

Principal Investigator: \_\_\_\_\_




Date Approved: \_\_\_\_\_

This document covers basic chemical safety information for nitromethane. The use of nitromethane is subject to pre-approval by the Principal Investigator (PI) and/or Supervisor. PI and/or Supervisor may use the sheet attached to this SOP to document any lab specific training for Nitromethane. **DO NOT USE NITROMETHANE UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.**

## Nitromethane

Nitromethane (CH<sub>3</sub>NO<sub>2</sub>) is a clear liquid often used as a solvent or reagent in organic synthesis. It is a suspected carcinogen and flammable. Nitromethane is also toxic by inhalation and ingestion. When heated, nitromethane may cause an explosion due to the energetic nitro functional group and low carbon count. Nitromethane can also become shock-sensitive if contaminated with incompatible materials such as amines, acids or bases.



Personal Protective Equipment & Personnel Monitoring		
 <b>Lab Coat</b>	 <b>Gloves</b>	 <b>Eye Protection</b>
Flame resistant lab coat	Neoprene, polyvinyl alcohol, viton, or butyl gloves. Heavy-duty nitrile gloves are also acceptable. Do not wear disposable nitrile gloves.	ANSI Z87.1-compliant safety glasses or safety goggles if a splash hazard is present. If heating use a blast shield for extra protection.

## Labeling & Storage

Store under inert gas and in an approved flammable cabinet or a refrigerator rated for flammable storage. Primary containers should be labeled according to the UNC Charlotte Chemical Hygiene Plan. The secondary container's label must contain the chemical name and corresponding hazards. Keep container tightly closed in a dry and well-ventilated area away from sunlight. Store at or, if possible, below room temperature. Keep away from incompatible materials such as: amines, strong acids, strong bases, strong oxidizing agents, strong reducing agents, and copper. Store away from heat sources and in a flame proof area. Do not store in copper or copper alloy storage vessels.

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## Engineering Controls, Equipment & Materials

### ***Fume Hood***

Handle using a chemical fume hood with good ventilation and electrically grounded lines and equipment. Vapors may form explosive mixtures with air. Avoid mechanical friction or shock.

## Housekeeping

### ***Spills***

Notify others in the area of the spill, including your supervisor. Evacuate the location where the spill occurred. Call 911 from any campus phone (or 704-687-2200 from a cell phone). Report any exposure to EHS at 704-687-1111. Remain on-site (at a safe distance) to provide detailed information to first responders.

### ***Decontamination***

Clean contaminated surfaces with soap and water. Dispose of the paper towels as hazardous waste.

### ***Waste***

Refer to the UNC Charlotte Chemical Hygiene Plan for details.

## First Aid & Emergencies

### ***Skin Contact***

Immediately remove contaminated clothing and shoes; flush skin with water for at least 15 minutes. Get medical attention immediately.

### ***Eye Contact***

Check for and remove contact lenses. Immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.

### ***Inhalation***

Move person into fresh air. Get medical attention immediately.

### ***Ingestion***

Do not induce vomiting or give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

