# University of Arizona

## Laboratory Chemical Hygiene Plan

*[This is a template. Fill in all necessary blanks, and delete all highlighted areas when complete. Add any sections necessary for your laboratory.]*

**Approval Holder (AH):** Click here to enter text. **Approval #:** Click here to enter text.

**Approval Holder Phone Number(s):** Click here to enter text.

**Approval Safety Coordinator (ASC):** Click here to enter text.

**Approval Safety Coordinator Phone Number(s):** Click here to enter text.

**Department:** Click here to enter text.

**Laboratory Locations with Hazardous Chemical Use/Storage:**

|  |  |  |
| --- | --- | --- |
| **Building** | **Room** | **Room Type** |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |
| Enter building name. | Enter room number. | Choose an item. |

**Summary of Changes:**

*[Summarize the changes to this Chemical Hygiene Plan since the last amendment. If there have been no changes, or if this is the first Chemical Hygiene Plan for this Approval Holder, write “N/A” for this section.]*

**RLSS Use Only:**

**Amendment #:** Click here to enter text. **Amendment Date:** Click here to enter a date.

**AH Electronic Signature:** Sign by entering full name. **Date:** Click here to enter the date.

# 1 Introduction

### Purpose

This Laboratory Chemical Hygiene Plan (LCHP) addresses the specific hazards and available control measures associated with the chemical inventory within Enter AH’s name’s University of Arizona (UA) laboratories. The LCHP has been created to comply with the requirements of the Code of Federal Regulations, Title 29 Section 1910.1450.

### Scope

This LCHP provides information that is specific to Enter AH’s name’s laboratory and is not covered in the University Chemical Hygiene Plan (UCHP). The LCHP is an addition to the UCHP, and shall not contradict the UCHP. In any instance where the LCHP contradicts the UCHP, either the UCHP shall be upheld or approval for variance from the UCHP will be provided by the Research Laboratory & Safety Services (RLSS).

The Approval Holder must review this plan for completeness and accuracy at least annually. All laboratory workers under Approval Number Enter Approval # must read and affirm to this LCHP through the Research Laboratory and Safety Services (RLSS) User Dashboard (rlss.arizona.edu/services) upon amendment. The AH or ASC must also perform laboratory-specific training based off of this LCHP to all laboratory workers. A template for laboratory-specific training can be found on the RLSS website. Worker affirmation to this LCHP through the RLSS User Dashboard also includes an affirmation that the worker has received adequate laboratory-specific training and had the opportunity to have all questions answered by the AH or ASC.

# Standard Operating Procedures

All laboratory workers under Enter AH’s name’s Hazardous Chemical Approval must comply with all University Standard Operating Procedures (USOPs) found within the UCHP.

*[Delete one of the following paragraphs, depending on whether your hazardous chemical use requires the creation of a Laboratory Standard Operating Procedure].*

In addition to the USOPs, laboratory workers under this Approval must also adhere to the Laboratory Standard Operating Procedures (LSOPs) included in Appendix A of this plan.

*[OR]*

The use of hazardous chemicals in Enter AH’s name’s laboratories do not require additional Laboratory Standard Operating Procedures (LSOPs).

# Emergency Plans/Procedures

**IN CASE OF AN EMERGENCY:**

**Call 911 to contact local Emergency Response**

### Emergency Preparedness

The following emergency equipment is available in the laboratory for laboratory workers to use if they are appropriately trained. *[Ensure to account for each laboratory listed on page 1.]*

|  |  |
| --- | --- |
| **Emergency Equipment** | **Location(s)** |
| Fire Extinguisher | Describe the location(s) of the equipment in or near the lab. |
| First Aid Kit | Describe the location(s) of the equipment in or near the lab. |
| Chemical Spill Kit | Describe the location(s) of the equipment in or near the lab. |
| Emergency Eye Wash | Describe the location(s) of the equipment in or near the lab. |
| Emergency Safety Shower | Describe the location(s) of the equipment in or near the lab. |

### Chemical Spill

*[Use the following paragraph to explain that there are no special procedures for spills exist for your lab.]*

There are no special procedures for the cleanup of a chemical spill in Enter AH’s name’s laboratories. Laboratory workers will follow the procedures listed in Section 8.2 of the UCHP to respond to a chemical spill.

*[OR]*

*[List any special procedures or steps involved with the spill of chemicals, or certain chemicals, that are specific to your laboratory.]*

Laboratory workers will follow the procedures listed in Section 8.2 of the UCHP to respond to a chemical spill. Special procedures for the cleanup of a chemical spill in this lab are as follows:

* Discuss special procedures for your selected chemicals here.

