# 

# **Laboratory Specific Chemical Hygiene Plan**

**Instructions:**

Complete your Laboratory Specific Chemical Hygiene Plan in its entirety. Upload completed document into BioRAFT.

Principal Investigator: Click or tap here to enter text.

Laboratory Safety Officer: Click or tap here to enter text.

(Principal Investigator is the Laboratory Safety Officer if one is not assigned)

Building:Click or tap here to enter text. Room(s): Click or tap here to enter text.

Completed By:Click or tap here to enter text. Date: Click or tap here to enter text.

**Checklist for documents to be appended to plan, if applicable:**

Check all items below that are appended to this plan. Unless otherwise indicated, copies of appended documents should be sent to Lab Safety.

List of particularly hazardous and high risk chemicals (required unless listed in this Plan, or unless you indicate that there are no particularly hazardous or high risk chemicals in the laboratory).

Standard Operating Procedures or customized Standard Operating Procedures, if any.

Summary of Chemical High Risk Procedures, hazard assessments or laboratory specific SOP’s for each high risk procedure(s).

Laboratory Emergency Response materials (spill kit).

Laboratory specific chemical hygiene and safety training documentation.

**Safety Data Sheets (SDSs)**

Every laboratory employee should be instructed on how to access and understand Safety Data Sheets.

Safety Data Sheets for our chemicals can be found:

In [BioRAFT](https://rowan.bioraft.com/)

Chemical Inventory for chemicals in this laboratory

The chemical inventory can be found in [BioRAFT](https://rowan.bioraft.com/).

**Controlling Exposures & Hazards – Laboratory Specific Strategies**

General strategies for controlling chemical exposures are described in the Chemical Hygiene Plan and Standard Operating Procedures.

List below any general lab guidelines that are more stringent than the above referenced section.

Click or tap here to enter text.

Indicate below the strategies for safe use of engineering controls in the laboratory:

Our laboratory has a chemical fume hood.

* Chemical fume hoods are certified on an annual basis. If your chemical fume hood has not been certified in the past year, contact Lab Safety at [labsafety@rowan.edu](mailto:labsafety@rowan.edu)
* Position sash correctly for work:

Hood sash moves vertically – keep sash in lowest practical position while working. Sash must come down to shoulder height or lower.

Hood has combination sash –

* For maximum flexibility, route tubes and cords under airfoil or through access panel at side of chemical fume hood. If this is not possible, route these connections under the sash. Avoid running tubes or cords between horizontal side panels.
* Keep horizontal panels closed and move sash vertically during work. Keep sash in lowest practical position while working. Sash must come down to shoulder height or lower.
* Close sash vertically. Place one sash panel between body and the work in the hood. Work with arms reaching around this sash panel.

Our lab uses a ducted biological safety cabinet for handling of powder chemicals or water-based solutions/suspensions. Look for annual certification date on the biological safety cabinet. Ducted biological safety cabinets are certified annually by an approved outside vendor.

Our laboratory has a snorkel exhaust (localized exhaust) to remove hazardous vapors from the benchtop. The snorkel must be placed as close as possible to the point of containment generation (generally 4” – 6”).

Our laboratory has other localized exhaust. Safe use instructions are included below  or are attached to this document .

**Flammable Chemicals**

Where are your flammable chemicals stored:

In a storage cabinet beneath the chemical fume hood

In a flammable storage cabinet

Other, list: Click or tap here to enter text.

Are there refrigerators which can safety store flammables available in your laboratory:

NO  YES  If yes, provide location: Click or tap here to enter text.

**Particularly Hazardous Substances**

Where are the designated areas in your laboratory to work with the particularly hazardous substances (list all particularly hazardous substances):

|  |  |
| --- | --- |
| **Particularly Hazardous Substance**  **(Acutely Toxic Material)** | **Designated Area Location**  **(e.g., Chemical Fume Hood)** |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| **Particularly Hazardous Substance**  **(Carcinogen)** | **Designated Area Location**  **(e.g., Chemical Fume Hood)** |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| **Particularly Hazardous Substance**  **(Reproductive Hazard)** | **Designated Area Location**  **(e.g., Chemical Fume Hood)** |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |

**Emergency Shower, Emergency Eyewash and Fire Extinguishers**

Location of closest emergency shower and emergency eyewash for this laboratory?

