

Principal Investigator: _____

Date Approved: _____




This document covers basic chemical safety information for novel chemicals with unknown hazards. The use of any novel chemical with unknown hazards 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 Novel Chemicals with Unknown Hazards. **DO NOT USE NOVEL CHEMICALS WITH UNKNOWN HAZARDS UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.**

Novel Chemicals with Unknown Hazards

Cutting-edge research may often involve the creation and/or use of novel chemicals and materials. In many cases, the hazards of these novel materials can be anticipated based on what is known about similar, established materials. In such cases it's prudent to presume that a derivative is at least as hazardous as its parent compound, and to take similar precautions when storing and/or handling it.

In all cases, a material with unknown hazards should be presumed to be hazardous until reasonably foreseeable health and/or physical hazards can be ruled out experimentally.



Personal Protective Equipment & Personnel Monitoring		
 Lab Coat	 Gloves	 Eye Protection
Traditional lab coat or flame-resistant lab coat when working with materials believed to be flammable.	Nitrile or neoprene gloves typically provide adequate protection against minor splashes. Consult with your PI or supervisor to determine whether any materials involved in your process require alternative hand protection.	ANSI Z87.1-compliant safety glasses or safety goggles if a splash hazard is present. A face shield and blast shield may be advisable if the material is reasonably anticipated to be potentially explosive.

Labeling & Storage

Store in secondary containment in a cool, dry place away from other materials that are reasonably anticipated to be chemically incompatible. If the material is reasonably anticipated to be a potential explosive, it must be stored away from light in an explosion-proof refrigerator/freezer or an explosion-proof cabinet. 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. Containers of these materials should be stored in leak-proof secondary containment. If the material is reasonably anticipated to be

acutely toxic, carcinogenic, or a reproductive toxicant, it must also be stored within a designated area. 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.

Engineering Controls, Equipment & Materials

Fume Hood

It is advisable to use a fume hood when working with these materials. If your protocol does not permit the handling of such materials in a fume hood, contact EHS to determine whether additional respiratory protection is warranted.

Blast Shield

When working with novel compounds which may be potentially-explosive, the use of a portable blast shield inside the fume hood is highly recommended.

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 Safety Data Sheet for guidance on cleaning materials.

Waste

Refer to the UNC Charlotte Chemical Hygiene Plan for details. Please note that some carcinogens and acute toxicants may be considered 'acutely hazardous' when disposed as waste.

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

Get medical attention immediately.

