waste Training Program](#).

Section E. Laboratory Security

1. Is the laboratory kept locked when workers are not present?

Most thefts are crimes of opportunity. Keeping the laboratory locked can prevent or reduce petty crime. It can also help to reduce liability by keeping unauthorized persons out of the lab. In addition, where certain materials are present, federal and state laws require labs to be locked when laboratory personnel are not in the room.

2. Are biologicals, chemicals, controlled substances, equipment, select agents and supplies properly accounted for and losses reported to the UAB police?

Drug abuse and the illicit manufacture of methamphetamine is, unfortunately, a problem in our area. It is important to prevent UAB laboratory supplies from being used in any illegal activities. Laboratory managers should be alert to the possibility of material “disappearing”. Be particularly alert for the theft of computer equipment, balances, solvents and flasks.

All thefts and suspected thefts should be reported to the UAB police department as soon as possible. A police report may be the only way to prove that materials were stolen (not sold or given away) if they are later discovered in a clandestine laboratory. Police reports may also be used by the UAB police department to track crime trends and allocate resources to trouble spots.

4. Is UAB property accounted for when workers leave or change laboratories?

5. Are keys and card keys accounted for and are passwords and access codes deleted or changed when workers leave or change research groups?

6. Is UAB police notified if suspicious individuals are observed in the building?

Section F. Biosafety

1. In areas using Class 2 or 3 etiologic agents, are the entrances to the lab area posted with an 8" X 10" or equivalent biohazard sign specifying the agent(s)?

Main laboratory-entry doors must be posted with an 8" x 10" red/orange [biohazard sign](#).

2. Is equipment used for infectious material storage and processing posted with a 2" X 3" biohazard sign (or equivalent)?

Any equipment used to store or process any infectious or potentially infectious material must be labeled with a red/orange [biohazard sticker](#).

3. Is medical/ biohazardous waste separated from laboratory non-medical waste at the point of generation?

Refer to UAB's [Biosafety Manual](#) (Section 11.1) in order to determine the items that need to be separated from the regular waste.

4. Is medical/ biohazardous waste contained and secured before treatment and transferred to secured and covered approved plastic barrels after treatment for transport?

Laboratory medical waste must be stored properly prior to decontamination. The medical waste must be contained within a secondary container in a secure and properly marked location. It is unacceptable to store laboratory medical waste in corridors and/or stairwells. Equipment (carts) used to transport laboratory waste must be properly marked/identified. Regulations require that biohazardous waste ([Appendix J](#)) must be in the proper container and covered for transport to the Hazardous Materials Facility.

5. Is animal waste disposed of according to UAB Medical Waste Management Plan?

Animal waste, such as carcasses, body parts, and fluids must be disposed of according to the Waste Management Plan found in UAB's [Biosafety Manual](#) (Section 11.1). Expended carcasses and body parts must be returned to the morgue at the animal facility. Please be aware that animal carcass disposal is dependent upon the type of research in which the animals were involved; e.g. chemicals administered, biologicals administered, radioactive compounds administered, etc. For specific methods of carcass disposal, please contact the Animal Resources Program.

6. Does the lab have access to an autoclave for decontamination?

If you are working with any BSL-1, BSL-2 and BSL-3 agents (section 7.0 [UAB Biosafety Manual](#) [for biological agents and biohazard classifications) you must autoclave or chemically disinfect the waste prior to disposal. Consult this [Autoclave Safety Short](#) for more information.

7. Is liquid biological waste decontaminated by an autoclave or chemical disinfection before disposal? See below.

8. Is solid biological waste decontaminated by an autoclave before disposal?

[University regulations](#) require that any potentially infectious waste, liquid or solid, must **not** be placed into the regular waste stream. It must be rendered non-viable via chemical (i.e. dilute

bleach solution) or physical means (autoclave) before being transported to the Hazardous Materials Facility.

9. Is autoclave performance validated monthly using biospore strips or ampoules?

Autoclaves must be validated using biological indicators in order to insure that the correct temperature, pressure, and duration were achieved for proper sterilization. The validation must be performed monthly or every 40 hours of operation and documented accordingly. Autoclave tape and chemical integrators are not considered biological indicators and are not sufficient for autoclave validation. Neither is an autoclave cycle print-out considered as a validation document.

10. Are sharps placed directly into appropriately labeled and/or color-coded, impervious, rigid, puncture-resistant OSHA-approved containers with covers?

According to rules and regulations set forth in UAB's Biosafety Manual, proper [sharps](#) containers must be used in order to dispose of various sharps.

11. Are OSHA-approved sharps containers sealed when filled to manufacturers' recommended fill-line mark and placed in designated transport barrels with covers?

Any sharps, such as scalpels, razor blades, syringes, needles, specimen-containing glass vacutainers or any other items of this nature that are potentially infectious or microbiologically contaminated must be placed in a container that can be securely sealed when the fill line is met. These sharps containers must be placed on top of the biosafety-identified trash bags inside the red barrels in order to be properly segregated at the Hazardous Materials Facility. For more information, consult the Safety Short on [Sharps](#).