Emergency Shower: Click or tap here to enter text.

Emergency Eyewash: Click or tap here to enter text.

What type of fire extinguishers are available? Where are they located?

|  |  |  |
| --- | --- | --- |
| **Type** | **Number** | **Location** |
| Class A | Click or tap here to enter text. | Click or tap here to enter text. |
| Class B | Click or tap here to enter text. | Click or tap here to enter text. |
| Class C | Click or tap here to enter text. | Click or tap here to enter text. |
| Class AB | Click or tap here to enter text. | Click or tap here to enter text. |
| Class ABC | Click or tap here to enter text. | Click or tap here to enter text. |
| Class BC | Click or tap here to enter text. | Click or tap here to enter text. |

**Controlling Exposure & Hazards – Standard Operating Procedures and Safety Guides**

***Mark below the Standard Operating Procedures that are relevant for this laboratory.***

|  |  |  |
| --- | --- | --- |
| **SOP** | **Chemical Name or Hazard Class** | **Notes** |
|  | Acutely Toxic Chemicals | Click or tap here to enter text. |
|  | Acutely Toxic Gases | Click or tap here to enter text. |
|  | Carcinogens | Click or tap here to enter text. |
|  | Reproductive Hazards | Click or tap here to enter text. |
|  | Compressed Gases | Click or tap here to enter text. |
|  | Strong Oxidizers | Click or tap here to enter text. |
|  | Pyrophoric Chemicals | Click or tap here to enter text. |
|  | Reactive Liquids | Click or tap here to enter text. |
|  | Reactive Solids | Click or tap here to enter text. |
|  | Water Reactive Chemicals | Click or tap here to enter text. |
|  | Peroxide Forming Chemicals | Click or tap here to enter text. |
|  | Corrosive Chemicals | Click or tap here to enter text. |
|  | Chemical Irritants | Click or tap here to enter text. |
|  | Other (specify) | Click or tap here to enter text. |

This laboratory does not have or need SOPs.

**The following Chemical Hygiene High Risk Procedures Apply:**

|  |  |  |
| --- | --- | --- |
|  | Chemical Hygiene High Risk Procedure | Approved by the PI |
|  | Use of liquid nitrogen or other cryogens in large quantities or in a manner that could displace oxygen. Specify cryogens, amounts, task (if applicable), location, and approximate room dimensions: Click or tap here to enter text.  “Large quantities” include any cryogen piped in from a tank located outside the building. For liquid nitrogen, large quantities would be more than one freezer and one attached liquid cylinder per room.  FILLING a cryocart or cooler is a task that could displace oxygen. |  |
|  | Heating of concentrated perchloric acid (60% or more). Indicate location, concentration, amount and frequency of use |  |
|  | Use of chemicals that are acutely toxic category 1 by inhalation or skin contact in the concentration purchased.  List acutely toxic chemicals in the laboratory: Click or tap here to enter text. |  |
|  | Use of hydrofluoric acid  List quantities and concentration: Click or tap here to enter text. |  |
|  | Use of reactive, pyrophoric & explosive chemicals that are considered high risk (examples are as follows):  Contact with water liberates toxic gas, reacts violently with water, pyrophoric liquid or solid – Category 1, Explosives –unstable or divisions 1.1 -1.3, self-reactive or organic peroxides (Type A), self heating –Category 1)  List materials or classes of materials: Click or tap here to enter text. |  |
|  | Chemical procedures involving pressure, vacuum, or heat when failure of the container could result in significant physical hazards, exposure to toxic materials or fire.  List procedures: Click or tap here to enter text. |  |
|  | Other, not identified above.  List: Click or tap here to enter text. |  |

**Controlling Exposures & Hazards – Work Practices**

Some laboratory work may not meet the definition of “high risk procedures” above, but may introduce additional risk because of when and/or how the work is conducted.

The following work practices require approval from the PI.

Provide details for each if applicable in your laboratory:

Working alone: Click or tap here to enter text.

Unattended Experiments: Click or tap here to enter text.

Indicate what safeguards are in place for unattended experiments: Click or tap here to enter text.

NOTE: If any unattended operation involves the use of a flammable or highly toxic material, prior approval must be obtained from the Department Chair.

