# SUNY Cortland - Environmental Health and Safety Office

Hazard Communication/Right-to-Know Program
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# Hazard Communication/Right-to-Know Program

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#### I. Introduction

This document is the Hazard Communication Program for SUNY Cortland. Our Hazard Communication Program is designed to promote safe work practices as well as convey information on the hazards of chemicals present in the work area. This program is reviewed periodically by the Environmental Health and Safety (EH&S) Office and other departments. All employees who handle or use chemicals should know how to access this program.

Hazard Communication compliance will be verified during routine inspections. Affected employees should become thoroughly familiar with the procedures and safe work practices outlined in this document. Please contact the EH&S Office at <a href="mailto:environlth@cortland.edu">environlth@cortland.edu</a>, or extension 2508, for questions or assistance with implementing this program in your department.

## II. Supervisors' Responsibilities

Supervisors must promote all aspects of safety. Chemicals should be safely and properly ordered, used, labeled, disposed of, and stored. Additionally, work areas should be neat and orderly, and safety inspections should be performed periodically. Compliance with this program will be verified during inspections conducted by the EH&S Office. Supervisors should respond to these inspections promptly and follow-up on any necessary corrective action. Moreover, results from air monitoring and noise

surveys must be reported to employees on a timely basis. Training requirements are outlined in Section V of this program. Employees who handle or use chemicals are to receive Hazard Communication training prior to their initial assignment and annually thereafter. Employees must also receive training when new chemicals, hazards, or work practices are introduced into the work environment. Supervisors should remember to submit records of department-provided safety training to the EH&S Office.

The central focus of the Hazard Communication program is contained in Sections VI, VII, VIII and IX. All relevant safe work practices and programs that are outlined in these sections should be implemented in the department. A comprehensive inspection checklist is provided in Section X. This checklist should be used throughout the year. When unsafe conditions are identified, appropriate corrective action must be taken. Moreover, all work-related accidents, injuries, illnesses or "near misses" must be reported to the EH&S Office promptly. Reporting procedures for work-related accidents, injuries, illnesses, and medical emergencies are available at:

## http://www.cortland.edu/hr/Policies/InjuryProcedure.pdf

Additionally, please use the SUNY Cortland *Employee Injury, Illness, Medical Emergency* form (Form WC-1) to report all work-related injuries and illnesses. This form is available at:

# http://www.cortland.edu/hr/Policies/InjuryForm.pdf

#### III. Employees' Responsibilities

Supervisors and employees share the responsibility of implementing an effective safety program within the department. Issues of special concern are safety training, housekeeping, chemical management, and safe work practices. At a minimum, employees must know or become familiar with:

- the contents and purpose of this program;
- how to access this program;
- how to access and read Safety Data Sheets (SDSs);
- how to access the department chemical inventory;
- hazards of chemicals and chemical processes;
- safe handling, storage, and disposal practices for chemicals;
- how to read manufacturer's labels and protocol for labeling chemicals;
- personal protective equipment (PPE) and control devices;
- safe work practices; and
- protocol for emergency response.

Safe work practices and specific programs are outlined in Sections VI, VII, VIII, and IX of this program. While the information in these sections is important, adopting a safety-conscious attitude is also important. Therefore, employees should practice safety at all times, identify and correct unsafe conditions, and promptly report work-related accidents, injuries, illnesses, and "near misses" to the department supervisor or EH&S Office. Reporting procedures for work-related accidents, injuries, illnesses, and medical emergencies are available at the following URL:

## http://www.cortland.edu/hr/Policies/InjuryProcedure.pdf

Additionally, please use the SUNY Cortland *Employee Injury, Illness, Medical Emergency* form (Form WC-1) to report all work-related injuries and illnesses. This form is available at:

http://www.cortland.edu/hr/Policies/InjuryForm.pdf

## IV. Contractor Safety

The EH&S Office and Facilities Planning, Design and Construction Office project coordinators will supply SDSs for SUNY Cortland chemicals and convey recognized workplace hazards to contractors whenever it is appropriate. However, while on campus, contractors are responsible for training their employees, observing safe work practices, complying with regulatory requirements, and complying with requirements and guidelines outlined in the SUNY Cortland Facilities Planning, Design and Construction Office Design Standards. Contractors must also submit written plans that outline project-specific hazards and associated safety precautions to the EH&S Office upon request.

Within the framework of the Hazard Communication Program, contractors must submit SDSs associated with specific projects to SUNY Cortland project coordinators prior to bringing chemicals on campus and commencing work. After receiving project-specific SDSs, project coordinators will submit these documents to the EH&S Office. The EH&S Office will review SDSs to assess hazards and determine whether or not certain controls should be implemented. In instances where a specific chemical is extremely hazardous or possesses an unreasonable risk to human health or the environment, the EH&S Office will request that the contractor use a less hazardous chemical or use appropriate controls to eliminate or reduce the hazard(s). During projects, contractors must make sure that their chemicals are appropriately labeled. Additionally, at the end of a project, contractors are required to remove their chemicals from the campus.

#### V. Training

Training is a crucial component of SUNY Cortland's safety program. Employees who handle or use chemicals are to receive Hazard Communication training prior to their

initial assignment and annually thereafter. Employees must also receive training when new chemicals, hazards or work practices are introduced into the work environment. Hazard Communication training is generally provided by the EH&S Office or supervisors. This training may be provided to an individual or a group.

Information that must be discussed during Hazard Communication training includes:

- the contents and purpose of this program;
- how to access this program;
- how to access and read SDSs (Section VI);
- how to retrieve the department chemical inventory (Section VI);
- hazards of chemicals and chemical processes (Sections VI and VII);
- safe handling, storage, and disposal practices for chemicals (Sections VI, VII, and VIII);
- how to read manufacturer's labels and protocol for labeling chemicals (Section VI):
- personal protective equipment and control devices (Section VI);
- safe work practices (Sections VI, VII, VIII, and IX);
- methods and observations used to detect the presence or release of a hazardous chemical; and
- instructions on what to do in the event of an emergency (refer to emergency response information under "Safe Work Practices" in Section IX).

Employees must also receive other job-related safety training. Table 1 summarizes significant training topics, training frequency, and target audiences. It is important to note that training frequency can be situation-dependent and performance-driven. If it is determined that employees lack adequate knowledge to perform their jobs safely, the training frequency indicated in Table 1 will be altered.

Table 1 – Required Safety Training

Training Topic	Training Frequency	Target Audience
Bloodborne Pathogen	Annually	Employees with potential
		exposures to blood and bodily
		fluids.
Chemical Hygiene Plan	Annually	Laboratory Employees who
		handle or use chemicals.
Emergency Action Plan	Annually	All Employees.
Hazard Communication/Right-	Annually	Employees who handle or use
to-Know		chemicals.
Hearing Conservation	Annually	Employees exposed to high
		noise levels.

