

<b>Johns Hopkins Safety Manual</b>	<i>Policy Number</i>	<b>HSE 803</b>
Subject:	<i>Last Review Date</i>	8/28/11
<b>Hazard Warning Signage</b>	<i>Page</i>	1 of 7

POLICY

It is the policy of Johns Hopkins that all laboratories be posted with hazard warning signage which restricts entry into laboratories to authorized personnel only. The hazard warning signage shall be the approved signage system for Johns Hopkins. The Department of Health, Safety and Environment and the Joint Committee on Health, Safety and Environment shall approve appropriate hazard warning signage for Johns Hopkins.

The Johns Hopkins hazard warning signage must be posted at the entrance to all laboratory areas, and include the name and off hours phone number of two individuals who are familiar with the operations of the laboratory. This information is necessary for proper emergency response. The hazard warning signage shall also indicate known hazards which are present in the laboratory. See the enclosed Hazard Warning Label guidelines for the description of common hazards.

RESPONSIBILITIES

Principal Investigators/Lab Managers	<p>Provide the names and 24-hour phone numbers for at least two emergency contact persons on the hazard warning signage.</p> <p>Maintain current emergency contact information on all hazard warning signage.</p> <p>Maintain current hazard identification on all hazard warning signage.</p> <p>Keep hazard warning signage conspicuously posted on all laboratory entrances.</p>
Health, Safety and Environment	<p>Provide Johns Hopkins approved hazard warning signage to principal investigators and lab managers.</p> <p>Monitor hazard warning signage for accuracy and completeness during environmental surveys</p>
All Staff	<p>Obey hazard warning signage, and refrain from entering areas posted as authorized personnel only if such authorization has not been provided.</p>

**HAZARD WARNING LABELS**



When posted this **Restricted Area** label signifies admittance only to faculty, staff and students whom the Primary Investigator or Laboratory Supervisor have pre-authorized to enter.

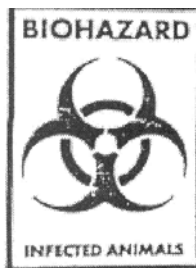


Rooms or areas where human body fluids or unfixed cell tissue, or organ cultures are handled for research, diagnosis, shipment and equipment used for research or diagnosis with specimens containing **potentially infectious materials (PIMS)** shall be conspicuously posted with the **Biohazard Symbol** and the **Caution - Potentially Infectious Materials** warning.

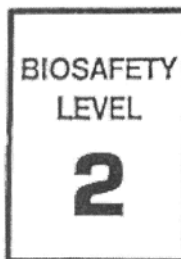
<b>Johns Hopkins Safety Manual</b>	<i>Policy Number</i>	<b>HSE 803</b>
Subject:	<i>Last Review Date</i>	8/28/11
<b>Hazard Warning Signage</b>	<i>Page</i>	2 of 7



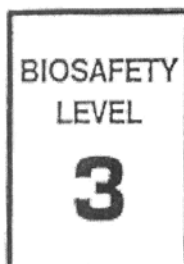
Laboratories and support areas where viral, bacterial, rickettsial, fungal, and parasitic agents requiring containment at biosafety level (BSL) 2 or greater are used or stored shall be conspicuously posted with the **Caution - Infectious Agents** sign.



Animal rooms and other containment areas which house animals deliberately infected with agents requiring BSL 2 (or greater) containment shall be posted with the **Biohazard Symbol** and the **Caution - Infected Animals** warning.



This **Biosafety Level 2** (BSL 2) label, with the appropriate biohazard warning, designates a containment level that meets the BMBL recommendations for BSL 2 work practices, safety equipment and facility design.



This **Biosafety Level 3** (BSL 3) label, with the appropriate biohazard warning, designates a containment level which meets the BMBL<sup>1</sup> recommendations for BSL 3 work practices, safety equipment and facility design.



Each area or room in which radioactive **materials** are used or stored or where radioactive wastes are accumulated or stored shall be conspicuously posted with a sign bearing the **radiation symbol** and the **Caution - Radioactive Materials** warning.

