LABORATORY SAFETY GUIDELINE

Hexane (n-Hexane) [CAS No. 110-54-3]

All hexane users at Harvard must review this document prior to using this substance. Hexane is a colorless liquid with a slight odor. It is highly flammable, and its vapors can be explosive. (17.60 kPa at 20.0 °C)

HAZARDS

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Description</th>
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<tr>
<td>Highly flammable liquid and vapor</td>
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<td>Causes eye irritation</td>
<td>Causes skin irritation May cause drowsiness or dizziness</td>
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<td>Suspected of damaging fertility or the unborn child May be fatal if swallowed and enters airways May cause damage to organs through prolonged or repeated exposure</td>
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Keep away from heat/sparks/open flames/hot surfaces.

PRECAUTIONS

Before starting work:
- Determine if you can use a less hazardous substance in place of Hexane;
- Review manufacturer’s Safety Data Sheet and additional chemical information at [ehs.harvard.edu/safety-data-sheets-sds](http://ehs.harvard.edu/safety-data-sheets-sds);
- Ensure that a written experimental protocol including safety information is available;
- Be familiar with general University emergency procedures in the [EHS Lab Emergency Response Guide](http://ehs.harvard.edu/safety-data-sheets-sds);
- Order the most dilute solutions available that will meet experimental needs. Order only the quantity that you need;
- Identify the location of the nearest eyewash and shower and verify that they are accessible;
- Locate and verify that appropriate spill cleanup materials are available, including the following:
  - Flame resistant absorbent pads or equivalent (example: Pig® Absorbent Mat)
  - Polypropylene containers that can hold the pads and be sealed tightly
- Ensure another person who knows emergency procedures is in the area.

During work:
- AVOID INHALATION! Perform all operations in a certified chemical fume hood or other approved ventilated enclosure. Sash lowered as much as possible. Always work at least 6 inches into the fume hood and behind the sash;
- AVOID CONTACT! Use appropriate personal protective equipment (PPE):
  - Wear a flame-resistant lab coat, a garment covering to the ankles, and closed-toed shoes
  - Wear standard safety glasses
  - Wear nitrile gloves, chemical resistant if possible (Microflex 93-260 [I-280], N-Dex Plus 8005 [I-85], TouchNTuff 92-600/650 [I-480])
  - Always consult Safety Data Sheet to ensure proper glove selection;
  - Gloves must be thoroughly inspected prior to each use. Do not use damaged gloves;
  - Change gloves whenever you suspect they have become contaminated;
Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact;
  - Wash hands and forearms thoroughly with soap and water each time gloves are removed;
- Use materials and containers appropriate for hexane use and remain aware of potential incompatibilities (i.e. oxidizing agents, certain plastics and rubbers);
  - Glass containers are preferred.
  - Polyethylene, then Polypropylene containers are acceptable.
- Keep all containers tightly closed when not in use and during transport.

**After completing the work:**

- Dispose of hexane waste following Harvard University Hazardous Waste Procedures
  - Hazardous Waste Classification: Toxic, Flammable
- Return container to storage area following Harvard University Laboratory Chemical Storage Guide
  - Storage Group: Flammable Liquids;
  - Store in original containers or other appropriate containers;
  - Store primary container in designated and compatible secondary containers;
  - Store away from incompatibles;
- Wash hands and forearms thoroughly with soap and water before leaving the lab.

**EMERGENCY PROCEDURES**

**First Aid**

**SKIN CONTACT**
- Wash with plenty of tepid water for at least 15 minutes using the closest available sink, safety shower or drench hose. Remove any exposed clothing as well as any jewelry.
- Seek medical attention; call 911 on a landline phone for medical assistance (or provide location if calling on a mobile phone).

**EYE CONTACT**
- Using eyewash, flush eyes while holding eyelids open;
- Seek medical attention; call 911 on a landline phone for medical assistance (or provide location if calling on a mobile phone).

**INHALATION**
- If fumes or combustion products are inhaled remove from contaminated area.
- Seek medical attention; call 911 on a landline phone for medical assistance (or provide location if calling on a mobile phone).

**INGESTION**
- If swallowed do not induce vomiting.
- Never give anything by mouth to an unconscious person;
- Seek medical attention; call 911 on a landline phone for medical assistance (or provide location if calling on a mobile phone).

**Spill Response**

**OUTSIDE FUME HOOD OR VENTILATED ENCLOSURE**
- Alert others and evacuate to a safe distance and prevent entry.
- Contact the University Operations Center at (617) 495-5560 [HMS/HSDM (617) 432-1901]
- Remain in a safe location until EH&S or other response personnel arrive.

**INSIDE FUME HOOD OR VENTILATED ENCLOSURE (< 500 ml)**
- If trained and confident, you may assist in the clean-up effort of small amounts, wearing PPE described above and using appropriate spill supplies.
  - Collect debris in appropriate container and move to your Satellite Accumulation Area.
    - Label with appropriately completed hazardous waste tag and request a waste pickup.
- Otherwise close the fume hood sash and await support.
- Contact the University Operations Center at (617) 495-5560 [HMS/HSDM (617) 432-1901] if you need support or technical assistance.