Table 1 – Required Safety Training (cont.)

Training Topic	Training Frequency	Target Audience
Lockout/Tagout	One-time for the general	All Employees.
	population. Initially and	
	whenever job responsibilities	
	change for maintenance	
	Employees.	
Personal Protective Equipment	Initially and when new PPE is	Employees who require PPE to
(PPE)	required.	perform their job.
Respiratory Protection	Annually	Employees who require the use
		of a respirator based on hazard
		assessments by the EH&S
		Office.

## VI. Hazard Identification and Exposure Control Programs

## Chemical Management Database

Chemical hazard information, SDSs, department chemical inventories, and other safety and environmental information related to chemicals are stored in SUNY Cortland's Chemical Management Database. Access to this database is available at: <a href="http://colfax/chemmgmt/">http://colfax/chemmgmt/</a>. Employees who handle or use chemicals are expected to know how to use this database. Instructions on how to use the Chemical Management Database are provided during annual Hazard Communication training sessions or during informal training sessions.

### Safety Data Sheets

SDSs provide health, safety, physical data, and waste disposal information on chemicals. Chemical manufacturers and distributors are required to supply these documents to their customers by federal mandate. SDSs can be accessed from SUNY Cortland's Chemical Management Database at: <a href="http://colfax/chemmgmt/">http://colfax/chemmgmt/</a> (see discussion on the Chemical Management Database in this section). SDSs should be reviewed: 1) during Hazard Communication training sessions; 2) when new chemicals are introduced into the department; or 3) when employees are unfamiliar with the hazards of a chemical. It is important to mention that employees are not required to review SDSs for all of the chemicals that are represented in the department chemical inventory during a Hazard Communication training session. However, employees should know how to read SDSs and understand basic terminology that is used within these documents. Employees are encouraged to speak with their supervisors or contact the EH&S Office for assistance with reading and interpreting SDSs. Additionally, employees should contact the EH&S Office if a SDS cannot be retrieved from the Chemical Management Database.

When chemical incidents or accidents occur that involve a visit to a hospital or treatment center, the SDS(s) for the specific chemical(s) should be given to the staff at the hospital or treatment center. If necessary, employees should contact their supervisor or the EH&S Office for assistance with acquiring SDSs during these situations. Moreover, if the Chemical Management Database is unavailable, employees should contact the EH&S Office for assistance with retrieving SDSs during regular hours. Employees should call Chemtrek at 800-262-8200 or Safetec at 888-745-8943 for emergency situations that occur after-hours.

While shipping chemicals to other non-SUNY Cortland employers is not a usual practice, employees must contact the EH&S Office before sending chemicals to other employers or locations. The EH&S Office will ensure that applicable shipping regulations are observed and SDSs are included with the shipment.

# Department Chemical Inventory

The department chemical inventory is the complete list of authorized chemicals for a department. Supervisors and employees are responsible for maintaining an accurate department chemical inventory. This inventory should be reviewed during Hazard Communication training sessions and scrutinized during self-inspections of the department. The department chemical inventory can be accessed from the Chemical Management Database at: <a href="http://colfax/chemmgmt/">http://colfax/chemmgmt/</a>. Employees should contact the EH&S Office for assistance with retrieving the department chemical inventory.

#### Labeling

Chemical labels supplement SDSs and supply concise hazard information on specific chemicals. All chemical containers must have either a manufacturer's label or a hand-written label. Additionally, pipes must be labeled to indicate the contents and direction of flow.

Manufacturer's labels will suffice for most chemicals. These labels should provide: 1) the chemical or trade name; 2) a signal word (e.g., "warning", "danger"), if applicable, to convey the hazard level; 3) hazard statement(s); 4) pictogram(s); 5) precautionary statement(s); and 6) name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

Employee-generated labels should be used for secondary containers. These labels must provide the chemical or trade name, and words, pictures, symbols, or a combination thereof, which convey the hazards of the chemical. However, if a secondary container is intended for immediate use, and it is under the control of the employee transferring the chemical, the secondary container does not need to be labeled.

Supervisors and employees should review the department chemical labeling program during self-inspections. Defaced labels should be replaced and containers without chemical labels should be promptly labeled.

#### Chemical Procurement and Control

Responsibilities, requirements, and guidelines for chemical procurement and control are outlined in SUNY Cortland's Chemical Procurement and Control Policy. Before a chemical is purchased, the chemical user should check the department inventory to determine authorization status. The department inventory can be retrieved from SUNY Cortland's Chemical Management Database at: <a href="http://colfax/chemmgmt/">http://colfax/chemmgmt/</a>. If the department is not authorized for the chemical of interest, the chemical user should send information related to the chemical (i.e., chemical name, desired quantity, specific use, and SDS) to the EH&S Office. The EH&S Office will review the chemical request to assess potential hazards and determine whether or not regulatory restrictions apply. In rare instances where a chemical is, for example, extremely toxic or hazardous, the EH&S Office will suggest that the user consider selecting a less toxic or hazardous substance. When a chemical is approved for use, the SDS and other relevant information is entered into the Chemical Management Database. Additionally, safe handling, storage and disposal requirements might be specified to the user.

Note: Free samples are not to be obtained from chemical manufacturers or distributors without approval from the EH&S Office, and employees are not to use chemicals obtained from home for job-specific tasks. Additionally, employees should not borrow chemicals from other departments without prior approval from the EH&S Office.

The chemical user may order the chemical of interest after the chemical authorization review. Orders should be limited to quantities that are commensurate with current needs and in accordance with sound chemical management practices. After a chemical is received, the user should observe all safe handling, storage, and disposal requirements.

Existing chemicals do not require a chemical authorization review; therefore, these chemicals can be ordered at the discretion of the user. In instances where large quantities are ordered or when certain regulatory controls apply, the user should contact the EH&S Office before placing an order. The EH&S Office will, thereafter, specify whether or not special ordering, handling, use, or disposal requirements are necessary.

Chemicals that are imported from other countries require special controls under the Environmental Protection Agency's Toxic Substances Control Act (TSCA). Before arrangements are made to import any chemical, the EH&S Office must be contacted first. If the chemical's use will comply with the relevant stipulations of TSCA, the EH&S Office will issue a TSCA Certificate of Compliance and approval will be granted to import the requested chemical (see discussion on Toxic Substances Control Act in this section).

