



# Safety Bulletin

Winter  
2007

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The US Nuclear Regulatory Commission conducted a two-day inspection at Yale University in December, 2006. After an extensive evaluation, including visits to a number of research laboratories, interviews with researchers, checks to evaluate security, detailed inspections and manager interviews at several OEHS facilities including two RAM storage and handling locations and a counting lab, the inspector found no areas of noncompliance. In fact, at the close out meeting, the inspector used phrases such as "well-done," "excellent," radiation safety at Yale is "first-rate" and "keep up the good work." In regard to implementation of a new NRC regulation, he stated that he was going to report to NRC Headquarters that Yale University was the best example of "how it should be done."

OEHS wants to acknowledge Yale University faculty, staff, and students. Yale Security and Yale Police Departments are also to be commended. Members of Therapeutic Radiology played a substantial role in of this NRC inspection and are to be recognized as well. So many of you understand Yale's regulatory obligations and work in a very collegial manner with OEHS to ensure Yale's continued compliance. Your efforts and attitude were critical to this successful inspection and ensure that research and education involving the use of radioactive materials can continue at Yale. Thank You!

OEHS Web Links

- [www.yale.edu/oehs](http://www.yale.edu/oehs)
- [info.med.yale.edu/bbp](http://info.med.yale.edu/bbp)
- [info.med.yale.edu/bbpclinical](http://info.med.yale.edu/bbpclinical)
- [info.med.yale.edu/chemhaz](http://info.med.yale.edu/chemhaz)
- [info.med.yale.edu/chemsafe](http://info.med.yale.edu/chemsafe)
- [www.yale.edu/oehs/TB/index.htm](http://www.yale.edu/oehs/TB/index.htm)

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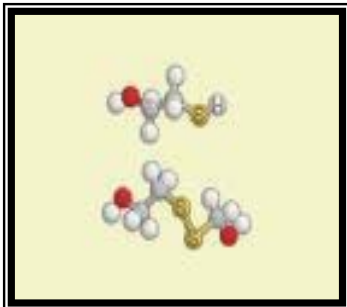
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**WANTED**

OEHS invites submittals to be published in our Safety Bulletin. The articles should be related to environmental health and safety topics. All articles will be reviewed and edited by the OEHS Safety Bulletin Committee. For further information please contact Tamara either by email ([tamara.hall@yale.edu](mailto:tamara.hall@yale.edu)) or phone (5-3550).

## Beta-Mercaptoethanol (BME)

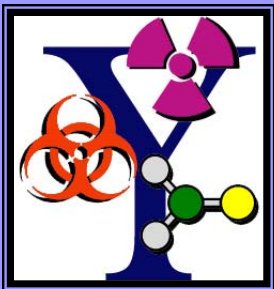


BME is an offensively foul smelling but common chemical widely used in modern biomedical science. Although BME can be toxic and poses skin contact hazards, in the very small volumes used in research laboratories its real hazard tends to be its characteristic strong sulfury rotten egg-like stench. Unfortunately, a similar chemical, mercaptan, is used as an additive in natural gas to give it good warning properties. Humans can smell mercaptan as low as 0.02 parts per billion in air, making it a chemical with one of the lowest odor thresholds known. As a result, almost any open air work with BME will offend people nearby and create the suspicion of a natural gas leak. This occurs all-too-frequently, and in December resulted in the unnecessary evacuation of a building at the Medical School.

If you work with BME, please respect its strong odor and always handle it inside a chemical fume hood, no matter how small a quantity you are working with. Keep pipette tips and other supplies that come in contact with BME inside the fume hood to evaporate any residue, and double bag and seal all waste materials contaminated with BME. Do not flush or rinse BME or its residue down a sink drain, and never discard materials in the regular trash.

Should you have a small incidental spill of BME, absorb the liquid into paper toweling while wearing double gloves and safety glasses, double bag and seal the waste, and then store it inside a fume hood for collection as hazardous waste by OEHS. Clean the spill area with detergent and water and collect these waste materials with the initial spill material. Notify Security (785-5555), the Yale Police Department Dispatch Center (432-4400 or 111 from any Yale phone), or the applicable Facilities Control Center (Medical School 785-4620, Central/Science 432-6888) of the spill – and the smell – to avoid an unnecessary gas leak report. For larger spills, contact OEHS immediately for assistance. See Incident Blotter (page 3) for a description of the BME incident at the Medical School in December.

### **NEW: CME Credit for Bloodborne Pathogens Training**



OEHS is pleased to announce that faculty and staff who complete the web-based Bloodborne Pathogens training are eligible to receive CME credit from the Yale Continuing Medical Education Department. The University designated this web-based training as an educational activity for a maximum of 1 Category 1 credit toward the American Medical Association Physician's Recognition Award. The course, "Web-based Bloodborne Pathogens Training for Clinical or Patient Care Personnel" – which may be found on the internet at [info.med.yale.edu/bbpclinical/](http://info.med.yale.edu/bbpclinical/) - requires Yale Netid and Password. Questions about training may be referred to Stephanie Perry at 785-3550



### A sampling of some recent on-campus incidents .....

October, 2006

**Description:** *Glass bottle containing residual P-32 dropped*

A glass container slipped from a researcher's hand after he had poured the radioactive liquid into a liquid waste jug. Researcher stayed in immediate vicinity so as not to spread contamination or be cut by broken glass. Assistance was solicited from lab members and OEHS.