### Chemical Exposure

Call 911 if a laboratory worker is exposed to a hazardous chemical and requires immediate medical attention. Perform first aid assistance described in Section 8.4 of the UCHP if you’ve been appropriately trained, and it is safe to do so. Notify Enter AH’s name at Enter AH’s phone number or Enter ASC’s name at Enter ASC’s phone number as soon as is practical. Inform the Research Laboratory & Safety Services and Risk Management Services of all chemical exposures.

If the chemical exposure does not require immediate medical attention, but the laboratory worker feels unwell, he/she should call the Arizona Poison & Drug Information Center at 1-800-222-1222 for further information and recommendations.

* + 1. **Chemical Exposure First Aid Assistance**

 *[If there are no special procedures involved with chemical exposure that are specific to your laboratory, delete this section].*

There are no special procedures involved with chemical exposure that are specific to this laboratory.

*[OR]*

*[List any special procedures or steps involved with chemical exposure that are specific to your laboratory. For example, exposure to a hazardous gas could require hitting the emergency shutoff valve in the gas line. List any antidotes available for the hazardous chemicals used in your laboratory (e.g. calcium gluconate for hydrofluoric acid, selegiline for MPTP, etc.).]*

***If your lab works with hydrofluoric acid, MPTP, or any other chemical requiring an antidote, contact RLSS.***

* + 1. **Routine Medical Surveillance**

*[If there are no hazardous chemicals used or stored in your laboratories that require routine medical surveillance (as determined by the RLSS), delete this section. If it is determined that your laboratory workers require routine medical surveillance, complete the paragraph below.]*

Medical surveillance is required for the use of Enter the names of all chemicals used in the laboratory that require routine medical surveillance in Enter AH’s name’s laboratory. All laboratory workers using these chemicals must be medically cleared by Occupational Health, Enter the steps required for medical surveillance, and inform Enter AH’s name or Enter ASC’s name of any potential exposure.

*Or*

*[No monitored chemicals are present in the laboratory.]*

This laboratory does not possess or use hazardous chemicals that require assessment for staff enrollment into the Medical Surveillance Program. Contact RLSS if medical surveillance chemicals (i.e. formaldehyde, arsenic, mercury, etc.) come into possession/use, as this may require assessment/measurements and enrollment into the Medical Surveillance Program.

*Or*

*[Monitored chemicals are stored in the laboratory but are not in use.]*

Medical surveillance is NOT required for the CHEMICAL(S) in storage within **AH’s** laboratory. Notify AH NAME or ASC NAME prior to any future use of CHEMICAL(S), as this may require assessment/measurements by RLSS and potential enrollment into the medical surveillance program.

***[Example]***

Medical surveillance is NOT required for:

* Paraformaldehyde in **AH name**’s laboratory used/handled exclusively within a certified chemical fume hood. Notify **AH name** or **ASC name** prior to any change of use with paraformaldehyde, as this may require assessment/measurements by RLSS and potential enrollment into the medical surveillance program.
* Formaldehyde used in **AH name** laboratory when used/handled within a fume hood and centrifuge. The centrifuge lid be closed for 15 minutes after centrifuging has completed. Notify **AH name** or **ASC name** prior to any change of use with formaldehyde, as this may require assessment/measurements by RLSS and potential enrollment into the medical surveillance program.
* Sodium arsenite is used for cell culture (low concentration solutions used in small amounts infrequently) within **AH name**’s laboratory. Notify **AH name** or **ASC name** prior to any change of use with Sodium Arsenite, as this may require assessment/measurements by RLSS and potential enrollment into the medical surveillance program.

### Fire/Explosion

In the case of an explosion or fire in the laboratory, assist any person in immediate danger if it can be accomplished without risk to you. Immediately evacuate the area and call 911 from a campus phone, or call 911 from a non-campus phone and mention the incident is on the UA campus. If an alarm is not yet sounding, activate the fire alarm system by pulling a manual fire alarm pull station and meet your fellow laboratory workers at the pre-determined destination.

If the fire is relatively small and contained, and a laboratory worker has been appropriately trained on the use of a fire extinguisher, he/she may attempt to extinguish the fire, following the instructions in Section 8.3 of the UCHP.

*[List any special procedures or steps involved with an explosion or fire emergency that are specific to your laboratory. This may include Class D fire extinguisher/sand use for pure metals (e.g. sodium, potassium, etc.) turning off heat sources if they are in use (e.g. for use of a Bunsen burner, hot plate, etc.) or evacuating the area regardless of the size of the fire if explosive or pyrophoric chemicals are involved or stored near the fire.]*

# Chemical Hazards and Controls

The following chemical hazard classes represent the chemicals that may be used or stored in Enter AH’s name’s laboratories according to the RLSS User Dashboard. *[Delete any hazard classes that are not applicable to your Approval as per your RLSS User Dashboard.]*

* Compressed Gas
* Contact (Eye & Skin) Hazard
* Corrosive
* Delayed Health Hazard
* Developmental & Reproductive Toxins
* Explosive
* Flammable
* Highly Reactive
* Ingestion Hazard
* Inhalation Hazard
* Oxidizing

Control measures specific to **Enter AH’s name**’s laboratories to address these hazards are detailed in the following sections.

