SITE SPECIFIC SAFETY

AND

STANDARD OPERATING PROCEDURES

DOCUMENT

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and

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1.0 SCOPE

The purpose of this document is to supplement the MSU Chemical Hygiene Plan to provide site specific laboratory safety and standard operating procedures for the School of Packaging (SoP). All researchers, students, and employees are to comply with these procedures to ensure the safe and efficient operation of the School. Safety is the responsibility of everyone working in university laboratories, and is essential to facilitating a clean and hazard free environment.

2.0 ADMISSION TO THE SCHOOL OF PACKAGING LABORATORIES

The following procedures must be followed before individuals will be allowed to work in the School of Packaging laboratories. The omission of any of these steps may result in the denial of lab use or other appropriate action.

2.1 Complete the Hazardous Waste Initial safety course given by Environmental Health and Safety (EHS). This course is to be taken online at the EHS web site (http://www.aware.msu.edu/TRAIN/CHI/). This covers general chemical hygiene and hazardous waste regulations and procedures. You must take the Hazardous Waste Refresher course annually to continue to be eligible to conduct work in the School of Packaging laboratories.

2.2 Complete the Cryogen safety course given by EHS. This course is to be taken online at the EHS website (http://www.aware.msu.edu/TRAIN/CRY/). This covers the safe use of cryogens, including liquid nitrogen.

2.3 Complete the Compressed Gas Cylinder safety course given by EHS. This course is to be taken online at the EHS web site (http://www.aware.msu.edu/TRAIN/CGC/). This covers general hazards and proper handling techniques of compressed gas cylinders.

2.4 Complete the Biosafety Principles safety course given by EHS. This course is to be taken online at the EHS web site (http://www.oeos.msu.edu/TRAIN/BSP/). This covers general hazards and proper handling techniques of biological materials. Select the “Other” module when given the option at the beginning of the course.

2.5 Review the MSU Chemical Hygiene Plan which can be found at the EHS website at http://www.ehs.msu.edu/chemical/programs_guidelines/chem_hygiene/chem_hygiene_plan/chp_full.pdf and in the School of Packaging main office, room 130. The MSU Chemical Hygiene plan provides a general guide for handling hazardous chemicals in laboratories. Guidelines outlined in this document must be strictly followed to ensure compliance with regulatory agency requirements.

2.6 Review the MSU Hazardous Waste Disposal Guide which can be found at the EHS web site at http://www.ehs.msu.edu/waste/programs_guidelines/WasteGuide/wastedisposalguide.pdf and in the School of Packaging main office, room 130. The MSU Hazardous Waste Disposal guide details how to properly dispose of waste materials. Guidelines outlined in this document must be strictly followed to ensure compliance with regulatory agency requirements.

2.7 Review this School of Packaging Site Specific Safety document in its entirety and become familiar with the policies and procedures within.
2.8 Complete the School of Packaging Site Specific training with the Laboratory Manager. For researchers beginning work in the fall, this course is offered as part of the Graduate Student Orientation. This course covers safety items and standard operating procedures specific to the School of Packaging. For researchers beginning work at other times of the year, please make arrangements for training by contacting the Laboratory Manager.

2.9 Fill out the Application to Work in School of Packaging Laboratory form and submit to the Laboratory Manager, room 130. This form can be obtained from the School of Packaging main office, room 130, from page 14 in the appendix of this document, or from http://www.packaging.msu.edu/research/for_researchers.

3.0 STANDARD OPERATING PROCEDURES

The following standard operating procedures must be observed when using the School of Packaging laboratories and equipment. Failure to observe these procedures can result in the loss of lab privileges or other appropriate action.

3.1 Work hours
Standard work hours for the School of Packaging are considered to be Monday through Friday between the hours of 8:00am and 5:00pm. For individuals that demonstrate that work needs to be conducted outside of this time frame, you must obtain approval to work after hours from the Laboratory Manager or appropriate faculty member.