## **Chemical Inventory Control**

Chemical users are encouraged to periodically review their department chemical inventory for accuracy. If a chemical is used, but is it is not listed on the department chemical inventory, the user should contact the EH&S Office. The user should specify the chemical name, manufacturer and quantity when reporting unauthorized chemicals. Chemical users should also contact the EH&S Office when a chemical is no longer used within a department. The department's chemical authorization list will subsequently be updated and hazardous waste disposal arrangements will be made.

## **Audits and Inspections**

Health, safety, and environmental audits and inspections emphasize all aspects of safety and regulatory compliance. During these inspections, the EH&S Office will: 1) evaluate health, safety, and environmental program compliance; and 2) identify unsafe conditions and work practices. When discrepancies are identified, the EH&S Office will implement appropriate corrective action. Depending on the circumstances, supervisors and employees are required to participate in these audits and inspections. Moreover, supervisors and employees are periodically requested to conduct self-audits. A comprehensive inspection checklist is provided in Section X of this document.

To promote sound chemical inventory management, the EH&S Office will periodically conduct chemical inventory audits. During these audits, supervisors are requested to verify the accuracy of their department chemical inventory. Inventory changes or discrepancies will be identified, and the EH&S Office will update the Chemical Management Database.

#### **Toxic Substances Control Act**

The Toxic Substances Control Act (TSCA) was enacted in 1976. This legislation gives the Environmental Protection Agency the authority to regulate the manufacture, use, distribution and disposal of chemical substances. Additionally, TSCA requires manufacturers to provide data on the health and environmental effects of chemical substances and mixtures. The principal components of TSCA involve: 1) chemical testing; 2) pre-manufacture review; 3) authority to control chemical use and disposal; 4) recordkeeping and reporting; 5) export notification; and 6) import certification. The compliance strategy for the relevant sections of TSCA is outlined in this section.

All chemicals used in a non-laboratory setting must be TSCA registered. TSCA status should be ascertained by the EH&S Office before a chemical is purchased. For chemicals that are not TSCA registered, requests for chemical authorization are denied. Alternatively, chemicals used strictly for research and development are exempt from TSCA registration. When a non-TSCA registered chemical is approved for use in research and development, the requestor must ensure that the chemical is not introduced into a non-laboratory setting. The requester must also observe all safe handling, storage and disposal requirements specified by the EH&S Office, including labeling the chemical "For Research and Development Use Only".

The Environmental Protection Agency requires export notification for certain regulated chemicals. Before a chemical is exported, the EH&S Office must be contacted first. The chemical name, the country to which the chemical will be exported, and the date of intended export must be specified. The EH&S Office will issue relevant regulatory documents, if necessary.

Before arrangements are made to import a chemical, the EH&S Office must first be contacted. It is important to note that equipment containing chemicals, toners, ink cartridges, and ribbons are subject to TSCA requirements. The EH&S Office will determine the intended use of the chemical and ascertain whether or not the chemical or its components are listed on the TSCA inventory. For import requests that comply with all aspects of TSCA, the EH&S Office will issue a TSCA Certificate of Compliance. Subsequently, arrangements can be made to import the chemical. Import requests that do not comply with TSCA will not be approved.

#### Job Hazard Analysis

A job hazard analysis is a document that provides written procedures to help eliminate job hazards and reduce accidents, injuries, illnesses, and incidents in the workplace. Job hazard analyses for chemicals are particularly useful as safe operating procedures and personal protective equipment are specified within the document. Supervisors and employees are requested to make these documents part of their safety program.

### Personal Protective Equipment

Requirements involving Personal Protective Equipment (PPE) are outlined in SUNY Cortland's: 1) Personal Protective Equipment Program; 2) Operational Services Unit's Policy for Protective Equipment/Dress for Personal Safety; and 3) Uniforms and Safety Shoe Programs Policy. PPE requirements are also specified: 1) in department hazard assessments; 2) in job hazard analyses (see discussion on Job Hazard Analysis in this section); and 3) during chemical procurement. Employees must wear PPE that is specified for certain jobs or tasks, and supervisors must enforce the use of PPE whenever it is required.

## VII. Chemical Management

#### General Requirements

Responsible chemical management requires vigilance, dedication, and advanced planning. Chemicals must be ordered, handled, stored, labeled and disposed of properly. Employees are informed of sound chemical management practices during training, when chemicals are ordered, and when job hazard analyses are reviewed. Employees also become familiar with the hazards of chemicals when SDSs are reviewed and during audits and inspections.

Safe chemical storage is frequently mishandled in the workplace. The four major storage classifications for chemicals are: 1) organics/flammables; 2) oxidizers; 3) inorganics/bases; and 4) acids. Chemicals from each of these discrete storage classifications must not be stored together. For example, oxidizers must not be stored with flammables. Aside from segregating incompatible substances, chemicals must be stored in specially designated areas, such as in cabinets or locations with adequate spill containment. Supervisors and employees are encouraged to contact the EH&S Office for assistance with chemical storage.

Although it is difficult to effectively summarize all safe work practices pertaining to chemicals, the following guidelines should be observed:

- Store chemicals away from hand soap, skin cream, personal hygiene products, and foodstuffs.
- Label refrigerators where chemicals are stored to indicate "No Food, No Drink".
- Purchase all chemicals in accordance with procurement practices outlined in Section VI and in SUNY Cortland's Chemical Procurement and Control Policy.
- Do not obtain free samples of chemicals from manufacturers or distributors without prior approval from the EH&S Office.
- Do not borrow chemicals from other departments without prior approval from the EH&S Office.
- Do not use chemicals obtained from home for job-specific tasks.
- Transfer chemicals to other locations in approved carriers.
- Do not transfer chemicals to other locations in private vehicles. Contact the EH&S Office to request assistance with transporting chemicals.
- Use all chemicals under adequate exhaust.
- Always wear adequate PPE. Contact the EH&S Office for assistance with PPE selection.
- When chemical contact exposures occur, first remove contaminated clothing, wash skin or eyes under an eyewash/shower unit for 15 minutes,

and then seek medical attention. Employees should remember to complete a SUNY Cortland *Employee Injury, Illness, Medical Emergency* form (Form WC-1) for injuries and illnesses involving chemicals.

- Immediately report all chemical-related accidents, injuries and illnesses to the EH&S Office and the department supervisor.
- Make sure that all chemical containers have a manufacturer's label or an employee-generated label. Employee-generated labels must provide the chemical or trade name, and words, pictures, symbols, or a combination thereof, which convey the hazards of the chemical.
- Promptly dispose of chemicals upon completion of use. Contact the EH&S Office for assistance with hazardous waste disposal (see Section VIII of this document for additional information on hazardous waste management).
- Provide adequate secondary containment for large storage vessels.
- For spills less than 1 liter, clean up the affected area immediately using a suitable spill kit. For larger spills, contact the EH&S Office for assistance. Additionally, refer to SUNY Cortland's *Spill Clean-up Policy* and *Integrated Contingency Plan* for guidance on cleaning up spills.
- Dispose of chemicals when their shelf life is exceeded or when they are no longer needed. Requirements for hazardous waste disposal are outlined in Section VIII of this program.

