BRANDEIS UNIVERSITY
HAZARD COMMUNICATION PROGRAM

Revision Update: 12/3/07 **New Revision*: 02*** **Issue Date: 9/18/07** **Effective Date: 9/21/07** **Reason:** ***See italics***	Originated by: _____ Date:_____ Brandeis Manager of EH&S Approved by: _____ Date:_____

TABLE OF CONTENTS

1.0	**Introduction**	**Page**
	History of Federal Hazard Communication Standard	ii.
2.0	**SUMMARY OF BRANDEIS UNIVERSITY WRITTEN PROGRAM**	**HAZCOM**
	Summary of Hazard Communication Standard	2
	Chemicals in the Workplace	3
	Brandeis Compliance Program	3
	- WRITTEN PROGRAM	4
	- LABELS	4
	- MATERIAL SAFETY DATA SHEETS	5
	- EMPLOYEE INFORMATION & TRAINING	5
	- TRADE SECRETS	5
3.0	**GENERAL INFORMATION ABOUT CHEMICALS**	
	Chemical Inventory	5
	Health & Safety Information	5
	- Flammable Chemicals	6
	- Corrosive Chemicals	6
	- Toxic Chemicals	6
	- Reactive Hazards	6
	- Radioactive	6
	- Other	7
4.0	**Inventory Control Program**	
	Purchasing Policies	7
	Periodic inventories	7

Table of Contents (cont.)

5.0 **LABELING SYSTEM**

Labeling Requirements 7
In-house Labels 8

6.0 **MATERIAL SAFETY DATA SHEETS**

Hazard Determination 8
Chemical Inventory/Purchases/MSDS'S 9
MSDS Inventory 9

7.0 **Understanding The MSDS**

Contents of an MSDS 9

8.0 **EMPLOYEE INFORMATION & TRAINING**

Employer Responsibility 9
Employee Information 10
Employee Training 10
Retraining 10
Unusual Work Assignments 10
Sample Outline of Training Program 11
New Employees 11
Outside Contractors 11

1.0 INTRODUCTION

1.1 HISTORY OF FEDERAL COMMUNICATION STANDARD

The purpose of the Federal Hazard Communication Standard (HAZCOM) is to have employers inform their employees about the chemical hazards in their workplace. The underlying assumption is that informed employees will closely monitor any workplace threats to their health. The concept of informing employees about workplace hazards can be traced back to 1974 when the National Institute for Occupational Safety and Health (NOSH) first recommended that OSIER promulgate regulations of this type.

2.0 SUMMARY OF WRITTEN HAZARD COMMUNICATION PROGRAM

The OSHA Hazard Communication standard can be found at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10099

2.1 CHEMICALS IN THE WORKPLACE

Proper safety measures must be used in accordance with University policy when working with any chemicals. All chemicals in the workplace at Bandies University shall conform to this program.

2.2 BRANDEIS UNIVERSITY COMPLIANCE PROGRAM

The following sections briefly highlight the policies and regulatory compliance program of Brandeis University concerning hazardous chemicals in the workplace.

2.2.1 LABELING

Brandeis will use and preserve the labels already on containers provided by the chemical manufactures or suppliers. Whenever any materials are transferred to other containers for later use, the new container will be labeled immediately with the chemical name (or product name) as it appears on the manufacturer's label. The new container will also include the appropriate hazard warning.

2.2.2 MATERIAL SAFETY DATA SHEETS (MSDS)

Individual departments are responsible for obtaining and maintaining a MSDS on all hazardous chemical substances in their respective facility. A master file for the Sciences and Facility Trades is located at the Safety Office. *Department files are located:*

- *Science Center MSDS: Kalman basement level, outside Safety Office.*
- *Facilities Garage: Located in Garage behind Epstein Building.*
- *Fine Arts: Contact Ian Boyd, Fine Arts – Goldman Schwartz Bldg.*
- *Central Heating Plant:*

2.2.3 EMPLOYEE INFORMATION & TRAINING

All employees will be trained on general chemical hazards relevant to material used at the University. Training will occur when new employees start employment, or an employee is transferred to a position which involves chemicals of differing hazards and annually for all other employees handling hazardous chemicals. Any employee, faculty, staff or student who may be occupationally exposed shall complete initial Hazard communication training. Training with the Safety Office or through the on-line Boston Consortium training is required.

