MBIB SAFETY COMMITTEE MEETING

September 2018
ROM Update

- Any new issues to discuss from ROM or Group?
- Vendors
- Assigning the DEA training LAB504
- Importance of PPE
- Lab Meeting Presentations – being a good lab citizen/emergency response
SELECT TOXINS

Requirements for Harvard Labs
PERMISSIBLE TOXIN AMOUNTS

The following toxins are not regulated if the amount under the control of a principal investigator, treating physician or veterinarian, or commercial manufacturer or distributor does not exceed, at any time, the amounts indicated in the table below.

<table>
<thead>
<tr>
<th>HHS Toxins [§73.3(d)(7)]</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrin</td>
<td>1000 mg</td>
</tr>
<tr>
<td>Botulinum neurotoxins</td>
<td>1 mg</td>
</tr>
<tr>
<td>Short, paralytic alpha conotoxins</td>
<td>100 mg</td>
</tr>
<tr>
<td>Diacetoxycedrysanol (DAS)</td>
<td>10,000 mg</td>
</tr>
<tr>
<td>Ricin</td>
<td>1000 mg</td>
</tr>
<tr>
<td>Saxitoxin</td>
<td>500 mg</td>
</tr>
<tr>
<td>Staphylococcal Enterotoxins (Subtypes A, B, C, D, and E)</td>
<td>100 mg</td>
</tr>
<tr>
<td>T-2 toxin</td>
<td>10,000 mg</td>
</tr>
<tr>
<td>Tetrodotoxin</td>
<td>500 mg</td>
</tr>
</tbody>
</table>
Select Agents

EH&S is available to assist laboratories in understanding and managing Select agents, which are materials that have been identified by the U.S. Government as agents that have potential use in biological terrorism or warfare. Numerous requirements must be in place before these materials can be used in research.

Documents

- Exempt Quantities of Select Agent Toxin Destruction Form
- Exempt Quantities of Select Agent Toxin Transfer Form
- Exempt Quantities of Select Agent Toxins SOP
- Exempt Select Agent Toxin Inventory Sheet

DID YOU KNOW?

There are safer options to using standard hypodermic needles and scalpels in research. Safer needle devices include retractable and re-sheathing needles, re-sheathing scalpels, needles that can be blunted after use, and many more. Consider if a safer sharp will work for your experiment or if a blunt needle can be substituted. For more information on safer sharps, visit the OSHA webpage on needle safety: https://www.osha.gov/SLTC/etools/hospital/hazards/sharps
### Documents

- Exempt Quantities of Select Agent Toxin Destruction Form
- Exempt Quantities of Select Agent Toxin Transfer Form
- Exempt Quantities of Select Agent Toxins SOP
- Exempt Select Agent Toxin Inventory Sheet
- Select Agents and Toxins List

### External References

- National Select Agent Registry
- Permissible Toxin Amounts
- Select Agent and Toxin Exclusions
- Select Agent and Toxin List
Requirements

- PI must register with COMS
  - Select Agent and DURC sections of the application
- Document toxin quantity (inventory), destruction, and transfer
  - NOTE: Some of these toxins can be purchased through vendors like Sigma. Check your chemical inventories.
  - Forms provided on EHS website
- Toxins must be stored in secondary containment in a restricted manner
- Lab must document PPE, safe handling, and disposal procedures

**DISCLAIMER: The quantity limits on the EHS website and in the COMS registration need updated. Reference the Select Agent site directly.**
IMPORTANT INFORMATION
After hours emergency care has moved from Pound Hall in Cambridge – Back to the Smith Campus Center

Effective August 22, 2018

Urgent Care Services 24/7
Spanning weekday, daytime, overnight, weekend and holiday hours

HUHS Smith Campus Center Clinic
75 Mt. Auburn Street
3rd Floor
NEW Emergency Response Guides

• Thank you for the input on the new emergency response guides!
• These guides will replace the current flip charts
• New electronic flip chart information can be found at https://www.ehs.harvard.edu/programs/emergency-guidance
NEW Emergency Response Guides

Because this guide has changed the Lab Safety Orientation Checklist is now updated to include a review of this document.
NEW Emergency Response Guides

HARVARD
Campus Services
ENVIRONMENTAL HEALTH & SAFETY

Laboratory Safety Orientation Checklist

Laboratory Safety Training Review by Lab Training Manager (PI or Designee)

NOTE: The PI may authorize another person to operationally fulfill the role, but it remains the Principal Investigator's responsibility to ensure that all personnel in the lab have the necessary skills (through training and experience), maturity and supervision to work safely in a lab with hazardous processes or substances. Consider the varying maturity and experience levels when orientating a person to the lab and when determining the appropriate assignments and supervision and training required. When considering personnel under the age of 18, see the University’s Minors on Campus Policy http://safetyprotection.harvard.edu/minors-lab-safety.

☐ Add researcher to lab roster in PeopleSoft https://hrapps.cadm.harvard.edu/psfptrld/signon.html
Review the individual's research program, identify core and specialized training requirements. Show researcher how to access training in the Harvard Training Portal: https://trainingportal.harvard.edu
☐ Exception: those who will work in a lab for less than a week under direct supervision or others who will not be working with or adjacent to hazardous materials, processes or equipment.

☐ Review laboratory-specific safety training/SOPs
For highly hazardous materials, equipment, or processes that pertain to the individual's research program (may include COMS protocols, radiation registration, etc. in addition to internal lab documents on carcinogens, etc.)