Specific aspects of chemical use, storage and handling are further discussed in this section as follows: limited shelf life and highly reactive chemicals; flammables; oxidizers; corrosives; compressed gases; cryogenic fluids; carcinogens, teratogens and mutagens; highly toxic substances and poisons; and pesticides. Supervisors and employees should implement the requirements and guidelines that are outlined in this section whenever they are applicable.

### Limited Shelf-Life and Highly Reactive Chemicals

Limited shelf-life and highly reactive chemicals have the potential to cause very violent, destructive explosions. Peroxides (e.g., hydrogen peroxide, benzoyl peroxide), peroxide-forming chemicals (e.g., ethyl ether and tetrahydrofuran), picric acid, chemicals that polymerize, and certain chemicals that decompose are included in this category. SDSs and labels will indicate whether or not a substance has a limited shelf-life or is highly reactive.

Limited shelf-life and highly reactive chemicals should be disposed of no later than one year after opening unless it is determined these chemicals are stable. Employees should contact the EH&S Office for assistance with determining whether or not a chemical is stable. At no time is the manufacturer's specified expiration date to be exceeded. In order to adhere to these guidelines, vessels of limited shelf-life and highly reactive chemicals must be dated at the time of receipt.

This may be done with a stamp or with indelible ink. Moreover, secondary vessels used for storage of limited shelf-life chemicals must indicate the expiration date.

# Summary of Safety Practices for Limited Shelf-Life/Highly Reactive Chemicals

- Observe all handling, storage and disposal requirements specified by the EH&S Office and within this program.
- Indicate the date of receipt on all containers.
- Dispose of within one year after the date of receipt unless it is determined that the chemical is stable.
- Never exceed the manufacturer's specified expiration date.
- Store ethyl ether and other substances requiring cold storage in explosionproof refrigerators.
- Clean up spills less than 1 liter with a suitable spill kit. For spills greater than 1 liter, contact the EH&S Office.
- Wash eyes or affected areas of the skin under an eyewash/shower unit for 15 minutes for contact exposures and then seek medical attention.
- Dispose of waste promptly upon completion of use.

#### Flammables

Materials that ignite or that burn rapidly at temperatures less than 100°F are flammables. Flammable liquids are characterized by their flashpoints. The flashpoint is the temperature at which enough vapor is produced to be ignited. Flammable liquids are categorized as Class 1A, Class 1B, or Class 1C. Class 1A liquids have flashpoints below 73°F and boiling points below 100°F. Class 1B liquids have flashpoints below 73°F and boiling points at or above 100°F. Finally, Class 1C liquids have flashpoints at or above 73°F and below 100°F. SDSs and labels will indicate whether or not a substance is flammable.

Container size limitations for the aforementioned classes of flammable substances are regulated by the Occupational Safety and Health Administration (29 CFR 1910.106). The EH&S Office will specify container size restrictions for flammable liquids during chemical procurement, and during audits and inspections. Flammable liquids must not be ordered or stored in quantities that exceed specified limits.

Observe strict controls when handling or storing flammable liquids and always use under adequate local exhaust or in a well ventilated area. When dispensing flammables into metal containers, adequate grounding and bonding must be employed. For most situations, flammables should be stored in specially designed cabinets or in safety cans. Safety cans must be equipped with spring-loaded spouts and flash arresters, and must be properly labeled. Additionally, safety cans must be stored in specially designated areas where containers do not obstruct the opening

of drawers and cabinets or interfere with foot traffic. All drum storage areas must be approved by the EH&S Office.

# Summary of Safe Practices for Flammable Liquids

- Use under adequate local exhaust or in a well ventilated area.
- Wear appropriate PPE.
- Segregate from sources of ignition, peroxides, and incompatibles.
- Store ethers in explosion-proof refrigerators.
- Plan projects well to assure that inherent hazards are minimized.
- Provide adequate spill containment for waste containers.
- Properly ground and bond metal containers when dispensing.
- Properly ground metal containers when storing flammable liquids.
- Clean up spills less than 1 liter with a suitable spill kit. For spills greater than 1 liter, contact the EH&S Office.
- Wash eyes or affected areas of the skin under an eyewash/shower unit for 15 minutes for contact exposures and then seek medical attention.
- Dispose of waste promptly upon completion of use.

#### Oxidizers

Oxidizers are substances that spontaneously evolve oxygen either at room temperature or under slight heating. The most widely recognized class of oxidizers is peroxides, of which sodium peroxide and hydrogen peroxide are examples. Sodium chlorite and potassium permanganate are also oxidizers. Organic peroxides are of special concern because of their instability, sensitivity to shock, flammability and decomposition potential. When oxidizers are handled or stored improperly, very violent and disastrous explosions can occur. Peroxide-forming compounds such as ethyl ether or tetrahydrofuran are equally precarious.

## Summary of Safe Practices for Oxidizers

- Use under adequate local exhaust or in a well ventilated area.
- Wear appropriate PPE.
- Isolate from organics, flammables, and reducing agents.
- Establish strict shelf-life controls.
- Clean up spills less than 1 liter with a suitable spill kit. For spills greater than 1 liter, contact the EH&S Office.
- Wash eyes or affected areas of the skin under an eyewash/shower unit for 15 minutes for contact exposures and then seek medical attention.
- Dispose of waste promptly upon completion of use.

#### Corrosives

Chemicals that cause injury or destruction to eyes, skin, respiratory tract or gastrointestinal tract are corrosives. Acids, bases, certain organics and oxidizers are included in this classification. SDSs and chemical labels will indicate whether or not a substance is corrosive.

At a minimum, employees should wear a goggles and gloves when handling corrosive substances. When splash hazards exist, a faceshield, apron, and arm guards and impervious boots should also be worn. For contact exposures, wash eyes or affected areas of the skin under an eyewash/shower unit for 15 minutes. Any contaminated clothing should be removed prior to using a shower unit.

Whenever possible, it is strongly recommended that corrosive liquids be purchased in plastic-coated glass containers rather than ordinary glass. The plastic coating prevents the glass container from shattering in the event that the container is dropped, thus preventing potential skin contact. Corrosives should also be stored on corrosion-resistant surfaces. In areas where corrosives are used, acid/base spill kits should be available for responding to small spills. For spills greater than 1 liter, contact the EH&S Office for assistance.