2.2.4 TRADE SECRETS

While respecting a company's legal right to protect secret formulation, MSDS's which omit health hazard information because of trade secrets will not provide necessary health and hazard information (which is not part of the formulas), then a new alternate chemical supplier will be sought.

3.0 GENERAL INFORMATION ABOUT CHEMICALS

3.1 CHEMICAL INVENTORY

An inventory of chemical material will be kept current. Brandeis science labs shall ensure that an inventory is maintained for each lab and an update sent to the Safety Office every six months.

3.2 HEALTH AND SAFETY INFORMATION

Brandeis uses chemicals with flammable, corrosive, toxic, reactive, and oxidizing properties. To ensure the safe use of these chemicals, the University has mandated the following safety precautions. Additional detail of chemical handling in laboratories can be found in the University Chemical Hygiene Plan.

3.2.1 FLAMMABLE CHEMICALS

All flammable chemicals will be stored away from ignition sources and protected from open flames, static discharge, cigarettes, and sparking tools. All bulk vessels containing flammable chemicals will be grounded

in accordance with OSHA standards and NFPA codes. Appropriate fire extinguishing material will be kept available for fire emergencies.

3.2.2 CORROSIVE CHEMICALS

All corrosive chemicals will be managed to prevent spills. Personnel using corrosive material will be protected with rubber gloves, face shield, goggles and other appropriate protective equipment. Acids and caustics will be stored away from each other. Corrosive chemicals utilized at pH neutralization systems for waste water shall be kept in secondary containment.

3.2.3 TOXIC CHEMICALS

All toxic chemicals will be managed according to OSHA's guidelines, (PEL's), or the more stringent ACGIH guidelines, (TLV's). Workers will be trained on the proper chemical handling methods and the appropriate personal protective equipment.

3.2.4 REACTIVE HAZARDS

Chemicals which are incompatible with other chemicals will be segregated to avoid accidental chemical reactions. No mixing of reactive chemicals is allowed except under supervision.
No supervisor/faculty/PI will allow chemical mixing to take place without first checking the containers label and checking the MSDS to note special mixing hazards.
Oxidizers are chemicals which may react violently, explosively or generate sufficient heat to ignite when mixed with a flammable or combustible material. All oxidizer chemicals will be segregated from all flammable and combustible materials including solvents, cleaners, paint, rags, paper and wood. Personnel handing oxidizers will wear proper protective clothing and equipment.

3.2.5 RADIOACTIVE

Any radioactive material will be managed and monitored according to the Nuclear Regulatory Commission regulations. Handling of radioactive material shall be done in strict compliance with the policies established by the Brandeis Radiation Protection Office.

3.2.6 OTHER

Paint and painting supplies often contain a variety of hazardous substances such as flammable solvents and toxic ingredients. Organic paints and paint thinners often contain flammable solvents which must be managed as other flammable chemicals. Aerosol sprays and epoxy resins sometimes contain toxic substances, including toluene diisocyanates, and must therefore be scrutinized when the paint is initially purchased to determine whether it contains toxics and how it is best applied. Respiratory protection and/or adequate ventilation must always be used when working with paints.

The everyday common cleaning supplies must not be overlooked in a Right-To-Know compliance program. Hazardous substances are often used as ingredients in cleaning supplies.

Compressed gases must be managed to prevent accidental damage to the cylinder or the uncontrolled release of its gaseous contents. Uncontrolled releases of compressed gases can lead to asphyxiation, fire or explosion. Cylinders must be secured to walls or benches, and will not be moved without the valve protector in place.