### Engineering Controls

*[Use the following paragraph if the results of the hazardous chemical inventory and RLSS assessment suggest no additional engineering controls are required to control the hazards presented by chemicals in your laboratory.]*

Engineering controls should be used to control chemical hazards as described in Section 4.4 of the UCHP; no specific engineering controls are required for the use of hazardous chemicals in Enter AH’s name’s laboratories.

*[OR]*

*[List the engineering controls that should be used by laboratory workers when working with specific chemicals, or specific classes of chemical hazards, in the laboratory. For example, you may require all pyrophoric chemicals be handled in a glove box, all inhalation hazards to be used in a chemical fume hood, a specific explosive chemical to be used in a chemical fume hood with a blast shield, etc.]*

Engineering controls should be used to control chemical hazards as described in Section 4.4 of the UCHP; specific engineering controls are required for the use of the following hazardous chemicals in Enter AH’s name’s laboratories.

* Discuss special procedures for your selected chemicals here.

### Work Practices

 *[Use the following paragraph if the results of the hazardous chemical inventory and RLSS assessment suggest no additional work practices are required to control the hazards presented by chemicals in your laboratory.]*

Administrative controls and general work practices should be used to control chemical hazards as described in Section 4.5 of the UCHP; no specific work practices are required for the use of hazardous chemicals in Enter AH’s name’s laboratories.

*[OR]*

*[List the work practices that should be used by laboratory workers when working with specific chemicals, or specific classes of chemical hazards, in the laboratory. For example, you may require that laboratory workers not work alone when working with a specific highly reactive chemical, that all oxidizing chemicals be stored in a desiccator, etc.]*

Administrative controls and general work practices should be used to control chemical hazards as described in Section 4.5 of the UCHP; specific administrative controls and general work practices are required for the use of the following hazardous chemicals in Enter AH’s name’s laboratories.

* Discuss special procedures for your selected chemicals here.

### Personal Protective Equipment

 *[Use the following paragraph if the results of the hazardous chemical inventory and RLSS assessment suggest no additional personal protective equipment are required to control the hazards presented by chemicals in your laboratory.]*

Personal protective equipment should be used to control chemical hazards as described in Section 4.6 of the UCHP; no specific personal protective equipment are required for the use of hazardous chemicals in Enter AH’s name’s laboratories.

*[OR]*

*[List the engineering controls that should be used by laboratory workers when working with specific chemicals, or specific classes of chemical hazards, in the laboratory. For example, you may require all pyrophoric chemicals be handled in a glove box, all inhalation hazards to be used in a chemical fume hood, a specific explosive chemical to be used in a chemical fume hood with a blast shield, etc.]*

Personal protective equipment should be used to control chemical hazards as described in Section 4.6 of the UCHP; specific personal protective equipment is required for the use of the following hazardous chemicals in Enter AH’s name’s laboratories.

* Discuss special procedures for your selected chemicals here.

# Designated Areas

*[If there are no particularly hazardous chemicals used or stored in your laboratories, use the following paragraph and delete the table below.]*

There are no particularly hazardous chemicals (i.e. select carcinogens, developmental/reproductive toxins, or chemicals that are fatal if inhaled, ingested, or come in contact with the skin) used or stored in Enter AH’s name’s laboratories. Notify RLSS if the use of particularly hazardous chemicals begins, as this requires postings and an LCHP update.

*[Otherwise, delete the above paragraph and complete the following table.]*

All particularly hazardous chemicals (i.e. select carcinogens, developmental/reproductive toxins, or chemicals that are fatal if inhaled, ingested, or come in contact with the skin) must be used and stored in areas designated for that purpose. Designated areas can be a piece of equipment (e.g. chemical fume hood), and area of a lab (e.g. a lab bench where ethidium bromide is used), or an entire lab itself (e.g. a dark room where particularly hazardous chemicals are used).

