Principal Investigator: _____ ***Date Approved:*** _____

This document covers basic chemical safety information for potential explosives. The use of any potentially explosive chemical 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 Potentially Explosive Chemicals. DO NOT USE POTENTIAL EXPLOSIVES UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.

Potentially Explosive Chemicals

Potentially explosive chemicals (PEC) are liquid or solid materials that can undergo a sudden release of pressure, gas, and heat when subjected to an initiating mechanism such as friction, impact, catalysts, light, or heat. Examples include: nitrocellulose, dibenzoyl peroxide, picrate salts, and most 'trinitro-' compounds. Chemicals covered by this SOP **DOES NOT** include peroxide-forming chemicals, picric acid, ammonium perchlorate or nitrate salts.

Personal Protective Equipment & Personnel Monitoring			
 **Lab Coat**	 **Gloves**	 **Eye Protection**	 **Face Shield**
Flame resistant lab coat.	Nitrile or neoprene gloves.	ANSI Z87.1-compliant safety glasses or safety goggles if a splash hazard is present. Consider using a blast shield for extra protection.	

Labeling & Storage

Store in secondary containment at the manufacturer's recommended temperature in an explosion-proof refrigerator/freezer or an explosion-proof cabinet that does not contain flammables or chemically incompatible materials. Keep away from heat, light, and any potential initiating mechanisms. 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. Also, if not plainly visible (e.g. through a cabinet window), labeling must be applied to storage locations where these are stored to avoid an inadvertent encounter. Limit the amount kept in storage to the amount needed for planned and/or foreseeable experiments.

Engineering Controls, Equipment & Materials

Fume Hood

Work in a chemical fume hood whenever possible. Keep the sash at the lowest practical height while working, and close the sash when the fume hood is not in use.

Blast Shield

When working with PEC the use of a portable blast shield inside the fume hood is highly recommended.

Cautions & Considerations

Limits on Scale

The PI and/or supervisor must communicate and enforce clear limits on the quantity of each PEC that can be used in any single experiment. Consult with your PI if you do not know the quantity limit(s) that has been set for your lab.

Initiating Mechanism

Before working with any potentially explosive chemicals, determine the initiating mechanism that could lead to an explosion; friction, impact, catalysts, light, or heat. Refer to the chemical safety data sheets (SDS) for this information. Also consider working with equipment that cannot generate static electricity or sparks.

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

Decontamination methods will vary based on the materials handled and equipment being used. Please review the chemical SDS for guidance on cleaning materials.

Waste

Dispose of as hazardous waste. Refer to the UNC Charlotte Chemical Hygiene Plan for more details.

First Aid & Emergencies

Skin or Eye Contact

Remove contaminated clothing and accessories; flush affected area with water. If symptoms persist, get medical attention.

Inhalation

Move person into fresh air. If symptoms persist, get medical attention.

Ingestion

Rinse mouth with water. If symptoms persist, get medical attention.

Name	Signature	Date