4.0 INVENTORY CONTROL PROGRAM

4.1 PURCHASING POLICIES

Purchases of chemical stock will be restricted to prescribed limits based on: (1) the maximum amount which can be safely stored, and (2) the minimum amount necessary for uninterrupted work.
Purchasing authority will be limited to a few designated responsible personnel.

4.2 PERIODIC INVENTORIES

All chemical containers should be identified so older chemicals can be used before newer stock. Staff shall ensure that chemical inventories are maintained and up to date. Laboratories shall ensure that inventories are maintained for each lab and an updated list forwarded to the Safety Office every six months. The Safety Office shall provide for waste disposal services.

5.0 LABELING SYSTEM

The University labeling system will rely primarily on labels provided by the chemical manufacturer. Brandeis staff are responsible for labeling secondary containers when chemicals are transferred.

5.1 LABELING REQUIREMENTS

The University's requirements for labels under OSHA are to include the chemical identify, and the appropriate hazard warning. The chemical manufacturer and supplier must also provide that same information on all delivered containers including drums, jars, bottles and bags; therefore, it is the University's policy to preserve and maintain those labels wherever possible.

5.2 IN-HOUSE LABELS

Some shipments of chemicals may arrive in large containers and later be transferred to smaller containers. Those smaller containers must also be labeled as required above. University personnel who transfer the material between containers are responsible for labeling the smaller container with the appropriate chemical identity, and the hazard warning.

6.0 MATERIAL SAFETY DATA SHEETS

Material Safety Data Sheets (MSDS) are required with each first shipment of a hazardous chemical from a supplier. For materials for which the University must produce a MSDS, refer to paragraph (g) of the Hazard Communication Standard.

6.1 HAZARD DETERMINATION

The manufacturer or importer of a chemical must determine if the chemical product is hazardous under OSHAs HAZCOM. The University is not responsible for testing any purchased materials to determine hazard properties; however, University personnel will be aware of minimal hazard determination procedures:
The DOT hazard class labels on the containers must coincide with the hazards described on the MSDS. (.e.g. if the MSDS says that the material is not hazardous, but the DOT shipping label is poison, the supplier must be contacted to clear the discrepancy).
If experience has shown the material to have a different hazard than stated on the MSDS, then the supplier must be contacted for explanation and clarification.

If the MSDS states that the ingredients are a trade secret but gives no hazard warnings of first aid information, then the supplier must provide a new and more complete MSDS.

6.2 CHEMICAL INVENTORY/ PURCHASES/ MSDS

All hazardous chemicals in stock, regardless of when purchased, must have a MSDS on file.
No new chemical may be purchased without the supplier sending a MSDS so the appropriate safety personnel may note in-house ability to handle this chemical.
No free samples from a supplier will be accepted without a MSDS.

6.3 MSDS INVENTORY

Individual departments are responsible for obtaining and maintaining MSDS for each of the hazardous chemicals used at the University. The MSDS master file will be arranged so that the proper MSDS can be found using minimal information during an emergency. The MSDS file will be reviewed whenever the chemical inventory is updated to ensure that every chemical in stock has a corresponding MSDS in the files. Old MSDSs for materials no longer in stock or used by the University will be transferred to a permanent inactive MSDS file. Those inactive MSDS will be retained in case of future questions concerning those materials.

MSDS for the Sciences shall be maintained in a location that shall be available to faculty, staff and students at all times.

7.0 UNDERSTANDING THE MSDS

The entire purpose for having a MSDS hinges on a persons ability to make proper use of the document. The following includes some of the most important features of a typical MSDS.

7.1 CONTENTS OF A MSDS

Paragraph (g) of the Hazard Communication regulation lists the required contents of the MSDS.