12. Is outer street clothing stored somewhere other than the laboratory area where allergens or Risk Group 2 agents and higher may be present?

Outer-street clothing, such as coats, hats, or other accessories should not be worn in the lab work area and should not be allowed to come in contact with lab coats. One should never wear outer-street clothing i.e. coats, into the animal facilities. Neither should street coats and lab coats be stored together.

13. Are work surfaces being decontaminated when work with infectious material is finished and immediately after spills or splashes?

Bench tops and any other work surface(s) must be decontaminated with appropriate disinfectant after finishing work with infectious material and immediately after spills or splashes. Please list the disinfectant(s) used.

14. Is a current pathogen inventory maintained in the lab?

Each lab must have a complete and up-to-date inventory of human and animal pathogens. The inventory should include the genus, species and strain of each agent along with its physical location.

15. Are pathogens stored in locked storage units?

All human and animal pathogens should be kept in locked storage units when not in use. Access to the key/combination should be limited.

16. Are inventories of unaccounted pathogenic organism stock cultures and select agents reported to the UAB Biosafety division?

It is imperative to report all missing/lost stocks of select agents and pathogenic organisms to the UAB Division of Biosafety as soon as discovered. It is also necessary to report all unaccounted inventory overages. Failure to report shortages of select agents may result in federal investigation and/or prosecution.

17. Are procedures with a potential for creating infectious aerosols or splashes conducted within a certified biological safety cabinet?

According to UAB's Biosafety Manual, proper engineering containment must be in place in order to safely handle infectious materials when there is a potential for creating aerosols or splashes. [Biological Safety Cabinets](#) (BSC) must be certified annually, when initially installed and if the BSC is ever moved. The identification of BSC(s) for certification is/are the responsibility of the PI or the designated laboratory representative. Each BSC should have a colored sticker indicating when it was last certified and when it is due to be re-certified. If your BSC certification is out of date, contact the UAB OH&S at 934-2487 to arrange an appointment for certifying your BSC.

Referenced Web Site Addresses

American Red Cross First-Aid Supplies/Kits

http://www.redcross.org/services/disaster/0,1082,0_607_,00.html

Biosafety Manual (Sections 8.1, 11.1 and Appendix J)

<http://www.healthsafe.uab.edu/pages/biosafety/biosafetymanual.pdf>

Blood Borne Pathogens Training

<http://www.healthsafe.uab.edu/pages/biosafety/bbp/pages/page00.htm>

Chemical Hygiene Plan

http://www.healthsafe.uab.edu/pages/chemicalsafety/chem_manual.pdf

Chemical Management (pages 17-22, Section 4) of the
Chemical Safety and Waste Management Manual

http://www.healthsafe.uab.edu/pages/chemicalsafety/chem_manual.pdf

Chemical Safety and Waste Management Manual

http://www.healthsafe.uab.edu/pages/chemicalsafety/chem_manual.pdf

Chemical Safety Training

<http://www.healthsafe.uab.edu/pages/chemicalsafety/chemtrain/instructions.htm>

Drug Emergency Notification Information

<http://www.healthsafe.uab.edu/pages/chemicalsafety/chemicalsafetyforms.html>

Enforcement Administration

<http://www.usdoj.gov/dea/>

Eyewash Safety Short

http://www.healthsafe.uab.edu/pages/home/ss_emer_eyewashtest.pdf

Glove Information, Appendix G, Pages 159-161

<http://www.healthsafe.uab.edu/pages/chemicalsafety/chemicalsafetyforms.html>

Hazardous Waste Training Program

[http://www.healthsafe.uab.edu/4d.acgi\\$cs055](http://www.healthsafe.uab.edu/4d.acgi$cs055)

Highly Reactive Compounds (Appendix B, pages 59-62)

http://www.healthsafe.uab.edu/pages/chemicalsafety/chem_manual.pdf

OH&S Reference Manuals

<http://www.healthsafe.uab.edu/pages/home/manuals.html>

OH&S Safety Shorts

<http://www.healthsafe.uab.edu/pages/home/safetyshorts.html>

OH&S Education and Training Section

<http://www.healthsafe.uab.edu/pages/educationandtraining/educationandtraining.html>

Safety Shorts – Autoclave Safety

Pending Link

Safety Short: Making Sense Out of Chemical Storage

http://www.healthsafe.uab.edu/pages/home/ss_makingsense.pdf

Safety Shorts - Sharps

http://www.healthsafe.uab.edu/pages/home/ss_2003_mar_sharps.pdf

Select Agent Information at UAB

http://www.healthsafe.uab.edu/pages/home/ss_2003_jan_saint.pdf

Small Biohazardous Spill Kit

<http://www.healthsafe.uab.edu/pages/biosafety/basicbiosafetykit.html>

Small Basic Chemical Spill Kit

<http://www.healthsafe.uab.edu/pages/chemicalsafety/basicchemicalkit.html>

UAB OH&S Biosafety Division

<http://www.healthsafe.uab.edu/pages/biosafety/biosafety.html>