The following table describes all of the designated areas available for the use and storage of particularly hazardous chemicals in Enter AH’s name’s laboratories.

|  |  |  |  |
| --- | --- | --- | --- |
| **Building** | **Room** | **Description** | **Use or Storage** |
| Enter building name. | Enter room #. | Describe the designated area. | Choose an item. |
| Enter building name. | Enter room #. | Describe the designated area. | Choose an item. |
| Enter building name. | Enter room #. | Describe the designated area. | Choose an item. |
| Enter building name. | Enter room #. | Describe the designated area. | Choose an item. |
| Enter building name. | Enter room #. | Describe the designated area. | Choose an item. |
| Enter building name. | Enter room #. | Describe the designated area. | Choose an item. |
| Enter building name. | Enter room #. | Describe the designated area. | Choose an item. |
| Enter building name. | Enter room #. | Describe the designated area. | Choose an item. |

# Laboratory Procedures Requiring Prior Approval

*[If there are no chemicals that you want laboratory workers to obtain prior approval from you before working with them, as well as no procedures involving hazardous chemicals that you want them to request prior approval for, delete Section 6 entirely].*

Laboratory workers must obtain prior approval from Enter AH’s name or Enter ASC’s name before the first time working with Enter the names of all chemicals used in the laboratory that require prior approval from you , or before performing any of the following procedures: Enter the names of any laboratory procedures that require prior approval from you.

\*all monitored chemicals must be mentioned

### Hazardous Gases

*[Use the following paragraph if the laboratory possesses highly hazardous gases (e.g. anhydrous ammonia, carbon monoxide, silane, or any other gas specified in the UCHP Appendix B-14).]*

Laboratory workers must review all relevant safety information (i.e. UCHP, USOPs, LSOPs, etc.) and discuss experiments and procedures involving Enter the names of all hazardous gases you have in the lab before beginning any such experiments. The hazards presented by these gases, as well as the control measures in place to decrease the likelihood of exposure to these gases, have been evaluated by the RLSS.

*[OR]*

*[Use the following paragraph if the results of the hazardous chemical inventory and RLSS assessment suggest no additional personal protective equipment are required to control the hazards presented by chemicals in your laboratory.]*

There are no hazardous gases in the laboratory (e.g. corrosive, toxic, or pyrophoric gases) that require approval by the RLSS in your laboratory. Notify RLSS if the use of hazardous gases changes, as this may require assessment/measurements by RLSS.

### DEA Controlled Substances

*[Use the following paragraph if the laboratory possesses DEA Controlled Substances.]*

DEA-regulated controlled substances may be used during some research protocols. Before any laboratory worker may work with controlled substances, they must be listed on Enter the name of the DEA registrant’s DEA registration and receive relevant training. All laboratory workers must notify Enter AH’s name or Enter ASC’s name of any drug-related felonies. All laboratory workers listed as agents under Enter the name of the DEA registrant’s DEA registration must adhere to the DEA regulations as described in Section 7.1 of the UCHP.

*[OR]*

*[Use the following paragraph if the results of the hazardous chemical inventory and RLSS assessment suggest no additional personal protective equipment are required to control the hazards presented by chemicals in your laboratory.]*

This laboratory does not utilize DEA-regulated controlled substances. Notify RLSS if you are interested in becoming a registrant for the use of DEA Controlled Substances.

### ATF Explosive Materials

*[Use the following paragraph if the laboratory possesses AT- regulated explosive materials.]*

ATF-regulated explosive materials may be used during some research protocols. Before any laboratory worker may work with these explosive materials, they must be given relevant training by Enter the name of the ATF licensee. All laboratory workers that are given permission to use ATF-regulated explosive materials must adhere to the ATF regulations as described in Section 7.3 of the UCHP.

*[OR]*

*[Use the following paragraph if the results of the hazardous chemical inventory and RLSS assessment suggest no additional personal protective equipment are required to control the hazards presented by chemicals in your laboratory.]*

This laboratory does not utilize ATF-regulated explosive materials. Notify RLSS if the lab is interested in beginning work with ATF-regulated explosive materials.

# 7 Waste Disposal

*[Use the following paragraph to explain that no special procedures for waste disposal exist for your lab.]*

There are no special procedures for the disposal of chemical waste in Enter AH’s name’s laboratories. Laboratory workers will follow the procedures listed in Section 4.9 of the UCHP to dispose of chemical waste.

*[OR]*

 *[List any special procedures or steps involved with the disposal of specific chemicals used in your laboratories. Common chemicals that require special disposal procedures include ethidium bromide gels, heavy metals, unlicensed radioactive materials, etc.]*

Laboratory workers will follow the procedures listed in Section 4.9 of the UCHP to dispose of chemical waste. Additional laboratory specific waste disposal procedures are listed below:

* Discuss special procedures for your selected chemicals here.

# 8 Additional Information

*[Use this section to add any chemical safety-related information specific to your laboratory that were not covered in Sections 1-7. If there is no further information you would like to add, delete Section 8 entirely.]*

# Appendix A: Laboratory Standard Operating Procedures

*[Delete this section if there are no LSOPs required for your Hazardous Chemical Approval.]*