## **Summary of Safe Practices for Corrosives**

- Use under adequate local exhaust or in a well ventilated area.
- Wear appropriate PPE.
- Isolate acids from bases.
- Isolate corrosives from other incompatible substances.
- Add acid to water. Never add water to acid.
- Do not store mineral acids with organic acids.
- Store corrosive gases in specially designed exhausted cabinets.
- Clean up spills less than 1 liter with a suitable spill kit. For spills greater than 1 liter, contact the EH&S Office.
- Wash eyes or affected areas of the skin under an eyewash/shower unit for 15 minutes for contact exposures and then seek medical attention.
- Dispose of waste promptly upon completion of use.

#### Compressed Gases

Compressed gases have unique physical and toxicological hazards. Ruptured cylinders can become very destructive. Additionally, large volumes of toxic, corrosive, flammable or explosive gases can also be quickly released from cylinders. Many gases are colorless and/or odorless which intensifies their potential hazard. Even compressed gases that do not present significant physical or health hazards

may act as asphyxiants when they leak and displace oxygen. SDSs will indicate the toxicological and physical properties of compressed gases.

# Summary of Safe Practices for Compressed Gases

- Use under adequate local exhaust or in a well ventilated area.
- Wear appropriate PPE.
- Anchor all cylinders securely when storing.
- Know the contents of a cylinder and become familiar with all toxicological and physical properties by reading the SDS.
- Transport cylinders by using an approved hand truck.
- Do not expose compressed gas cylinders to temperatures in excess of 125 °F.
- Segregate cylinders with incompatible contents.
- Segregate oxygen from flammable gases.
- Do not store flammable gases in areas where there are sources of ignition or excessive heat.
- Do not use cylinders without pressure regulators.
- Do not use adaptors on cylinders.
- Keep protective caps on cylinders when they are not being used.
- Do not attempt to refill cylinders unless prior permission is granted by the EH&S Office.
- Appropriately tag cylinders "Full", "In Use" or "Empty".

# Cryogenic Fluids

Cryogenic fluids or liquefied gases are characterized by their extremely low temperatures and their ability to cause severe burns. The gases evolved from cryogenic fluids can also cause damage to the eyes and skin. The most common cryogenic fluid is liquid nitrogen.

### Summary of Safe Practices for Cryogenic Fluids

- Wear a faceshield, goggles, impervious labcoat or apron, and insulated gloves.
- Store in shielded or reinforced dewars.
- Use tongs when removing immersed objects.
- Insulate all plumbing.
- Immediately seek medical attention for contact exposures.

### Carcinogens, Teratogens, and Mutagens

Carcinogens are toxic substances that are capable of causing cancer. Unlike the

chemical classes discussed thus far, the toxic effects of carcinogens are chronic. Teratogens and mutagens are also toxic agents that are capable of causing adverse health effects. Whereas, a teratogen is a toxic substance capable of causing defects during fetal and embryonic development, a mutagen is a substance capable of altering genetic material in the nucleus of a cell. SDSs will indicate if a substance is a carcinogen, teratogen, or mutagen.

A chemical's health effects and toxicity should be evaluated by the EH&S Office prior to procurement. While known carcinogens, mutagens, and teratogens are not approved for use in non-laboratory settings, these agents are periodically approved for use in the laboratory. When these agents are approved for use in the laboratory, all requirements stipulated by the EH&S Office must be implemented.

## Summary of Safe Practices for Carcinogens, Teratogens. and Mutagens

- Use under adequate local exhaust.
- Wear required PPE.
- Order in quantities sufficient for immediate use.
- Limit use to authorized personnel.
- Clean up spills less than 1 liter with a suitable spill kit. For spills greater than 1 liter, contact the EH&S Office.
- Immediately remove and dispose of contaminated clothing. Attire that is not disposed of should be decontaminated.
- Wash eyes or affected areas of the skin under an eyewash/shower unit for 15 minutes for contact exposures and then seek medical attention.
- Dispose of waste promptly upon completion of use.

## **Highly Toxic Substances and Poisons**

Chemicals that cause extreme adverse chronic and acute health effects are categorized as highly toxic. While carcinogens, teratogens, and mutagens are included in this category, guidelines for acutely toxic substances are the focus of this section.

SDSs will indicate whether or not a substance is highly toxic or a poison. A chemical's health effects and toxicity should be evaluated by the EH&S Office prior to procurement. While highly toxic substances or poisons are not generally approved for use in non-laboratory settings, these agents are periodically approved for use in the laboratory. When these agents are approved for use in the laboratory, all requirements stipulated by the EH&S Office must be implemented.

## Summary of Safe Practices for Highly Toxic Substances and Poisons

- Use under adequate local exhaust.
- Wear required PPE.
- Order in quantities sufficient for immediate use.
- Limit use to authorized personnel.
- Clean up spills less than 1 liter with a suitable spill kit. For spills greater than 1 liter, contact the EH&S Office.
- Immediately remove and dispose of contaminated clothing. Attire that is not disposed of should be decontaminated.
- Store poisons under lock and key.
- Wash eyes or affected areas of the skin under an eyewash/shower unit for 15 minutes for contact exposures and then seek medical attention.
- Dispose of waste promptly upon completion of use.

#### **Pesticides**

According to the New York State Department of Environmental Conservation, pesticides are principally: 1) substances or mixtures of substances intended for preventing, destroying, repelling, or mitigating insects, rodents, fungi, weeds, or other forms of plant or animal life or viruses; and 2) any substance or mixture of substances intended as a plant regulator, defoliant or desiccant.

Requirements involving the use of pesticides are outlined in Title 6 of New York Codes Rules and Regulations, Part 325. This regulation mandates that only certified employees are approved to use pesticides in a commercial setting. Additionally, when pesticides are applied, consideration must be given to weather conditions, environmental conditions, potential for water contamination, and protocol for safe usage, including visual markers.

### Summary of Safe Work Practices for Pesticides

- Limit use to certified personnel.
- Only use pesticides that are approved for use in New York State.
- Wear required PPE.
- Observe all use and posting requirements.
- Clean up spills less than 1 liter with a suitable spill kit. For spills greater than 1 liter, contact the EH&S Office.
- Immediately remove and dispose of contaminated clothing. Attire that is not disposed of should be decontaminated.
- Wash eyes or affected areas of the skin under an eyewash/shower unit for 15 minutes for contact exposures and then seek medical attention.

Dispose of waste promptly upon completion of use.

