

HAZARD COMMUNICATION PROGRAM

**THE WYSS INSTITUTE
FOR
BIOLOGICALLY INSPIRED ENGINEERING**



Prepared By:

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LIST OF ABBREVIATIONS AND ACRONYMS

CFR	Code of Federal Regulations
EH&S	Environmental Health and Safety
HAZCOM	Hazard Communication
MSDS	material safety data sheet
OSHA	U.S. Occupational Safety and Health Administration
PI	Principal Investigator
Wyss Institute	Wyss Institute for Biologically Inspired Engineering at Harvard University

CONTACT INFORMATION AND USEFUL WEBSITES

CONTACT INFORMATION

Name/Title	Phone Number	E-mail
Christopher Neal, CHMM, Environmental Health and Safety (EH&S)	617-432-7222 (office) or 617-293-0333 (cell)	cneal@eheinc.com
Jessica Healey, M.S., Biosafety Officer	774-244-7018 (cell)	jhealey@eheinc.com
Jennifer Bosselman, M.S., Project Manager	800-825-5343*	jbosselman@eheinc.com
Ted Myatt, Sc.D., RBP, Senior Scientist	800-825-5343*	tmyatt@eheinc.com
EH&S Emergency Response Pager	781-597-9786	
Harvard Radiation Safety	617-496-3797 Emergency after hours number: 617-495-5560	radiation_protection@harvard.edu
Mary Tolikas, Wyss Operations Director	978-457-5191	mary.tolikas@wyss.harvard.edu
Martín Montoya-Zavala, Wyss Laboratory Manager	617-233-9281	martin.montoya@wyss.harvard.edu
Occupational Health Departments: Harvard Medical School (HMS) Children's Hospital Boston (CHB) Beth Israel Deaconess Medical Center (BIDMC) Dana-Farber Cancer Institute (DFCI) Boston University (BU) Massachusetts Institute of Technology (MIT) University of Massachusetts (UMass) Medical School: Employee Health University Campus Employee Health Memorial Campus Employee Health 210 Lincoln Street	617-432-1370 617-355-7580 617-632-0710 617-632-3016 617-353-6630 617-253-8552 774-441-6263 508-334-6238 508-793-6400	
Harvard University Police Department (HUPD)	617-432-1212	
BioMed Realty Trust, Inc. (BMR) Security	617-232-0102 or 617-202-8957	
Harvard Custodial Services	617-432-1901	
Chemical Waste pickup: Triumvirate	request pick-up by email	clschemicals@bidmc.harvard.edu
Triumvirate contact: Dennis Colarusso	617-715-8920	

(Contact Information updated as of November 2010)

* **NOTE:** 800-825-5343 is the phone number for the main switchboard for Environmental Health & Engineering, Inc. (EH&E), which is the company supplying environmental health and safety (EH&S) support. Please specify the employee when the person answers the phone. For EH&S emergencies, please call the EH&S emergency response pager.

EMERGENCY REPORTING

For any emergency, contact the Harvard University Police Department (HUPD) at 617-432-1212.

For medical emergencies call 911 then HUPD with the exact location of the emergency

For lock-outs or walking escorts anywhere **on campus**, call New Research Building Security at 617-432-6119.

EMERGENCY HOSPITALS

For Harvard, Children's Hospital Boston, Brigham and Women's Hospital (BWH), Dana-Farber Cancer Institute affiliated personnel: **BWH**

For Beth Israel Deaconess Medical Center (BIDMC) affiliated personnel: **BIDMC**

For Massachusetts Institute of Technology (MIT) affiliated personnel: **MIT Medical**

For Boston University (BU) affiliated personnel: **Boston Medical Center**

Note: For MIT, University of Massachusetts Medical School, and BU affiliated personnel, patients should be taken to the nearest available hospital if necessary.