**Resolution:**

Individual was surveyed and found to be free of contamination. Contaminated glass shards were carefully picked up and placed into a radioactive sharps container. Floor was cleaned and lab survey documented successful decontamination.

**Lessons Learned:**

Always use plastic or other unbreakable containers for hazardous material experiments.  
Researcher did an excellent job of staying in vicinity of spill and thus contamination was not spread.

November, 2006

**Description:** *Needlestick*

Researcher was loading syringe with a sample of adenovirus. He recapped the needle to prepare it for transport and the needle went all the way into the cap and through the side of the cap into the researcher's thumb.

**Resolution:**

Washed needlestick area for 15 minutes and called OEHS. Researcher taken to YHP and seen by Employee Health physician. Protocol was evaluated and determined that there was no reason to load syringes in one room and then transport to another for use.

**Lessons Learned:**

No recapping of needles! This procedure is prohibited.  
To avoid transfer risks with infectious sharps load syringes in the location of use just prior to performing experiment.  
Place needleboxes in the immediate vicinity of use so that sharps can be discarded immediately after use.

December, 2006

**Description:** *small 2-mercaptoethanol spill*

Researcher spilled several milliliters of 2-mercaptoethanol (BME). He cleaned it up with paper towels, rinsed off towels in sink, and disposed of the towels in the open biohazard waste box in the lab. The mercaptan odor spread throughout the building from the sewer system and laboratory. Eventually the New Haven Fire Department was called to investigate the "gas leak," the Connecticut Department of Environmental Protection arrived, the building was evacuated, and Cedar Street was blocked off.

**Resolution:**

OEHS responded, together with the Yale Fire Marshal's Office, determined the source of odor was the earlier small BME spill, collected the spill cleanup material as hazardous waste and moved it to the hazardous waste facility. Water was run in the sinks to fill any potential dry traps and dilute and wash away any residual chemical in the drains. Waste materials were moved to the chemical fume hood to minimize the spread of further odors.

**Lessons Learned:**

Notify OEHS of all spills of this and all other hazardous materials, even those you clean up yourself. Kindly alert lab and floor mates so that they won't be alarmed by any lingering odor. If the odor persists, notify the Building Services Office or the Facilities Office. Always work with BME inside a chemical fume hood, and keep any contaminated material (gloves, tips, etc) inside the hood or inside a sealed bag or container. Refresher training in spill cleanup and emergency notifications may be necessary for laboratory workers. Hazardous chemicals should not be disposed of down the sink drain or in biohazard waste receptacles.



### ***EMPLOYEE SPOTLIGHT***

The first contact that many people have with OEHS is often Tamara Hall-Walcott, our Senior Administrative Assistant. Throughout the day, Tamara fields numerous inquiries such as requests for health and safety information, training requirements and scheduling, regulated materials ordering information, and guidance on use of the OEHS web-site, as well as any calls to the OEHS emergency line. Since joining the Office in 2001, Tamara has become well versed in the various activities for which OEHS is responsible, and directs callers to the staff member who can provide the most assistance. Tamara is always friendly and patient, and is committed to providing a high level of customer service. As coordinator of the OEHS newsletter committee, Tamara also solicits articles, edits submissions, and ensures the newsletter is prepared and distributed to the campus community. In her free time, Tamara enjoys attending church, spending time with family and friends, gospel music, and traveling.



***Office of Environmental Health & Safety***

... Dedicated to providing a healthy and safe environment for the Yale community



# Safety Training Calendar

## Biosafety Training

This is a mandatory course for employees working with pathogens classified at Biosafety Level 2. The course focuses on good microbiological practices, safety equipment, and containment. We also review emergency response procedures and Yale Biosafety Policies. The course is ideal for new employees and can also provide helpful tips and valuable information for experienced personnel.

Wed. Jan. 10	10:00 am - 12:15 pm
Wed. Feb. 07	01:00 pm - 03:15 pm
Wed. Mar. 07	10:00 am - 12:15 pm

## Biosafety Level 3 Training

Mandatory for employees prior to initiating experiments with agents classified at BL2+, BL3, or BL3+. Please call 785-3550 to schedule.

## Bloodborne Pathogens Training

These mandatory training sessions consist of an initial training seminar that new "occupationally exposed" employees must attend and a retraining seminar that must be attended each year by personnel occupationally exposed to human materials or bloodborne pathogens. Please note the appropriate training session to attend.