## VIII. Hazardous Waste Management

Requirements and guidelines for hazardous waste management are outlined in this section and in SUNY Cortland's Waste Management Program.

The four primary hazardous waste characteristics are ignitability, corrosivity, reactivity, and toxicity. These characteristics are defined as follows:

**Ignitability** – A liquid with a flash point less than 140 °F; a non-liquid capable, under standard temperature and pressure, of causing a fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard; an ignitable compressed gas; an oxidizer; or a waste with an EPA Hazardous Waste Number of D001.

Corrosivity – An aqueous waste with a pH less than 2 or greater than 12.5; a liquid that corrodes steel at a rate greater than 0.25 inch per year at a temperature of 130 °F; a solid waste that exhibits the characteristics of corrosivity and has the EPA Hazardous Waste Number of D002.

Reactivity – A waste that: 1) is normally unstable and readily undergoes violent change without detonating; 2) reacts violently with water; 3) forms potentially explosive mixtures with water; 4) when mixed with water generates toxic vapors, gases, or fumes in a quantity sufficient to present a danger to human health and the environment; 5) is a cyanide or sulfide-bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health and the environment; 6) is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement; 7) is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; 8) is a forbidden explosive, a Class A explosive, or Class B explosive (see 49 CFR 173.51, 173.53, or 173.88, respectively, for further definitions); or 9) is a solid waste that exhibits the characteristics of reactivity and has the EPA Hazardous Waste Number of D003.

**Toxicity** – A solid waste that exhibits the characteristic of toxicity when a specific EPA "Toxicity Characteristic Leaching Procedure" test method is used; a solid waste that exhibits the characteristic of toxicity having EPA waste codes D004 through D043.

There are other chemical and use-specific classes of hazardous waste that are defined by the EPA. Rather than define these classes separately, employees are requested to contact the EH&S Office for guidance on determining what constitutes a "hazardous waste".

Waste minimization is a hallmark of SUNY Cortland's Waste Management Program. Employees are encouraged to use chemicals that are less harmful to human health and the environment, and order chemicals in quantities commensurate with needs. To prevent hazardous waste from accumulating, supervisors and employees are regularly requested to review the department chemical inventory and dispose of chemicals that are no longer needed.

Employees should wear adequate PPE when handling hazardous waste. While PPE is specified by the EH&S Office during chemical procurement, PPE requirements are also specified in department hazard assessments, during training, in SDSs, and in job hazard analyses. Employees are encouraged to contact the EH&S Office for guidance on PPE selection involving hazardous waste.

Spills of hazardous waste must be cleaned up promptly. Whereas, spills less than 1 liter should be cleaned up with a suitable spill kit, the EH&S Office should be contacted for spills greater than 1 liter. Additionally, refer to SUNY Cortland's *Integrated Contingency Plan* for spills with potential to affect the environment.

Most hazardous waste at SUNY Cortland is disposed of as "virgin chemical waste". A virgin chemical waste is an unprocessed chemical that remains in its original container and has exceeded its expected use. Employees should contact the EH&S Office to make arrangements to dispose of these wastes.

Another significant hazardous waste stream at SUNY Cortland is process related. Process-related wastes include spent oil, solvent contaminated rags, and certain laboratory wastes. These wastes are stored in secondary containers that are placed in Satellite Accumulation Areas. Satellite Accumulation Areas can be rooms, work areas, art studios, laboratories, and containment areas. Satellite Accumulation Areas must be at or near the point of generation and under the control of the person who generated the waste. Waste generators may accumulate up to 55 gallons of a hazardous waste, or 1 quart of acutely hazardous waste, before having to move the waste to the campus' Chemical Management Facility. The following practices must also be implemented for hazardous waste stored in Satellite Accumulation Areas:

- 1. Waste containers should be placed in adequate secondary containment. Secondary containment should be capable of holding 110 percent of the volume of the largest container.
- 2. Hazardous waste must be stored in containers that are compatible with the contents.
- 3. Waste containers with incompatible contents must be segregated.

- 4. Waste containers must be labeled with the words "Hazardous Waste" and the label should identify the contents. Employees should contact the EH&S Office to obtain hazardous waste labels.
- 5. Hazardous waste containers must remain closed except when adding or removing waste.
- 6. Properly ground and bond metal containers when dispensing and storing flammable wastes.
- Regularly check waste containers for integrity. Employees should contact the EH&S Office if they identify waste containers that have cracks, leaks, or exhibit signs of degradation.
- 8. The date that a waste container becomes full should be recorded on the "Hazardous Waste" label. This date is known as the "accumulation start date". Employees should promptly contact the EH&S Office to make arrangements to transfer full waste containers to the campus' Chemical Management Facility (Note: Full waste containers must be moved to the Chemical Management Facility within three days)

Before hazardous wastes are transported to an approved Treatment, Storage, and Disposal Facility, they are stored at SUNY Cortland's Chemical Management Facility. This facility is located at the Service Group Complex and functions as the campus' central storage area.

# IX. Other Safety Guidelines and Requirements

#### General

Supervisors and employees share the responsibility of making safety a daily practice. Whenever applicable, the requirements and guidelines in this section should be observed.

### Housekeeping

- Keep floors clean and free of spilled material. Clean up chemical spills immediately so that the potential for contamination or injury is minimized.
- Keep bench and counter tops free of debris, unused chemicals, glassware, equipment and other material.
- Use designated areas for storage of chemicals, supplies and equipment.
- Post a notice of ownership outside of laboratories. This notice should provide the owner's name and contact number.

#### Safe Work Practices

• In the event of an emergency, call 911. Employees using internal phones may also dial extension 2111.

- Become familiar with emergency evacuation plans and routes.
- Know the location of the nearest fire extinguisher. Note: Use of fire extinguishers is for escape only.
- Do not work alone when performing highly hazardous tasks.
- Use sufficient lighting to work safely.
- Become familiar with the toxicological and physical properties of all chemicals handled or used in the department.
- Know how to retrieve SDSs. If necessary, contact the EH&S Office for assistance with obtaining SDSs.
- Know the location of the nearest eyewash/shower unit. The area within 3 square feet of an eyewash/shower unit must remain unobstructed. Additionally, eyewash/shower units must be tested regularly for integrity. If an eyewash/shower unit is not available, maintain eyewash bottles in a readily accessible location.
- Work safely and wear appropriate PPE. PPE requirements are outlined in SUNY
  Cortland's: 1) Personal Protective Equipment Program; 2) Operational Services
  Unit's Policy for Protective Equipment/Dress for Personal Safety; and 3)
  Uniforms and Safety Shoe Programs Policy. PPE requirements are also specified
  in department hazard assessments, during chemical procurement, and when job
  hazard analyses are developed.
- Do not place chemicals on the ledge of exhaust hoods. Chemicals should be placed inside of exhaust hoods to ensure sufficient protection.
- Post "No Food/No Drink" signs on all refrigerators where chemicals are stored.
- Make sure that potentially hazardous equipment such as ovens or hot plates are turned off under the following conditions: when unsupervised; after a job is performed; or at the end of the day.
- Immediately inform supervisors or the EH&S Office of unsafe conditions.
- Do not eat, drink, chew gum, apply cosmetics, or wear jewelry in areas where chemicals are used.
- Limit use of hypodermic needles and syringes to authorized personnel only. Additionally, maintain an accurate inventory of hypodermic needles and syringes, and store them under lock and key (Note: requirements for hypodermic needles and syringes are outlined in SUNY Cortland's Hypodermic Needle and Syringe Program)
- Do not pipette by mouth.
- Understand how to operate all equipment safely.
- Observe lockout/tagout protocol.