<sup>1</sup> CDC/NIH 1999 Biosafety in Microbiological and Biomedical Laboratories, 4th Edition. U.S. Department of Health and Human Services, Public Health Service, and subsequent revisions

<b>Johns Hopkins Safety Manual</b>	<i>Policy Number</i>	<b>HSE 803</b>
Subject:	<i>Last Review Date</i>	8/28/11
<b>Hazard Warning Signage</b>	<i>Page</i>	3 of 7



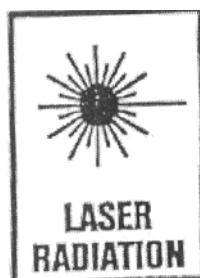
Each radiation area (any area, accessible to faculty, staff or students in which there exists radiation at such levels that a major portion of the body could receive in any 1 hour a dose in excess of 5 millirem or in any 5 consecutive days a dose in excess of 100 millirem) shall be conspicuously posted with the **Caution - Radiation Area** sign.



Each high radiation area (any area accessible to faculty, staff or students in which there exists radiation at such levels that a major portion of the body could receive in any one hour a dose in excess of 100 millirem) shall be conspicuously posted with the **Caution - High Radiation Area** sign.

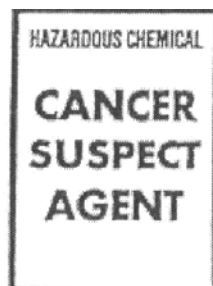


All rooms or areas, accessible to faculty, staff or students in which there exists a potential for exposure to **ultraviolet light** above the NIOSH published recommended exposure limit (REL) for occupational exposure. At 254nm, the wavelength for ultraviolet germicidal irradiation (UVGI), the REL is 0.006 joules per square centimeter (0.006 J/cm<sup>2</sup>). The permissible irradiance for an 8 hour workday exposure is  $\leq 0.2$  W/cm<sup>2</sup> or 6000 Wsec/cm<sup>2</sup>



Each area where **Class 2** and **Class 3a lasers** are used shall be conspicuously posted with this standard **laser warning** sign.

**Note:** - Protective eyewear that absorbs the exact wavelength of light produced by the laser in use shall be worn by all faculty, staff or students with potential for exposure to this laser source or to the reflected beam



This **Cancer Suspect Agent** label is posted when chemicals, which are classified as suspect human or animal carcinogens by the International Agency for Research on Cancer Monographs (IARC), National Toxicology Program (NTP) or by OSHA, are used or stored in the laboratory or work area.

<b>Johns Hopkins Safety Manual</b>	<i>Policy Number</i>	<b>HSE 803</b>
Subject:	<i>Last Review Date</i>	8/28/11
<b>Hazard Warning Signage</b>	<i>Page</i>	4 of 7



The **carcinogen symbol** is posted when chemicals, classified as known human carcinogens by the National Toxicology Program (NTP), International Agency for Research on Cancer monographs (IARC) and OSHA, are used or stored in the laboratory or work area.



Rooms and areas used as dedicated chemical storage rooms and/or dispensing rooms should display the **Chemical Storage Area** sign.



Separate rooms, cabinets or areas where corrosives (concentrated acids or bases) in excess of one (1) day's supply are stored shall be conspicuously posted with the Caution - **Corrosive Materials sign**.