3.2 General housekeeping
Keep work areas clean and uncluttered. Clean up work area at the conclusion of your experiment or equipment use, including floors, bench tops, equipment, and tools. Dispose of gloves and paper products in appropriate waste bins. Clean glassware and put in proper storage area. Dispose of any broken non-contaminated glass in broken glass bucket, and dispose of sharps in sharps containers. Labs are not storage areas. If you have items such as materials, extrudate, or specimens that need to be stored, please arrange to have them stored in one of the School of Packaging storage rooms by contacting the Laboratory Manager or appropriate faculty member.

3.3 Security
Report any suspicious or malicious activity observed in the School of Packaging. Never give access to labs or offices to unknown individuals. Keep keys secured at all times, and always keep lab doors closed and locked.

3.4 Instrument specific training
After admission to the School of Packaging, you must contact the Laboratory Manager to obtain equipment training. You cannot use the equipment by yourself until you have demonstrated that you can operate it independently and proficiently.

3.5 Instrument reservation schedules
Instrument reservation schedules can be accessed online at www.schoolofpackaging.com. This is to be used to reserve equipment time, and is MANDATORY FOR THE USE OF EVERY INSTRUMENT. The reservation schedule is also used as the instrument log book to keep track of usage. Please reserve the equipment for only the time needed, and if plans change and you will not be using your allotted time, please remove your reservation as soon
as possible. Individuals that consistently fail to reserve time for the use of instruments will be subject to appropriate corrective action, which can include having lab privileges revoked. If you are more than 30 minutes late for a reserved time, your time block may be forfeited.

3.6 **Broken or malfunctioning equipment**

Report broken or malfunctioning equipment to the Laboratory Manager. Damaged equipment can be a safety hazard, and reporting equipment problems ensures that it stays operational for everyone to use. If you make a mistake resulting in equipment damage, please report to the Laboratory Manager. Mistakes, while not endorsed, are common in a learning environment and reporting them is necessary to keep equipment operational and to ensure individuals learn correct operation methods.

3.7 **General safety principles**

The following general safety principles must be observed at all times when working in the School of Packaging laboratories. Repeat offenders and the failure to comply with these standards can result in appropriate corrective action and the revocation of lab privileges.

3.7.1 Wear appropriate safety equipment which may include aprons, gloves, lab coats, splash shields, safety glasses, and goggles. Safety glasses must be procured by individuals using the lab and must be worn any time the potential for impact or splashing exists. Undergraduate students must wear safety glasses at all times during lab classes. See Figure 1 in the appendix at the end of the document for eye and face protection recommendations.

3.7.2 Be familiar with the chemicals and compounds you are using for experimental setups and with the operation of lab equipment. If necessary, review hazards and proper handling techniques outlined in the applicable MSDS sheets.

3.7.3 Know the location of emergency equipment such as eyewash stations, safety showers, telephones, and fire alarms. Know emergency response procedures, which can be found in Section 5.0 on page 7 of this document.

3.7.4 No food or drink to be used for human consumption is allowed into the labs as specified in the MSU Chemical Hygiene Plan, Section 2.3.

3.7.5 Report any observed unsafe conditions or practices in the lab to any member of the safety committee.

3.8 **Chemicals**

3.8.1 **Labeling**

All compounds in the School of Packaging laboratories must be labeled with the following information:

3.8.1.1 Unabbreviated chemical name

3.8.1.2 Owner

3.8.1.3 Date of acquisition or preparation

3.8.1.4 Hazards identification

Compounds missing any of this information are subject to disposal without notification. Please reference Figure 2 for proper labeling techniques.

3.8.2 **Chemical check-in procedures/inventory**

All chemicals must be logged into the School of Packaging chemical inventory database and must be labeled using the following process:
3.8.2.1 Fill out the SoP Chemical Inventory Log-in sheet (form is available at the School of Packaging main office, room 130, from the appendix in this document (page 15), or from www.packaging.msu.edu under the For Researchers tab.