Laboratory Orientation

Review the following safety features:

☐ Lab Emergency Response Guide and location of Emergency Numbers
☐ Emergency evacuation route and meeting area
☐ Location of fire extinguishers and closest fire alarm pull station
☐ Location and proper use of safety showers and eyewash stations
☐ Location of Safety Data Sheets in lab or online (ehs.harvard.edu/safety-data-sheets-sds)
☐ Location of Chemical Hygiene Plan in lab or online (EH&S Safe Chemical Work Practices web page)
☐ Location of accident report filing process (ehs.harvard.edu/programs/accident-reporting-investigation)
☐ PPE policy, lab’s PPE assessment report and location of required PPE (gloves, safety glasses, lab coats, etc.)

Yes N/A

☐ Location and review of Exposure Control Plan (EH&S Bloodborne Pathogens web page)
If yes, complete Hepatitis B Vaccination Offer form

☐ Waste management (see ehs.harvard.edu/programs/lab-waste-management) (check all that apply):
Pregnancy & Reproductive Health

Pregnancy & Reproductive Health

Laboratory workers who are pregnant, nursing, or planning to conceive should review the hazardous materials involved in their work. Certain toxins can adversely affect reproductive health in both males and females, or could harm a developing fetus. These include chemicals classified as mutagens, teratogens, embriotoxins, or those with known developmental and reproductive toxicity. There are also biologic and radiologic materials that can pose a danger to reproductive health or an unborn child. As always, thoroughly review Safety Data Sheets (SDS) and other product literature before using a potentially hazardous material.

Anyone with questions relating to radiation protection measures for the embryo/fetus, radiation safety or procedures on the declaration of a pregnancy is encouraged to contact Radiation Safety Services for information.

COMS will stipulate procedures for work with organisms posing a risk to reproductive health or harm to a developing fetus. Individuals may contact the Biosafety Program to review work with micro-organisms.

Individuals listed on an IACUC protocol may reach out directly to the Occupational and Environmental Health Network, inc. (OEHN) for a medical consultation regarding protocol-associated concerns. EH&S can assist individuals not listed on IACUC protocols in obtaining a confidential medical consultation with an OEHN clinician. EH&S can conduct hazard assessments and provide guidance on proper administrative and engineering controls, PPE selection, and other prudent work practices and may be requested by the OEHN clinician to perform additional evaluations.

Contact Mary_Corrigan@harvard.edu (or 617.496.4746) for questions or concerns or requests for occupational medical consultations.
Lab Safety Officer (LSO) Information

https://www.ehs.harvard.edu/find-resource?page=16
Sodium Azide – Disposal Restrictions

Health Effects

- Ingestion of even small concentrations can be fatal
- Mixing with water or acid creates toxic hydrazoic gas
- Contact with transition metals can lead to the formation of explosive, shock sensitive metal azides

Proper personal protective equipment
- Avoid contact with acids or heavy metals
- Avoid disturbing corroded materials if the corrosion may be due to sodium azide
- Avoid exposure of potentially concentrated sodium azide to friction or shock
Shipping anything with chemicals

- When shipping any type of chemical please check with EH&S to make sure that the chemical/concentration/volume is in fact an Excepted Quantity

- Excepted Quantity shipping training is available through HTP (LAB109) – HOWEVER it is different than the dry ice shipping training and shippers must have this training to ship chemicals even if they contain biologicals

- Anything that is not considered an Excepted Quantity is considered a Dangerous Goods Shipment and those individuals need to be IATA/DOT trained and have a special FedEx account to ship in this manner – only EH&S currently has this training
In response to recent accidents/injuries we have developed a new Qiagen kit guidance.

This guidance includes hazardous waste disposal and bleach interaction information.
Spill Kit Training

Session 1
Date: Wed. 9/26
Time: 11:00am-12:00pm
Location: TMEC 106 Learning Studio (Peabody)

Session 2
Date: Tues. 10/2
Time: 1:00pm-2:00pm
Location: TMEC 106 Learning Studio (Peabody)

This link should take you directly to the classes:
https://trainingportal.harvard.edu/Saba/Web_spf/NA1PRD0068/common/ledetail/cours000000000013161

⭐ Please send this information out to your lab members
Biosafety Case Study for Emergency Response

Scenario: An MBIB intern was working in the NRB animal facility. While marking a mouse’s tail, the animal became agitated and bit her finger. The mouse was infected 2 days prior with Streptococcus pneumonia.

Q: What route of transmission is this? Is this one of the routes listed for transmission in a lab?

Q: What should she do next?
What actually happened: The intern was wearing two pairs of gloves, neither of which appeared to be punctured. Upon removal of the gloves and examination of her finger, she deduced the skin was not broken. She still washed her hands for 10-15 minutes and reported the incident to her supervisor, who entered it into the online PMA system. She was also informed by her supervisor that she could go to the hospital for antibiotics if she wished. She opted against it, but was told to monitor for symptoms and seek treatment if needed.

Q: Was this handled correctly and should anything have been done differently?

Q: What symptoms should she be looking for?

Q: What is the incubation period?

Q: What treatments are available?
Discussion

Q: How could the researcher hope to prevent this in the future?

Q: Would response have changed if this was a different agent or if the mouse was not infected? If it was a needlestick with the agent vs. a mouse bite? What about an ocular splash?