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

This document covers basic chemical safety information for picric acid. The use of picric acid 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 Picric Acid. DO NOT USE PICRIC ACID UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.

Picric Acid

Picric acid, or 2,4,6-trinitrophenol (TNP), is a yellow, odorless crystalline solid that is mildly corrosive, highly flammable, and explosive when dry. Normally sold and stored wet, it is only slightly soluble in water. Picric acid is often used as a fixative and staining reagent in immunohistochemistry. This substance is prone to sublimation, whereupon it can react with nearby metals, bases, or other materials to form dangerous picrate salts.

Personal Protective Equipment & Personnel Monitoring		
 **Lab Coat**	 **Gloves**	 **Eye Protection**
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

Dry picric acid is sensitive to shock and friction and must therefore be stored wet, under a layer of water. **DO NOT** allow the solution to evaporate to dryness. Glass or plastic bottles are required, as picric acid can easily form highly sensitive metal picrate salts. **DO NOT** use metal spatulas when manipulating picric acid. Keep away from sources of ignition. **DO NOT** use glass stoppers as some material may be ground between the flask neck and the stopper, and it may explode. Clean bottleneck, cap, and threads with a wet cloth before re-sealing. Keep away from metals, amines, bases, and hygroscopic chemicals. 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.

Engineering Controls, Equipment & Materials

Fume Hood

Use fume hood to keep exposure to picric acid as low as possible. If your protocol does not permit the handing of such materials in a fume hood, contact EHS to determine whether additional respiratory protection is warranted.

Cautions & Considerations

If an old or previously unaccounted for bottle of picric acid is discovered **DO NOT** touch the container. Depending on how long the bottle has been abandoned and the state of the product inside, even a minor disturbance could be dangerous. Visually inspect the contents of the bottle

without moving it to evaluate its water content, looking for signs of crystallization inside the bottle and around the lid. If there is even the slightest indication of crystallization, evaporation, or the formation of dry solids, **DO NOT** handle the container and contact EHS immediately. Secure the area and restrict access to the container until it can be evaluated by EHS personnel

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. Keep the paper towels wet and dispose of them as solid hazardous waste.

Waste

Picric acid should be collected in a sealed container as an aqueous solution. Dispose of it 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