

STANDARD OPERATING PROCEDURE UNSTABLE MATERIALS AT HARVARD INSTITUTES OF MEDICINE (HIM)/NEW RESEARCH BUILDING (NRB)

DEFINITION

Per Boston Fire Preventive Codes, Ordinances of 1979, Chapter 28, Section 20.02 Definitions, unstable materials are defined as “Any substance, which will vigorously and energetically reactive with water or other materials, which is explosive or potentially explosive, which can polymerize, which will instantaneously decompose, which will undergo uncontrollable auto-reaction, or which can be exploded by heat, pressure, shock, or combinations thereof.”

REGISTRATION WITH PERIODIC EVALUATION

Laboratory personnel who use or store any unstable materials are required to submit a registration form to the Harvard Institutes of Medicine (HIM)/ New Research Building (NRB) Environmental Health and Safety (EH&S) Office. Refer to the attached registration form and list of unstable materials.

The laboratory must submit **one form for each room** where unstable materials are used and/or stored. Please provide updates whenever the laboratory purchases additional unstable materials. The HIM/NRB EH&S Office will request quarterly updates of this information.

NOTE: It is important that laboratories periodically inspect their potentially unstable materials to ensure that they have not expired

DISCOVERY

When a person discovers a potentially unstable material, (s)he must notify the HIM/NRB EH&S Office immediately via phone or e-mail. Once the potentially unstable material has been reported to the HIM/NRB EH&S Office, the laboratory should leave the potentially unstable material alone and remove items surrounding the potentially unstable material without disturbing it.

If the potentially unstable material is in a fume hood, the fume hood must:

- Be emptied of its remaining contents. (Do not remove unstable material container from the fume hood. Do not touch the unstable material container.)
- Taped shut.
- Marked off with caution tape.
- Affixed with the appropriate signage. Signage should include the following information:
 - The words “Caution Do Not Remove, Unstable Material”
 - The name of the chemical and any specific hazards (i.e. shock sensitive, explosive, etc.)
 - Contact information for HIM/NRB EH&S Office

See attached sign.

If the potentially unstable material is on a bench or a shelf, the area must be:

- Cleared within an 18-inch radius of the unstable material. (Do not remove unstable material container from the bench or shelf. Do not touch the unstable material container.)
- Marked off with caution tape.
- Affixed with the appropriate signage. Signage should include the following information:
 - The words “Caution Do Not Remove, Unstable Material”
 - The name of the chemical and any specific hazards (i.e. “shock sensitive, explosive, etc.)
 - Contact information for HIM/NRB EH&S Office

Refer to enclosed sign.

NOTIFICATIONS

Once the HIM/NRB EH&S Office inspects the potentially unstable material and ensures the area meets the requirements mentioned above, the HIM/NRB EH&S Office will notify the following people:

- Boston Fire Department
- Hazardous Waste Contractor
- Facility Manager
- Security Operations Manager

HAZARDOUS WASTE CONTRACTOR RESPONSIBILITIES

The hazardous waste contractor will inspect the potentially unstable material, confirm the material is unstable or not, and evaluate whether the material causes an imminent danger to the laboratory.

If the material is considered unstable as defined by the Boston Fire Prevention Code but does not pose an imminent danger to the laboratory, then the unstable material will remain in the fume hood. The hazardous waste contractor will submit an application for removal of unstable/reactive materials permit including a work plan for the removal of the unstable/reactive materials including the Material Safety Data Sheets. Once the Boston Fire Department approves the application, the hazardous waste contractors will remove the unstable material as soon as possible.

If the material is considered unstable and poses an imminent danger to the laboratory, then the entire laboratory will be shut down until the hazardous waste contractor is able to receive permission from the Boston Fire Department to remove the unstable material.

If the material is not considered unstable per the Boston Fire Prevention Code, then the hazardous waste contractor will transport the material to the main accumulation area for proper labeling and disposal under the following regulations:

- 310 Code of Massachusetts Regulations 30.000, Massachusetts Hazardous Waste Regulations,
- 49 Code of Federal Regulations (CFR) 172 through 178,
- 40 CFR parts 260 through 263, 273, 279, 302, 311, 355, 370, and 372, and
- 29 CFR 1910.120, 1200, and 1450.

Enclosures:

Registration Form for Unstable Materials

List of Potentially Unstable Materials

Sign for Posting