8.0 EMPLOYEE INFORMATION AND TRAINING

8.1 EMPLOYER RESPONSIBILITY

Brandeis University is responsible under the Hazard Communication Standard for employee training. The following sections outline the contents of the training program and training program options.

8.2 EMPLOYEE INFORMATION

University employees must be informed about certain matters relating to hazardous chemicals; these matters include:
*The regulatory requirements of the Hazard Communication Standard (OSHA 1910.1200)
*The presence, identity and location of hazardous chemicals in their workplace
*The location and availability of this Written Hazard Communication Program and MSDSs
*The above information must be present during pre-placement and new employee training.

8.3 EMPLOYEE TRAINING

All employees who have the potential of being exposed to a hazardous substance in the course of their work must be trained regarding the chemical hazards, including:
*Chemical detection methods
*The chemicals physical and health hazards
*How to read/interpret an MSDS and label warnings
*Appropriate protective measures including ventilation
*Details on the labeling system used
Employee training can be classroom style. A complete training manual with teaching aids, including video tapes and lecture outlines, may be provided by health/safety representatives. Employees, staff, faculty and students may also complete training provided by the Boston Consortium.

8.4 RETRAINING

Retraining is required whenever new hazards are introduced into the workplace. It is recommended that between formal training periods, employee questions are documented, along with the answers, to demonstrate that training and information are on-going processes. A formal review program is suggested annually.

8.5 UNUSUAL WORK ASSIGNMENTS

Occasionally some unusual work assignment is made; for example cleaning out a storage tank. The University Safety Officer or supervisor must remind or inform the workers of the hazards of this work assignment before work commences. This meeting must be documented in memo form.

8.6 SAMPLE OUTLINE OF TRAINING PROGRAM

The following is an example of an employee training program outline.

EMPLOYEE TRAINING PROGRAM CONTENTS OUTLINE

*Introduction	Explain the Hazard Com Standard via the video tape provided by the Safety Department
*Company Policies & Practices	Should also include inventory of hazardous chemicals in the workplace
*Flammable/Combustible Chemicals	The fire triangle (fuel, oxygen, heat) and how to prevent fires
*Corrosive Hazards	What corrosivity is, and what to do if splashed with corrosive chemicals
*Reactive Hazards	Chemical oxidizers, chemical incompatibilities and the importance of separating chemicals
*Special Topics	Additional topics unique to the university
*Conclusion & Summary importance of university	A summary which repeats the safety policies

8.7 NEW EMPLOYEES

New employees will be trained prior to their initial assignment in work areas where hazardous materials are present.

8.8 OUTSIDE CONTRACTORS

The University's Hazard Communication Program must be extended

to all those individuals who are not directly employed by the University but are hired to work onsite. The best example of these "outside employees" and "outside employers" is a construction or renovation project within the University. If the project places outside workers at risk of exposure to hazardous chemicals used by the University, whether under normal operations or a foreseeable emergency, then the hazard communication requirements apply. These requirements work both ways in that outside employers who must bring hazardous material related to their project into the University are obligated to adhere to the communication requirements.
It is advisable whenever possible, to eliminate the risks of exposing outside workers to hazardous chemicals. This can be accomplished by disposal or relocation of unwanted material to a safe area away from the construction renovation site. When these options are not available, the university manager or project coordinator (or the manager of construction and renovation projects) will be responsible for informing the outside service about the requirements of this Program. Compliance must be documented in writing and shall include:

1. The contracted employer must be made aware of the possibilities of exposure to hazardous chemicals on the work site. The university's manager of the area in question is the best resource person for consulting exposures.
2. Any necessary precautionary measures to be used on the work site must be communicated to outside employers.
3. Outside employers must be informed of the availability and location of MSDS.
4. MSDS for all hazardous substances brought onsite by outside employers must be acquired, with copies being submitted to the work site manager and the Safety Office for review and action.
5. Outside employers must be required, as a condition of the work agreement, to abide by all University safety rules, and follow the requirements of this Hazard Communication Program.