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

This document covers basic chemical safety information for anesthetics. The use of any anesthetic 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 Anesthetics. DO NOT USE ANESTHETICS UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.

Anesthetics (Inhalant)

Inhaled Anesthetics are used in the laboratory setting to induce general anesthesia in animal subjects for the purposes of surgery or euthanasia. Common anesthetics include nitrous oxide and various halogenated agents. The most widely used halogenated agents include isoflurane (Forane®), desflurane (Suprane®), sevoflurane (Ultane®), halothane (Fluothane®), and enflurane (Ethrane®). Many of these substances are liquids at room temperature when pure, but when mixed with oxygen and vaporized become gaseous – resulting in increased inhalation hazards. Exposure to anesthetics and waste anesthetic gases (WAGs) may result in adverse neurological effects, reproductive problems in women, and developmental defects in the unborn fetus.

Personal Protective Equipment & Personnel Monitoring		
 **Lab Coat**	 **Gloves**	 **Eye Protection**
Traditional white lab coat. A barrier lab coat may be appropriate when biological hazards are present.	Nitrile or neoprene gloves typically provide adequate protection against minor splashes.	ANSI Z87.1-compliant safety glasses.

Labeling & Storage

Store in a well-ventilated location below 30°C (86°F), away from heat, flame, and from other materials that may be chemically incompatible. Incompatibilities include: strong oxidizing agents, strong acids, bases, and alkali metals. 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 and locked up.

Engineering Controls, Equipment & Materials

Fume Hood/Biosafety Cabinet IIB2

Use fume hoods or hard-ducted Class II B2 biosafety cabinet (BSC) whenever possible.

Active Scavenging

When a fume hood or appropriate BSC is not available, active scavenging devices can be used. These include exhausted induction chambers/surgery nose cones or snorkel trunks ducted to

the building exhaust system. Do not use the house vacuum line for active scavenging unless approved by EHS.

Passive Scavenging
Charcoal canisters that adsorb used gas via positive pressure from equipment and the anesthetized animal's exhalation are also acceptable means of scavenging WAGs. Weigh the canisters regularly to monitor adsorption levels and prevent channels from forming in the charcoal – these allow gas to enter the local atmosphere. Never place the exhaust side of the canister on a flat surface - this inhibits the flow of gas.

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
Wipe residual liquid with absorbent pads and clean the area with soap and water. Dispose of the absorbent pads as hazardous chemical waste.

Waste
Dispose of unused liquid anesthetic as hazardous chemical 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