### Initial Training

Wed. Jan. 03	01:30 pm - 03:30 pm
Wed. Jan. 17	09:00 am - 11:00 am
Thu. Feb. 01	01:30 pm - 03:30 pm
Tue. Feb. 13	09:00 am - 11:00 am
Wed. Mar. 14	09:00 am - 11:00 am
Tue. Mar. 27	01:30 pm - 03:30 pm

### Annual Retraining

Thu. Jan. 18	10:30 am - 11:30 am
Wed. Feb. 21	01:30 pm - 02:30 pm
Wed. Mar. 21	10:30 am - 11:30 am

## Safe Use of Biological Safety Cabinets

This training briefly explains how biological safety cabinets work, limitations of biological safety cabinets, proper technique when working in a biological safety cabinet, and certification and repair procedures. It is recommended for anyone that uses a biological safety cabinet.

Thu. Jan. 18	09:00 am - 10:00 am
Tue. Feb. 20	01:30 pm - 02:30 pm
Wed. Mar. 21	09:00 am - 10:00 am

## Laboratory Chemical Safety

Required training for laboratory personnel working with chemicals.

Tue. Jan. 02	01:00 pm - 02:30 pm
Wed. Jan. 24	09:15 am - 10:45 am
Thu. Feb. 15	01:00 pm - 02:30 pm
Tue. Mar. 06	09:15 am - 10:45 am
Wed. Mar. 28	01:00 pm - 02:30 pm

## Safety Orientation for Non-Lab Personnel

This course combines three required training classes for non-lab staff. (Chemical Safety, Radiation Safety and Bloodborne Pathogens) in one condensed session. New or existing non-lab employees who require training may attend.

Wed. Jan. 03	08:30 am - 09:40 am
Wed. Feb. 07	08:30 am - 09:40 am
Wed. Mar. 07	08:30 am - 09:40 am

## Tuberculosis Awareness Training

This mandatory training class is for employees who work in patient care or outreach settings that may involve exposure to Mycobacterium tuberculosis.

Wed. Jan. 10	09:00 am - 10:00 am
Tue. Feb. 06	01:00 pm - 02:00 pm
Tue. Mar. 13	09:00 am - 10:00 am

## Shipping and Transport of Hazardous Biological Agents

This course reviews the shipping regulations from the Centers for Disease Control, the Department of Transportation (DOT), and the International Air Transport Association (IATA). Packaging, permits, shipping declaration forms, labels, and emergency response are among items that will be addressed. This is a mandatory course for employees sending, transporting, or receiving infectious substances.

Tue. Jan. 16	10:30 am - 12:00 pm
Wed. Feb. 14	01:00 pm - 02:30 pm
Tue. Mar. 06	10:30 am - 12:00 pm

## Respiratory Protection Training

Respiratory protection training and fit testing is required initially and annually for all respirator wearers.

**If you already have and/or wear a respirator, please bring it with you to this class so that you can be fit-tested.**

Tue. Jan. 09	09:00 am - 10:00 am
Thu. Feb. 08	11:00 am - 12:00 pm
Mon. Mar. 19	01:30 pm - 02:30 pm

## Radiation Safety Orientation

Mandatory course for personnel working with radioactive material or frequenting an area where radioactive materials are stored or used.

Thu. Jan. 04	09:30 am - 12:15 pm
Tue. Jan. 16	01:00 pm - 03:45 pm
Thu. Feb. 01	09:30 am - 12:15 pm
Tue. Feb. 13	01:00 pm - 03:45 pm
Thu. Mar. 01	09:30 am - 12:15 pm
Tue. Mar. 13	01:00 pm - 03:45 pm
Thu. Mar. 29	09:30 am - 12:15 pm

## Radiation Survey/Spill Training

Hands on radiation safety class concentrating on performing contamination surveys and handling incidents involving radioactive material. This is supplementary to the Radiation Safety Orientation class and intended for those with little or no previous radioactive material work experience. Refreshments served. Please call 737-2140 to schedule.

## Confined Space Training

This session is designed to provide information regarding the identification, evaluation and control of confined space hazards and to insure that employees who must enter such locations are trained and apprised of Yale University's Confined Space Entry Program. Please call 785-3550 to register to attend this training.

Tue. Jan. 02	09:00 am - 10:00 am
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## Office Ergonomics

Are you satisfied with your office workstation? Call your Safety Advisor to schedule a personal assessment.

## Interactive Web Training

### Bloodborne Pathogens

<http://info.med.yale.edu/bbp>

### Bloodborne Pathogens Clinical

<http://info.med.yale.edu/bbpclinical>

### Chemical Safety

<http://info.med.yale.edu/chemsafe>

### Chemical Hazardous Waste

<http://info.med.yale.edu/chemhaz>

### Safety Orientation

<http://learn.caim.yale.edu/rcr>

### Tuberculosis Awareness Web Training

<http://www.yale.edu/oehs/TB/index.htm>

**The Office of Environmental Health & Safety's training room is located at  
135 College Street, in the lower level**

Remember to log onto Yale's Training and Certification website at:

<http://www.yale.edu/training> to complete your Training Requirement Assessment