WEBSITE

Department/Resource	Webpage
U.S. Occupational Safety and Health Administration (OSHA) Hazard Communication Standard	http://www.osha.gov/dsg/hazcom/standards.html

1.0 GENERAL INFORMATION

In order to comply with the U.S. Occupational Safety and Health Administration (OSHA) Standard Title 29 Code of Federal Regulations Part 1910.1200 (29 CFR 1910.1200), Hazard Communication, the following written Hazard Communication (HAZCOM) Program is established for the Wyss Institute for Biologically Inspired Engineering at Harvard University (Wyss Institute) facilities. This program applies to all work operations in this facility where employees may be exposed to hazardous substances during normal working conditions or during an emergency situation. This written program may be obtained from the Wyss Institute Environmental Health and Safety (EH&S) Office on Thursdays, or call 617-432-2222 (Christopher Neal) or 1-800-825-5343 (Jessica Healey). Under this program, employees will be informed of the contents of the OSHA HAZCOM Standard, the hazardous properties of the chemicals and materials with which they work, the safe handling procedures, and measures to take to protect themselves from these chemicals.

The Principal Investigators (PIs) and Laboratory or Institute Administrators are ultimately responsible for ensuring that all applicable provisions and components of the Wyss Institute HAZCOM Program are implemented as required. To this end, PIs and Laboratory or Institute Administrators are encouraged to designate a person or persons to see to it that each of the program elements are being fully addressed (e.g., labeling, Material Safety Data Sheet [MSDS] issues, employee training and information, maintaining a list of hazardous materials in the laboratory, informing employees of hazardous non-routine tasks, etc.).

The provisions of this program will apply in all situations involving the use of hazardous materials that are not otherwise included within the scope and coverage of the Wyss Institute Chemical Hygiene Plan. This HAZCOM Program applies to the laboratory areas within the Wyss Institute. The PIs are responsible for ensuring HAZCOM compliance in their areas.

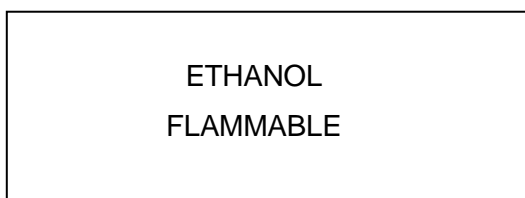
2.0 CONTAINER LABELING

The laboratory safety contact will verify that all containers of hazardous chemicals received from manufacturers, distributors, or importers are clearly labeled to indicate:

- The identity of the contents. The identity of the contents must match the corresponding MSDS.
- Appropriate hazard warnings, including routes of entry into the body and the target organs, if known.
- The name and address of the manufacturers, importer, or responsible party.

The laboratory safety contact will ensure that secondary containers are properly labeled when required. Chemicals that are transferred from a labeled container to a portable container for the immediate use by the person transferring the chemical do not require a label on the portable container. Wyss Institute policy urges that all containers be labeled in English regardless of the intended period of use. The person in charge will assure that hazard warning labels on the containers are not removed or defaced unless the hazard is no longer present.

Secondary containers must be labeled with the name of the hazardous chemical (no abbreviations) and the hazard associated with the hazardous chemical(s). Labels used for secondary containers may be copies of the original manufacturers' labels. The following is an example of a label:



Laboratories with members who speak other languages may add the information in their language to the material presented as long as the information is presented in English as well for Emergency Response purposes.

3.0 MATERIAL SAFETY DATA SHEETS

The MSDS is a detailed information bulletin prepared by the manufacturer or importer of a chemical product or chemical substance. It describes the chemical and physical hazards associated with the product or substance, its physical and chemical characteristics, when and how it may be hazardous, the effects of exposure, precautions for safe handling and use, emergency and first aid procedures, and control measures that are applicable.

Sometimes an MSDS contains information that may not apply to your particular operation. In such cases, concentrate essentially on the information that is applicable to your situation. In general, employees should focus on the hazard information and what protective measures to take. Employers are required to maintain or make available to employees a complete and accurate MSDS for each hazardous chemical that is used in the workplace.