3.8.2.2 Submit Chemical Inventory Log-in sheet to Laboratory Manager along with applicable MSDS sheets. MSDS sheets are required for every single chemical you bring into and use in the School of Packaging.

3.8.2.3 Label the chemical container with the following information printed neatly (preferably using a printer and not hand written):
- Unabbreviated compound name
- Full name and date of acquisition
- Last name of your Principle Investigator (PI)
- Hazards of the compound

3.8.2.4 It will be your responsibility to ensure your chemicals remain properly labeled.

3.8.3 MSDS’s and MSU Chemical Hygiene Plan
MSDS sheets are maintained in the EHS electronic database located at http://www.aware.msu.edu/MSDS/search.htm?-DB=MSDS-&-Lay=Form-&-format=search.htm&-view. You can also obtain MSDS sheets from the chemical vendor. You must submit an MSDS sheet for every single chemical you bring into and use in the School of Packaging. You must review MSDS sheets for the chemicals you are using and be familiar with associated hazards. We are required to have an MSDS sheet on file for every single chemical we have in the School of Packaging. The MSU Chemical Hygiene Plan is also available in the School of Packaging main office, room 130, and on the EHS Web site at http://www.ehs.msu.edu/chemical/programs_guidelines/programs_guidelines.htm.

3.8.4 Chemical storage
Do not store chemical compounds in offices, drawers, on bench tops, or in the open. Store chemical compounds in designated storage areas only. Store only compatible chemicals in storage areas. Please reference Figure 3 for compatible chemical storage groups.

3.9 Hazardous waste

3.9.1 General guidelines
Generators of hazardous waste are responsible for the proper labeling and disposal of their waste. Leave the waste container in the same room where it is generated. If the waste product is not in the original container, a hazardous waste tag must be attached to it and must be completely filled out (See Figure 4). Hazardous waste tags can be obtained from the label station in room 163, from the Laboratory Manager, or from EHS. All hazardous waste containers must be submitted to EHS for pickup within 90 days of first use. A hazardous waste pickup request form can be submitted at http://www.oeos.msu.edu/chem-waste/new.htm. MAKE SURE TO DISPOSE OF YOUR WASTE BEFORE
THE 90 DAY LIMIT. Failure to comply with these protocols will result in appropriate corrective action.

3.9.2 **Sharps containers**
Red sharps containers are to be used for sharps disposal, which are defined as needles, syringes (with or without needle attached), scalpels, intravenous tubing with needles attached regardless of whether they are contaminated or not, and anything which is sharp enough to penetrate the skin and is contaminated with biological substances, per the Biological Safety Manual, which is located at [http://www.ehs.msu.edu/biological/programs_guidelines/biosafety_manual/Biosafety_Manual.pdf](http://www.ehs.msu.edu/biological/programs_guidelines/biosafety_manual/Biosafety_Manual.pdf). Red sharps disposal containers are located in the labs most likely to generate sharps waste. If you need more containers, notify the Laboratory Manager. Please label each container with the date that the first item was placed in it. Notify the Laboratory Manager when 90 days have passed since the first use of the red container so that a pick-up may be requested.

Non-contaminated razor blades only should be disposed of in the yellow blades containers located in each laboratory.

3.9.3 **Broken glass buckets**
The red buckets located in the labs are for non-contaminated glass items only per the MSU Chemical Hygiene Plan section 3.4.2.1. Do not put paper products, gloves, razor blades, or any other items in them.

3.9.4 **Mercury spills**
In the event of a mercury spill, immediately contact a member of the safety committee and do not attempt to clean it up yourself. If the cleanup is not done properly, the mercury contamination can be made worse. If a member of the safety committee is not available, please contact EHS directly. The MSU Chemical Hygiene Plan contains detailed information on how to handle mercury spills.

