






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

	Highly flammable liquid and vapor
	Causes eye irritation Causes skin irritation May cause drowsiness or dizziness
	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

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;
- 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](#);
- 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.