# **Equipment and Apparatus**

- Ensure proper operation of exhaust hoods and keep exhaust hoods free of clutter. Objects that can become lodged in ductwork, especially paper products, should not be put in exhaust hoods.
- Check labware and equipment periodically for safe operation. Equipment that is under pressure or a vacuum should be tested for leaks.
- Glass apparatus that is under pressure should be equipped with a safety shield.
- Keep unused glassware clean and store in designated areas. Glassware containing chemicals should be stored safely to reduce the potential for spills.
- Dispose of razor blades, broken glassware, or waste glassware in specially designated containers.

## X. Inspection Checklists

#### General

The checklists in this section are useful for maintaining a safe and healthful work environment. These checklists are categorized according to the sections in this document.

## Supervisors' Responsibilities

- 1. Are you familiar with the contents and purpose of the Hazard Communication Program?
- 2. Do you know how to access the Hazard Communication Program?
- 3. Are employees provided with Hazard Communication training according to the guidelines provided in Section V?
- 4. Do you maintain records of all safety training?
- 5. Are periodic self-inspections performed?
- 6. Are eyewash units checked periodically?
- 7. Is the department chemical inventory accurate?
- 8. Are results from air monitoring or noise surveys reported to your employees on a timely basis?
- 9. Do your employees know what to do in the event of an emergency?
- 10. Do you review emergency evacuation procedures and routes with your employees periodically?
- 11. Are chemical incidents reported accurately and on a timely basis?
- 12. Are work-related injuries, illnesses, and accidents reported by using SUNY Cortland's *Employee Injury, Illness, Medical Emergency* form (Form WC-1)?

## **Employees' Responsibilities**

- 1. Are you familiar with the contents and purpose of the Hazard Communication Program?
- 2. Do you know how to access the Hazard Communication Program?
- 3. Are you familiar with the hazards of all the chemicals you use?
- 4. Do you know how to retrieve SDSs from SUNY Cortland's Chemical Management Database?
- 5. Are chemicals obtained in accordance with SUNY Cortland's Chemical Procurement and Control Policy?
- 6. Do you handle and store all chemicals safely?
- 7. Are all chemical containers properly labeled?
- 8. Are chemicals disposed of promptly upon completion of use?
- 9. Do you wear appropriate PPE when using chemicals?
- 10. Are shelf-life requirements observed for all chemicals?
- 11. Is the work area maintained in a neat and orderly fashion?
- 12. Do you know what to do in the event of an emergency?
- 13. Are you familiar with emergency evacuation plans and routes?
- 14. Is all equipment turned off when unsupervised, when work is complete, or at the end of the day?
- 15. Are work-related injuries, illnesses, and accidents reported to your supervisor on a timely basis and do you use SUNY Cortland's *Employee Injury, Illness, Medical Emergency* form (Form WC-1) for reporting work-related injuries, illnesses and accidents?

## **Contractor Safety**

1. Are requirements that are outlined in Section IV being observed by SUNY Cortland employees and contractors?

### **Training**

- 1. Do employees receive Hazard Communication training annually and is this training recorded?
- 2. Do employees know the location and purpose of the Hazard Communication Program?
- 3. Do employees know how to access the Hazard Communication Program?
- 4. Are specific chemical hazards, including signs and symptoms of exposure, reviewed with employees?
- 5. Do employees know how to retrieve SDSs from SUNY Cortland's Chemical Management Database?
- 6. Do employees know how to properly label chemical containers?
- 7. Do employees use proper PPE and are they familiar with hazard control devices?
- 8. Are employees familiar with standard safe work practices?

- 9. Are employees familiar with methods and observations used to detect the presence or release of a hazardous chemical?
- 10. Do employees receive other relevant safety training as outlined in Table 1 in Section V?

## Hazard Identification and Exposure Control Programs

- 1. Do employees receive results from air monitoring and noise surveys on a timely basis?
- 2. Are chemicals ordered in accordance with SUNY Cortland's Chemical Procurement and Control Policy?
- 3. Is equipment operating safely?
- 4. Do employees observe safe operating practices as outlined in job hazard analyses?
- 5. Are unsafe conditions or practices corrected on a timely basis?

## Chemical Management

## **General Requirements**

- 1. Do employees know the hazards of the chemicals they use?
- 2. Do employees know how to retrieve SDSs from SUNY Cortland's Chemical Management Database?
- 3. Are chemical containers labeled with a manufacturer's label or an employee-generated label?
- 4. Do employee-generated labels provide the chemical or trade name, and words, pictures, symbols, or a combination thereof, which convey the hazards of the chemical?
- 5. Are all defaced or illegible labels replaced?
- 6. Are pipes labeled to indicate the contents and direction of flow?
- 7. Is the expiration date indicated on containers of chemicals with a limited shelf-life?
- 8. Are chemicals ordered in accordance with SUNY Cortland's Chemical Procurement and Control Policy?
- 9. Is the EH&S Office contacted first before obtaining free samples?
- 10. Are chemicals that are obtained from home restricted from use for job-specific tasks?
- 11. Is the EH&S Office contacted first prior to borrowing chemicals from other departments?
- 12. Is the department chemical inventory accurate?
- 13. Are incompatible chemicals segregated?
- 14. Are chemicals isolated from personal hygiene items, such as hand soap and skin cream?
- 15. Is adequate storage space available for all chemicals?
- 16. Are chemicals stored in designated areas?

- 17. Are chemicals transferred to other locations in approved carriers?
- 18. Is transport of chemicals in private vehicles prohibited?
- 19. Are chemicals disposed of promptly upon completion of use?
- 20. Are local exhaust, PPE and other control devices in place when using chemicals?
- 21. Are spill kits available for spills that are less than 1 liter?
- 22. Do employees contact the EH&S Office for spills greater than 1 liter?
- 23. Are eating, drinking, chewing gum, applying cosmetics, or wearing jewelry prohibited in chemical areas?