3.10 **Gas Cylinders**
3.10.1 **General**
Be aware of the physical and toxicological hazards of gases being used, such as flammability, oxidizing, pyrophoric, corrosive, toxic, irritant, and cryogenic gases, and be aware of those that can cause asphyxiation. Do not store cylinders containing incompatible gases together (i.e. oxygen with flammable gases). Keep gas cylinders secured at all times, and remove the regulator and put on a safety cap before transport. Use only approved restraints (do not use bungee cords etc.). Do not rely on cylinder color to indentify cylinder contents, always read the product label description. Never force an inlet fitting onto a valve or use an adaptor. Use appropriate safety gear such as safety glasses, goggles, gloves, etc. Emergency leaks - if the leak is significant or the gas involved is toxic or flammable (NFPA Rating 3 or 4), pull fire alarm, evacuate the area and call 911.

3.10.2 **Gas cylinder use and ordering**
Any gas cylinder entering or leaving the gas cylinder storage room (room 177) must be logged into the gas cylinder room log book. Please notify the Laboratory Manager when quantities are getting low according to Table 1 shown.
below. Users of instruments connected to liquid nitrogen dewars should monitor the level of the liquid nitrogen and notify the lab manager approximately one week before they are anticipated to be empty.

<table>
<thead>
<tr>
<th>Table 1. Gas Cylinder Order Chart</th>
<th>Notify Lab Supervisor When This Many Tanks Remain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (99.97% purity)</td>
<td>3</td>
</tr>
<tr>
<td>Air (medical)</td>
<td>2</td>
</tr>
<tr>
<td>Air (zero)</td>
<td>0</td>
</tr>
<tr>
<td>Helium (UHP - 99.999%)</td>
<td>1</td>
</tr>
<tr>
<td>CO₂ (99.5% Purity)</td>
<td>0</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>0</td>
</tr>
<tr>
<td>Oxygen</td>
<td>0</td>
</tr>
<tr>
<td>2% H₂/Balance N₂</td>
<td>1</td>
</tr>
</tbody>
</table>

4.0 THE SCHOOL OF PACKAGING CHECK OUT PROCEDURES

When leaving the School of Packaging, please use the following procedure to ensure chemicals and items associated with your projects are taken care of:

4.1 **Transfer all chemicals to a designate, or dispose** of in accordance with the MSU Chemical Hygiene Plan if no longer needed or past usable life.  
4.2 **Fill out a School of Packaging checkout form** (available on page 16 in the appendix of this document)

5.0 EMERGENCY/MEDICAL PROCEDURES

5.1 **Life threatening incident**

   Call 911

   **Emergency Facility**
   Sparrow Hospital ER
   1215 E. Michigan Avenue
   Lansing MI 48909
   517-364-4141

   Use this facility for critical emergencies: Severe burns, fractures, shock, seizure, shortness of breath, severe bleeding, chest pain, head injuries, motor vehicle accidents, chemical exposure, smoke inhalation. Also for bloodborne pathogen exposure when Olin Health Center is closed.
5.2 Non-life threatening incident

5.2.1 MSU Employees and Student Employees
5.2.1.1 Immediately report the incident to a member of the safety committee and obtain an Authorization to Invoice MSU form.
5.2.1.2 Take the Authorization to Invoice MSU form to the Primary Care Facility.

<table>
<thead>
<tr>
<th>Primary Care Facility</th>
<th>Secondary Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olin Health Center</td>
<td>Sparrow East Lansing Urgent Care</td>
</tr>
<tr>
<td>463 East Circle Drive</td>
<td>2682 E. Grand River Ave.</td>
</tr>
<tr>
<td>East Lansing MI 48824</td>
<td>East Lansing MI 48823</td>
</tr>
<tr>
<td>517-353-4660</td>
<td>517-333-6562</td>
</tr>
<tr>
<td>Monday-Friday, 8am – 6pm</td>
<td>8:00am-8:00pm, 7 days a week, 365 days a year</td>
</tr>
<tr>
<td>Saturday, 10:00am-1:00pm</td>
<td>• Use this facility when Olin Health Center is closed (except for blood borne pathogen exposures and emergencies)</td>
</tr>
<tr>
<td>Closed Sunday</td>
<td>• Follow-up visits must be scheduled at Olin Health Center</td>
</tr>
<tr>
<td>Summer Hours &amp; Semester Breaks</td>
<td>• Open holidays</td>
</tr>
<tr>
<td>Monday-Friday, 8am – 5pm</td>
<td></td>
</tr>
</tbody>
</table>

