



Standard Operating Procedure (SOP)



BENZENE

Effective Date: 8/23/2013

Revised Date: 8/23/2022

Introduction

This SOP applies to BENZENE.
Benzene is a known carcinogen.

Potential Hazards

HIGHLY FLAMMABLE. Vapors/gas heavier than air. Toxic smoke/fumes in a fire. Take precautionary measures against static discharges. Dispose of this material and its container at hazardous or special waste collection point. In case of fire and/or explosion, DO NOT BREATHE FUMES.

Health Hazards



Signal word: **Danger**

Hazard statement(s):

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H340 May cause genetic defects.
- H350 May cause cancer.
- H360 May damage fertility or the unborn child.
- H336 May cause drowsiness or dizziness.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H304 May be fatal if swallowed and enters airways.
- H401 Toxic to aquatic life.

Personal Protective Equipment

Standard Operating Procedure (SOP)



BENZENE

Effective Date: 8/23/2013

Revised Date: 8/23/2022

EYE PROTECTION

Safety glasses with side shields are appropriate for situations where there is no risk of fumes or vapors. In cases where fumes or vapors may be present, safety goggles must be worn, as these provide much better protection against these hazards.

HAND PROTECTION

Nitrile gloves generally provide the best overall protection for the widest range of chemicals. Charts with breakthrough times are available from each manufacturer and are usually located on their website. Neoprene gloves offer greater protection than Nitrile gloves, and should be used when working with concentrated, highly corrosive or toxic materials.

LAB COATS, ETC.

Individuals working with pyrophoric and flammable liquids on a regular basis should consider using a lab coat that is flame resistant.

Work Practices

All BENZENE work shall be done in the laboratory fume hood.
Laboratory must be marked as follows:

**Danger
BENZENE
CANCER HAZARD
FLAMMABLE – NO SMOKING
AUTHORIZED PERSONNEL ONLY**

Special Handling Procedures and Storage Requirements

Standard Operating Procedure (SOP)



BENZENE

Effective Date: 8/23/2013

Revised Date: 8/23/2022

PROPERTIES



Liquid. Does not mix with water. Floats on water. Highly flammable.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



x — Must not be stored together
0 — May be stored together with specific preventions
+ — May be stored together

Additional Lab Specific Special Handling/Storage Procedures

Waste Disposal

Excess BENZENE and all waste material containing BENZENE must be placed in a container labeled with the following **“HAZARDOUS WASTE BENZENE”**, AND THE FULL CHEMICAL NAME.

Contact EHS at x3427 for hazardous waste removal.

Emergency Numbers

Fire and Medical Emergencies	x5911 (911 on cell phone)
Environmental Health and Safety	x3427
FastMed Urgent Care (employees)	(336) 714-4616
Student Health (students only)	x5218
Poison Control	800-222-1222

First Aid



BENZENE

Effective Date: 8/23/2013

Revised Date: 8/23/2022

INGESTION

- > If swallowed do **NOT** induce vomiting.
- > If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- > Observe the patient carefully.
- > Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- > Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- > Seek medical advice.
- > Avoid giving milk or oils.
- > Avoid giving alcohol.
- > If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

EYE CONTACT

- > If this product comes in contact with the eyes:
- > Immediately hold eyelids apart and flush the eye continuously with running water.
- > Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- > Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- > Transport to hospital or doctor without delay.
- > Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN CONTACT

- > If skin or hair contact occurs:
- > Immediately flush body and clothes with large amounts of water, using safety shower if available.
- > Quickly remove all contaminated clothing, including footwear.
- > Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- > Transport to hospital, or doctor.

INHALATION

- > If fumes or combustion products are inhaled remove from contaminated area.
- > Lay patient down. Keep warm and rested.
- > Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- > Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- > Transport to hospital, or doctor, without delay.

Standard Operating Procedure (SOP)



BENZENE

Effective Date: 8/23/2013

Revised Date: 8/23/2022

Spill and Accident Procedures

Eliminate ignition sources. Consider evacuation. Prevent from entering drains. Contain spillage by any means. Control vapor with water spray/ fog. Absorb with dry agent. Stop leak if safe to do so. Take precautionary measures against static discharges. Dispose of this material and its container at hazardous or special waste collection point. This material and its container must be disposed of in a safe way. To clean the floor and all objects contaminated by this material, use water and detergent.