### Limited Shelf-Life/Highly Reactive Chemicals

- 1. Are all handling, storage and disposal requirements specified by the EH&S Office observed?
- 2. Is appropriate PPE worn?
- 3. Are these substances marked to indicate the date of receipt?
- 4. Are these substances disposed of within one year after opening or prior to becoming unstable?
- 5. Are these substances disposed of before the manufacturer's specified expiration date?

#### **Flammables**

- 1. Is appropriate PPE worn?
- 2. Are container size limitations observed?
- 3. Are flammables segregated from incompatibles?
- 4. Are flammables isolated from ignition sources?
- 5. Are flammables requiring cold storage kept in explosion-proof refrigerators?
- 6. When dispensing flammable substances, are containers appropriately grounded and bonded?

#### Oxidizers

- 1. Is appropriate PPE worn?
- 2. Are oxidizers isolated from flammables, combustibles and reducers?
- 3. Are shelf-life requirements observed?

## Corrosives

- 1. Are goggles, face shields and other appropriate PPE worn when handling corrosive substances?
- 2. Are corrosives segregated from incompatible substances?

## **Compressed Gases**

- 1. Are cylinders transported by means of an approved hand truck?
- 2. Are cylinders properly anchored?
- 3. Are cylinders stored so that they are not exposed to temperatures in excess of 125 °F?
- 4. Are flammable gases isolated from ignition sources?
- 5. Are cylinders with incompatible contents isolated from each other?
- 6. Are pressure regulators used on every cylinder?
- 7. Are adaptors prohibited from use on cylinders?
- 8. Do protective caps remain on cylinders when not in use?
- 9. Are cylinders appropriately tagged "Full", "In Use" or "Empty"?
- 10. Are cylinders inspected to make sure that the contents are accurately identified?

# Cryogenics

- 1. Are face shields, impervious lab apparel, and insulated gloves worn when handling cryogenic liquids?
- 2. Are specially-designed vessels used for the storage of cryogenic liquids?
- 3. Are tongs used for removing objects immersed in cryogenic liquids?
- 4. Is plumbing containing cryogenic liquids insulated?

## Carcinogens, Teratogens, Mutagens, Highly Toxic Substances and Poisons

- 1. Are requirements specified by the EH&S Office observed when using these substances?
- 2. Are these substances ordered in the smallest possible quantities?
- 3. Are these substances used under adequate exhaust?
- 4. Is appropriate PPE worn?
- 5. Are contaminated attire and protective equipment properly disposed of or decontaminated?
- 6. Are poisons kept under lock and key?

#### **Pesticides**

- 1. Is use limited to certified personnel only?
- 2. Is appropriate PPE worn?
- 3. Are all use and posting requirements observed?

### Hazardous Waste Management

- 1. Is appropriate PPE worn?
- 2. Is hazardous waste stored in a Satellite Accumulation Area?
- 3. Is hazardous waste stored in adequate secondary containment?

- 4. Are waste containers at or near the point of generation?
- 5. Are containers that are used for storage of hazardous waste compatible with the contents?
- 6. Are waste containers with incompatible contents segregated?
- 7. Are hazardous waste containers labeled with the words "Hazardous Waste"? Additionally, do hazardous waste containers indicate the contents?
- 8. Do hazardous waste containers remain closed except when adding waste?
- 9. Are metal containers with flammable waste properly grounded and bonded?
- 10. Are hazardous waste containers regularly inspected for integrity?
- 11. Are defective hazardous waste containers replaced?
- 12. When hazardous waste containers become full, is the "accumulation start date" indicated on the "Hazardous Waste" label? Additionally, is the EH&S Office contacted when hazardous waste containers become full? (Note: waste generators may accumulate up to 55 gallons of a hazardous waste, or 1 quart of acutely hazardous waste, before moving the waste to the Chemical Management Facility, and full waste containers must be moved to the Chemical Management Facility within three days.)

# Other Safety Guidelines and Requirements

### Housekeeping

- 1. Are bench tops, counter tops and other working surfaces kept free of clutter, debris and other unnecessary items?
- 2. Are fire extinguishers located within the work area? Note: use of fire extinguishers is for escape only.
- 3. Are designated areas established for the storage of chemicals, supplies and equipment?
- 4. Are evacuation routes posted within the work area?

#### Safe Work Practices

- 1. Do you know what to do in the event of an emergency? Note: employees should call 911 or extension 2111 when using an internal phone.
- 2. Are you familiar with the emergency evacuation plans and routes for your location?
- 3. Do you know the location of the nearest fire extinguisher? Note: use of fire extinguishers is for escape only.
- 4. Do you avoid working alone for highly hazardous tasks?
- 5. Is sufficient lighting available to perform work safely?
- 6. Are you familiar with the toxicological and physical properties of the chemicals you use?
- 7. Do you know the location of the nearest eyewash/shower unit? If an eyewash/shower unit is not available, are eyewash bottles available in a readily accessible location?

- 8. Do you wear appropriate PPE for tasks you perform?
- 9. Do you store chemicals safely?
- 10. Do you post "No Food, No Drink" signs on all refrigerators where chemicals are stored?
- 11. Do you turn off potentially hazardous equipment: 1) when it is unsupervised; 2) after a job is performed; or 3) at the end of the day?
- 12. Do you promptly inform your supervisor or the EH&S Office of unsafe conditions or work practices?
- 13. Are eating, drinking, chewing gum, applying cosmetics, or wearing jewelry prohibited in areas where chemicals are used?
- 14. Is use of hypodermic needles and syringes limited to authorized personnel only? Additionally, are accurate inventory records of hypodermic needles and syringes maintained, and are they stored under lock and key? (Note: Requirements for hypodermic needles and syringes are outlined in SUNY Cortland's Hypodermic Needle and Syringe Program.)
- 15. Is pipetting by mouth prohibited?
- 16. Do you know how to operate all equipment safely?
- 17. Do you observe lockout/tagout practices?

# **Equipment and Apparatus**

- 1. Are shower/eyewash units available for chemical exposures?
- 2. Are eyewash units inspected regularly?
- 3. Are exhaust hoods operating properly and free of debris and clutter?
- 4. Are labware and equipment checked periodically for integrity and safe operation?
- 5. Are safety shields in place for glass equipment that is under pressure?
- 6. Is unused glassware kept clean and in designated areas?
- 7. Are razor blades and broken glass disposed of in appropriate containers?