5.2.1.3 Present result of visit to supervisor and follow all recommendations/restrictions.
5.2.1.4 File a Report of Claimed Occupational Injury or Illness
5.2.1.5 Complete FMLA paperwork if applicable
5.2.1.6 Contact EHS following any injury

5.2.2 Students
5.2.2.1 Immediately report the incident to a member of the safety committee.
5.2.2.2 Go to a health care provider of choice.
5.2.2.3 The School of Packaging can arrange for transportation if needed.

5.3 Chemical Spill
Follow procedures outlined in the MSU Chemical Hygiene Plan and applicable MSDS sheets.

Emergency Situation – Fire
The following steps are basic protocol for handling a fire or fire-related emergency situation in the laboratory:
1.) Pull the fire alarm.
2.) Call 911 from a safe location.
3.) Notify the School of Packaging emergency/safety coordinator.
4.) Evacuate to rally points as indicated in Figure 5.

5.4 Tornado
Seek shelter in a designated tornado shelter areas indicated in Figure 5.
# Eye and Face Protection in MSU Laboratories

Appropriate eye and face protective equipment must be worn at all times in those labs where eye hazards exist. Guidelines for selecting appropriate eye and face protection

<table>
<thead>
<tr>
<th>Safety Glasses</th>
<th>Chemical Splash Goggles</th>
<th>Face Shield + Chemical Splash Goggles</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Safety Glasses Image]</td>
<td>![Chemical Splash Goggles Image]</td>
<td>![Face Shield + Chemical Splash Goggles Image]</td>
</tr>
</tbody>
</table>

**Required when:**
An impact hazard exists or when working with low hazard chemicals*, or when a low probability of splash exists.

**Examples:**
- Pipetting
- Handling closed bottle of injurious chemical
- Mixing solutions
- Opening centrifuge tubes

**Required when:**
Working with smaller amounts of corrosive or injurious chemicals* and a reasonable probability of splash exists.

**Examples:**
- Pouring acid out of a 1 pint bottle
- Pouring methylene chloride from a 1 liter bottle
- Working with liquids under pressure

**Required when:**
Working with larger quantities of corrosive chemicals* and / or a high probability of eye and face injury exists.

**Examples:**
- Working with an acid bath
- Pouring 4 liters of acid into a container
- Handling highly reactive chemicals that may spatter

* Refer to the MSDS for additional hazard information. Please refer to the PPE Assessment for specific operations.

Note: Ordinary prescription glasses do not provide adequate protection against eye injury. Eye protection equipment must be ANSI Z87 approved.

For more information on the MSU Eye and Face Protection policy, visit our web page at: [www.orcbs.msu.edu/chemical/eye_face.htm](http://www.orcbs.msu.edu/chemical/eye_face.htm)

ORCBS Contact Information: • Phone: 355-0153 • Fax: 353-4871 • E-mail: orcbs@msu.edu • Web: www.orcbs.msu.edu • Hot-Line: 432-SAFE
Proper Labeling for Containers of Hazardous Chemicals in MSU Laboratories

Labeling Basics

*For containers labeled by the manufacturer:* (see left)
1. Inspect the label on incoming containers.
2. Replace damaged or semi-attached labels.

*For transferred products or prepared solutions labeled by the user:* (see right)
1. Label each chemical container with the chemical name and hazard warning.
2. Refer to the Material Safety Data Sheet (MSDS) for hazard warnings.