OSHA has determined that drugs and medications that are not in solid or final form for direct administration to the patient fall within the scope of HAZCOM and, therefore, must be covered by MSDSs. Accordingly, MSDSs must be available for all drugs and medications that are liquid, gaseous, aerosol, etc., or not otherwise in solid, final form. MSDSs for such products will be available from the host institution's hospital pharmacy. MSDSs for chemical products other than pharmaceuticals are available from the manufacturers or suppliers of the product and employers (users) are automatically entitled to this information upon purchase of the product.

Laboratory or Institute Administrators will be responsible for obtaining and maintaining the MSDSs for all hazardous materials in their laboratory inventory. When hazardous substances are received without an MSDS and one is not available from a previous purchase, a letter with a copy to file should be sent to the supplier requesting the MSDS. If the supplier fails to furnish the requested information, notify the Wyss Institute EH&S Office directly (on site Thursdays), or 617-432-7222 or 1-800-825-5343 and ask for Christopher Neal or Jessica Healey.

PIs or Institute Administrators will ensure that any and all incoming MSDSs are reviewed for new and significant health/safety information and pass any such information on to the

affected employees. This may be done through delegation. Copies of MSDSs for all toxic and hazardous substances that all persons working at the Wyss Institute may be exposed to must be readily accessible to all areas where the substances are used, handled, or stored. MSDSs will be available to all employees for their review during each work shift. **An electronic version of the MSDS may be used as long as each employee who used the hazardous material has access to electronic version of the MSDS.** MSDS links are easily accessible at the Wyss Institute's Website at the following link: <http://wyss.harvard.edu/viewpage/195/health-and-safety>. If an MSDS is not available for any particular chemical or product, employees should contact their supervisor.

For assistance with interpreting and applying the information contained in the MSDS, visit the Wyss Institute EH&S Office on Thursdays, or call 617-432-7222 or 1-800-825-5343 and ask for Christopher Neal or Jessica Healey.

To obtain an MSDS:

- Visit the EH&S Office on Thursdays, or call 617-432-7222 or 1-800-825-5343 and ask for Christopher Neal or Jessica Healey.
- Ask the Laboratory Administrator, Institute Administrator, or PI for the location of the MSDS file.
- Contact the manufacturer of the product.

- Go to the manufacturer's webpage to access the MSDS electronically. The following is information on how to obtain an MSDS from certain manufacturers:
 - **Sigma-Aldrich:** Search by product number:
<http://www.sigmaaldrich.com/safety-center/msds-search.html>
 - **Fisher Scientific:** Search for product, click on MSDS icon on product page:
<http://www.fishersci.com/>
 - **Mallinckrodt Baker:** Search by chemical name:
<http://www.mallbaker.com/Americas/catalog/default.asp?searchfor=msds>

4.0 MATERIAL SAFETY DATA SHEET CHECKLIST

Each MSDS will be checked to ensure that the following information is covered:

- Product or chemical identity used on the label.
- Manufacturer's name and address.
- Chemical and common names of each hazardous ingredient.
- Name, address, and phone numbers for hazard and emergency information.
- Preparation or revision date.
- Hazardous substances that comprise the product.
- The physical and chemical characteristics of the hazardous substances, such as vapor pressure and flash point.
- Physical hazards, including the potential for fire, explosion, and reactivity.
- Known health hazards, including signs and symptoms of exposure.
- OSHA permissible exposure limit, American Conference of Governmental Industrial Hygienists threshold limit value or other exposure limits.
- Emergency and first aid procedures.
- Whether OSHA, National Toxicology Program, or International Agency for Research on Cancer lists the ingredient as a carcinogen.
- Precautions for safe handling and use.
- Control measures such as engineering controls, work practices, hygienic practices, or personal protective equipment required.
- Primary routes of entry.
- Procedures for spills, leaks, and clean up.