This **toxic chemicals** sign shall be posted in all areas or rooms where hazardous chemicals with an American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) of 5 ppm or less are used or stored. (A list of chemicals with a TLV  $\leq$  5 ppm can be found in the Johns Hopkins Safety Manual)

<b>Johns Hopkins Safety Manual</b>	<i>Policy Number</i>	<b>HSE 803</b>
Subject:	<i>Last Review Date</i>	8/28/11
<b>Hazard Warning Signage</b>	<i>Page</i>	5 of 7



This **toxic gas** sign shall be posted in all areas or rooms where toxic gases with an American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) of 10 ppm or less are used or stored. A partial list of these toxic gases and their TLV or ceiling level (C) is below:

Arsine (0.05 ppm)	Hydrogen sulfide(10 ppm)
Boron trichloride (1 ppm)	Methyl mercaptan(0.5 ppm)
Boron trifluoride (1 ppm C)	Monomethylamine(5 ppm)
Butadiene (10 ppm)	Nitrogen dioxide(3 ppm)
Chlorine (1 ppm)	Phosgene(0.1 ppm)
Cyanogen (10 ppm)	Phosphine(0.3 ppm)
Diborane (0.1 ppm)	Silane(5 ppm)
Dimethylamine(5 ppm)	Silicon tetrafluoride(0.1 ppm)
Hydrogen bromide(5 ppm)	Sulfur dioxide(2 ppm)
Hydrogen chloride(5 ppm C)	Sulfur tetrafluoride(0.1 ppm C)
Hydrogen fluoride(3 ppm C)	Trimethylamine(5 ppm)
Hydrogen selenide(0.05 ppm)	



All rooms and areas, accessible to faculty, staff or students which contain, unguarded (exposed, open) electrical equipment **in excess of 600 volts** shall be conspicuously posted with the **Caution - High Voltage** sign.



All rooms or areas, accessible to faculty, staff or students with exposed (open) electrical systems or live parts **less than 600 volts** shall be labeled with the **Caution - Electrical Hazard** sign.



This sign indicates that **eating, drinking, smoking, handling of contact lenses, and applying cosmetics are not permitted** in the posted work area because there is reasonable likelihood of exposure to hazardous chemicals, radioactive materials or potentially infectious materials.

<b>Johns Hopkins Safety Manual</b>	<i>Policy Number</i>	<b>HSE 803</b>
Subject:	<i>Last Review Date</i>	8/28/11
<b>Hazard Warning Signage</b>	<i>Page</i>	6 of 7



This **eye protection required** label shall be posted in all areas, accessible to faculty, staff or students, in which there is a reasonable probability of exposure to hazardous chemicals, potentially infectious agents or physical hazards which could result in injury. Eye protection shall be worn at all times in these areas when exposure potential exists.



Each area or room, accessible to faculty, staff or students, in which there is a potential for noise exposure which may equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 dBA. (OSHA standard 1910.95) shall be posted with the **hearing protection required** label.



This **protective clothing required** sign shall be posted when work conditions require specific protective clothing that is beyond the standard laboratory coat. Personal protective equipment selected for this work area shall be based on an evaluation of the task specific conditions and the hazards and potential hazards that are encountered.




---



---



---



---

This **Infectious Agents Sticker** shall be posted on all rooms or areas in which BSL 2 or 3 organisms are present including animal holding rooms and animal isolation rooms or cubicles, animal procedure rooms and research or diagnostic laboratories. The principle investigator or laboratory manager is responsible to list the BSL 3 organisms present on the posted space. Only the following organisms are exempt from identification: Non-cytotoxin-producing Escherichia Coli.



This **Flammable Materials sticker** shall be posted on all room or areas in which flammable materials are being used or stored in a room. A flammable material can be in solid, liquid, or gas form.

<b>Johns Hopkins Safety Manual</b>	<i>Policy Number</i>	<b>HSE 803</b>
Subject:	<i>Last Review Date</i>	8/28/11
<b>Hazard Warning Signage</b>	<i>Page</i>	7 of 7

## ADMITTANCE TO AUTHORIZED PERSONNEL ONLY

CONTACT	NAME	LOCATION	PHONE	HOME PHONE
ENTRY OR ADVICE				
IN EMERGENCY				
IN EMERGENCY				

DATE  
POSTED \_\_\_\_\_

ROOM  
NUMBER \_\_\_\_\_

This **Admittance to Authorized Personnel Only** sticker is to be placed on the bottom of caution signs whenever any of the contact information has changed.

REVIEW CYCLE

Annually