Alternate Method for Labeling Multiple Small Containers

Legend Method:
1. Label containers with abbreviated chemical name and hazard warning.
2. Provide a key in a visible location in the lab with complete chemical name.
3. Document that employees are trained on the labeling system.

Box or Tray Method:
1. Put containers in box or tray.
2. Label tray with chemical name and hazard warning.
3. If containers are removed from box/tray they must be properly labeled or returned to the box or tray within the workshift.*
4. Document that employees are trained on the labeling system.

Peroxidizable Chemicals

*Must be labeled with:*
1. Date Received
2. Date Opened
3. Date Tested
4. Test Results

See CHP Appendix H for more information.

ORCBS Contact Information:

Phone: 355-0153
Fax: 353-4871
E-Mail: orcbs@msu.edu
Web: www.orcbs.msu.edu
Hot-Line: 432-SAFE

* If the container is created and emptied within the workshift and is under the control of the person transferring the chemical, it does not have to be labeled.
Figure 3 – Compatible Chemical Storage Group Recommendations

The School of Packaging - Site Specific Safety and Standard Operating Procedures, Revision 11
Required Elements of Proper Hazardous Waste Container Management

Completely fill out waste tag
Label each container with the words “Hazardous Waste”. Keep containers closed when NOT in use.
Do NOT overfill, leave 5% volume for expansion.
Dispose of waste within 90 days.
Do NOT mix incompatibles.
Store in a secure area.
Refer to the Waste Disposal Guide.
Submit a pickup request through the web-site.
Take the initial Chemical Hygiene / Hazardous Waste training at the ORCBS and complete your annual Hazardous Waste Refresher on-line each year.

ORCBS Contact Information
Office Phone: (517) 355-0153
Office Fax: (517) 353-4871
Office E-mail: orcbs@msu.edu
Web Site: www.orcbs.msu.edu
Training Hotline: (517) 432-SAFE
EVACUATION RALLY POINT: Report to median on Wilson Road in front of Packaging Building (north side)

Figure 5 – School of Packaging Floor Plan Showing Tornado Shelter Areas and Evacuation Routes
Application To Work in SoP Laboratory

Date: ___________________________ Student Number: ___________________________

Name: ___________________________ E-mail Address: ___________________________

Department: ______________________ MSU NetID: ________________________________

Advisor’s Name: ___________________ Advisor’s e-mail: __________________________

Project Title:

<table>
<thead>
<tr>
<th>MSU Account Number(s)</th>
<th>Check Funding Type</th>
<th>Expiration Date</th>
<th>Authorized Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.)</td>
<td>□ Industrial □ Federal □ State □ MSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.)</td>
<td>□ Industrial □ Federal □ State □ MSU</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If keys are required for building or lab access, a deposit is required, which will be refunded upon return. Cost is $10.00 per key, not to exceed $20.00.

Instruments that will be used (Costs will be provided upon request):

Date applicant took EHS Chemical Hygiene and Laboratory Safety Initial training course (aware.msu.edu/TRAIN/CHI): ___________________________

Date applicant took EHS Cryogen Safety training (aware.msu.edu/TRAIN/CRY): ___________________________

Date applicant took EHS Compressed Gas Cylinder Safety course (aware.msu.edu/TRAIN/CGC): ___________________________

Date applicant took the EHS Biosafety Principles course (oeos.msu.edu/TRAIN/BSP): ___________________________

Date applicant attended the School of Packaging Site Specific training (schedule with lab manager): ___________________________

Date applicant reviewed MSU Chemical Hygiene Plan (orcbx.msu.edu/chemical/programs_guidelines/chem_hygiene/chem_hygiene_plan/chp_full.pdf), Hazardous Waste Disposal Guide (ehs.msu.edu/waste/programs_guidelines/WasteGuide/wastedisposalguide.pdf), and School of Packaging Site Specific Safety Document (packaging.msu.edu/research/for_researchers): ___________________________

Informed Consent Statement: By signing below, the applicant acknowledges that they have been informed about the location and contents of the MSU Chemical Hygiene Plan, the School of Packaging Site Specific Safety and Standard Operating Procedures Document, MSDS sheets, and the MSU Hazardous Waste Disposal Guide. Signing also acknowledges that the applicant has taken the required safety training from EHS.