5.0 EMPLOYEE TRAINING AND INFORMATION

Under the OSHA HAZCOM Standard, employers are required to inform employees where hazardous chemicals and/or products, including pharmaceuticals, are present at the time of their initial assignment to a work area (i.e., the Wyss Institute laboratories) as well as each time a new hazard is introduced into the work area.

PIs, Laboratory Administrators or Institute Administrators are responsible for ensuring employees attend a HAZCOM training session, which is part of the initial/annual Wyss Institute EH&S training. Prior to starting work, each new employee will receive information and training on the following as appropriate with their respective jobs. Training will cover the following topics (at a minimum):

- An overview of the requirements contained in the OSHA HAZCOM Standard, 29 CFR 1910.1200.
- Operations in their work area where hazardous chemicals, chemical products, or applicable pharmaceuticals are present.
- Location and availability of the written hazard communication program.
- Physical and health effects of the toxic or hazardous substances.
- Methods and observation techniques used to determine the presence or release of toxic and hazardous substances in the work area.
- How to use toxic and hazardous substances in the safest possible manner, including safe work practices and personal protective equipment requirements.
- Steps that the Wyss Institute has taken to lessen or prevent exposure to toxic and hazardous substances.
- Emergency procedures to follow, if exposed to these toxic and hazardous substances.
- How to read labels and review MSDSs to obtain appropriate hazard information.
- Location of MSDS file and location of toxic and hazardous substances list.

For more information regarding the Wyss Institute EH&S training program, please visit the Wyss Institute EH&S Office on Thursdays, or call 617-432-7222 or 1-800-825-5343 and ask for Christopher Neal or Jessica Healey.

6.0 LIST OF HAZARDOUS CHEMICALS, CHEMICAL PRODUCTS, AND APPLICABLE PHARMACEUTICALS

The Institute will maintain a list, referred to as the Chemical Inventory, of all known toxic and hazardous substances present or used within its respective work areas. A copy of the Chemical Inventory is to be maintained in the laboratory's files and provided to the Wyss Institute EH&S Office. The inventory may be maintained by common chemical or trade names for each hazardous material. It is recommended to update this chemical inventory on a periodic basis (at a minimum on an annual basis) or when a new hazardous chemical is added to the inventory.

7.0 HAZARDOUS NON-ROUTINE TASKS

If employees are required to perform potentially hazardous non-routine tasks, each affected employee will be given information by the Institute Laboratory Manager about any hazardous chemicals that they may be exposed to after consultation with the Wyss Institute EH&S office. This information will be given to the employee prior to starting work on such projects. This information will include:

- Specific hazards.
- Protective/safety measures the employee can take.
- Measures the Wyss Institute has taken to lessen the hazards including ventilation, respirators, presence of another employee, and emergency procedures.

An example of a non-routine task performed by staff at the Wyss Institute is the clean up of minor hazardous material spills.

8.0 INFORMING CONTRACTORS

Employees of outside contractors performing work at the Wyss Institute will be informed of any hazards that they might encounter from our operations prior to the beginning of the contract work. The PIs, Institute Administrators, facility management company, and/or the Wyss Institute EH&S office will provide outside contractors with the following information:

- Toxic and hazardous substances to which they may be exposed while on the Wyss Institute job site.
- Precautions the employees may need to take to reduce the possibility of exposure, such as use of appropriate protective equipment.
- The availability and location of appropriate MSDSs.

The PIs, Institute Administrators, facility management company, and/or the Wyss Institute EH&S office will also be responsible for contacting each contractor before work is started within the Wyss Institute's space in order to gather and disseminate any information concerning chemical hazards that the contractor may be bringing into the Wyss Institute. Contractors will be required to provide appropriate MSDSs for review and approval as a condition of use in Wyss Institute space.

Contractors will be required to abide by the Wyss Institute safety and health policies or guidelines. Violations of any such agreed upon terms may be cause for termination of the work until the condition is corrected.