**Laboratory Specific Information for Chemical Waste Disposal:**

Our laboratory generates chemical waste:

Chemical waste is accumulated in the laboratory, provide location: Click or tap here to enter text.

A satellite accumulation area sign is posted: YES  NO

Chemical waste labels are stored in the laboratory: YES  NO

If yes, provide location: Click or tap here to enter text.

Our laboratory does not generate chemical waste

**Emergency Response**

For general emergency response procedures can be found in the Emergency Action Guide, see the [Rowan Emergency Preparedness Information](https://sites.rowan.edu/publicsafety/emergencyservices/officeofemergency/index.html). Specific information on hazardous materials can be found [here](https://sites.rowan.edu/publicsafety/emergencyservices/officeofemergency/environmental/hazardous-material.html). Specific information on chemical spills can be found [here](https://sites.rowan.edu/publicsafety/emergencyservices/officeofemergency/environmental/chemical_spill.html).

**Emergency Assembly Point**

Information on building evacuation can be found in the Emergency Action Guide, see [Building Evacuation](https://sites.rowan.edu/publicsafety/emergencyservices/officeofemergency/emergency-action-guide/building_evacuation.html) for your Building Assembly Areas.

Our laboratory is [Emergency Assembly Point](https://sites.rowan.edu/publicsafety/_docs/2017%20Fall%20Semester%20Building%20Assembly%20Areas1.pdf) is: Click or tap here to enter text.

**Spill Clean Up Supplies and Instructions:**

Spill clean-up supplies are located: Click or tap here to enter text.

Usage information: (Refer to instructions in prepared kits or SOPs, or provide instructions here):

Click or tap here to enter text.

**Incident Report Form**

The Incident Report Form can be found [here](http://www.rowan.edu/incidentform).

Use the Incident Report Form to report campus incidents and employee work related injuries. These incidents may include, but are not limited to slips and falls, laboratory events, needlestick injuries, and/or other incidents that may require medical assistance.

**Certification**

By electronic signing and dating here, the Principal Investigator certifies that her/his Laboratory Specific Chemical Hygiene Plan is accurate and that it effectively provides for the chemical safety of faculty, staff, employees, and students in this laboratory.

Electronic Signature:­­ Click or tap here to enter text.

Date: Click or tap here to enter text.

**Annual Review and Updates**

By electronic signing and dating here, the Principal Investigator certifies that the required annual review (and update, if needed) of this Laboratory Specific Chemical Hygiene Plan has been completed, and that it continues to be accurate and to effectively provide for the chemical safety of faculty, staff, employees, and students in this laboratory.

|  |  |  |
| --- | --- | --- |
| **PI Electronic Signature** | **Date** | **Updates (Y/N)**  **State updates in this column** |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |

**CHEMICAL HYGIENE AND LABORATORY SAFETY TRAINING DOCUMENTATION**

The Principal Investigator (PI) of the lab is required to review and complete the entire list below

* annually with all lab members,
* when new procedures are created,
* whenever changes are made to the Chemical Hygiene Plan (CHP) or lab procedures,
* and with all new lab members before lab work is started.

Lab members must

* acknowledge all items have been reviewed,
* agree to follow procedures,
* and sign below.

Once completed, this document must be uploaded into BioRAFT.

PI is required to check each item when completed:

Ensure all lab members have read and know where to find a copy of Rowan’s CHP and the Laboratory Specific CHP, including Standard Operating Procedures.

Review how to locate important reference materials on laboratory hazards including safe handling, storage, and disposal practices.

Review chemical inventory and how to locate Safety Data Sheets for chemicals in BioRAFT.

Review physical and health hazards in this laboratory.

Review engineering controls, work practices, and personal protective equipment needed for protection from the hazards in the laboratory.

Review the location of fire extinguisher(s), emergency safety shower, emergency eyewash, emergency exit, and fire alarm pull station for this laboratory.

Review what to do in case of an emergency (spill, injury, fire).

Review the assembly point for emergency evacuations.

Review laboratory specific Standard Operating Procedures and guides covering procedures and instrumentation.

PI – Electronic Signature:Click or tap here to enter text. Date: Click or tap here to enter text.

|  |  |
| --- | --- |
| Lab Member Electronic Signature | Date |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. |