Student Signature: ___________________________ Date: ___________________________

Advisor Signature: ___________________________ Date: ___________________________

SoP Approval: ___________________________ Date: ___________________________

Applicant Status (Check One): □ Staff □ M.S. □ Ph.D. □ Undergrad □ Other, please describe: ___________________________

Rev. 2013 12-20
# SoP Chemical Inventory Log-In Sheet

**Notes:**
- MSDS sheet must be submitted to the Lab Manager along with this form for every chemical you bring into the SoP labs.
- You are responsible for properly labeling all chemicals, including full chemical name (no abbreviations), date, your name, and any hazards associated with the compound.
- You are responsible for the proper disposal of the chemical after completion of your experiment.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>Professor/PI</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>E-mail Address</td>
<td></td>
</tr>
<tr>
<td>Chemical Name</td>
<td></td>
</tr>
<tr>
<td>CAS #</td>
<td></td>
</tr>
<tr>
<td>Description of Chemical</td>
<td></td>
</tr>
<tr>
<td>Other Names/Synonyms</td>
<td></td>
</tr>
<tr>
<td>Application of Chemical</td>
<td></td>
</tr>
<tr>
<td>Toxicological Hazards</td>
<td></td>
</tr>
<tr>
<td>Container Size/Amount</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>Vendor/Catalog #</td>
<td></td>
</tr>
<tr>
<td>Date MSDS Reviewed</td>
<td></td>
</tr>
<tr>
<td>Received</td>
<td></td>
</tr>
<tr>
<td>Expiration Date</td>
<td></td>
</tr>
</tbody>
</table>

**Compliance Requirements:**
- No Flammables
- No Acids
- No Bases
- No Oxidizers
- Keep Desiccated
- Keep Refrigerated
- Keep Frozen
- No Heat

**Protection Required:**
- Goggles
- Gloves
- Lab Coat
- Face Shield
- Respirator
- Apron
- Fire Hood

**Physical Warnings:**
- Flammable
- Corrosive
- Pyrophoric
- Unstable
- Biohazardous
- Combustible
- Oxidizer
- Peroxidizable
- Cryogen
- Explosive
- Water Reactive
- Light Sensitive
- Radioactive

**Health Warnings:**
- Allergen
- Carcinogen
- Toxin
- Irritant
- Sensitizer

**NFPA Hazards Rating**
- Flammability
- Health
- Reactivity
- Specific
Either Part A or Part B must be completed before students will be certified for graduation.

**Part A**

I hereby certify that I have properly disposed of all experimental materials I have acquired or used, or that I have arranged with my major professor for them to be handled appropriately. All chemicals/materials that I have acquired and/or used have been disposed of or stored in accordance with University policies and regulations.

Name (please print): __________________________________________________

Signature: __________________________________________________________

Date: ______________________________

Name of Major Professor: _______________________________________________

I hereby certify that the student named above has properly disposed of all his/her experimental materials or other appropriate arrangements have been made for them. All chemicals/materials that were acquired and/or used have been disposed of or stored in accordance with University policies and regulations.

Signature of major professor: ___________________________________________

Date: ______________________________

Part B

I hereby certify that no experimental materials or samples were used for my project, thesis, or dissertation.

Name (please print): __________________________________________________

Signature: __________________________________________________________

Date: ______________________________

Name of Major Professor: _______________________________________________

I hereby certify that no experimental materials or samples were used for this student’s project, thesis, or dissertation.

Signature of major professor: ___________________________________________

Date: ______________________________