

**STANDARD OPERATING PROCEDURES**  
**DIVISION OF COMPARATIVE MEDICINE**  
**UNIVERSITY OF SOUTH FLORIDA**

SOP#: 909.6

Date Issued: 11/09

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Page 1 of 3

**TITLE:** **Anesthetic Gas Safety Practices**  
**SCOPE:** All Authorized Personnel  
**RESPONSIBILITY:** Training Coordinator, Facility Manager, Technical Staff,  
**PURPOSE:** To Outline Appropriate Use of Anesthetic Gas and Safety Practices

**I. PURPOSE**

1. The purpose of this procedure is to inform personnel of practices to limit exposures to waste anesthetic gases (WAG) in the workplace.

**II. RESPONSIBILITY**

1. The Training Coordinator and Facility Managers are responsible for training and supervising personnel regarding the proper implementation of this SOP.
2. It is the responsibility of personnel working with anesthetic gases to be familiar with

## **Mitigating WAG Exposures**

1. Distinction between high waste anesthetic gas (WAG) levels and trace WAGs has been made, with trace levels defined as below concentrations needed for anesthesia or detectable by smell.
2. No occupational diseases or adverse health effects have been attributed to trace WAG exposure levels.
3. If you can smell isoflurane, it is an indication that isoflurane may have escaped into the room from various components of the anesthesia delivery system resulting in WAG levels are above acceptable thresholds.
4. In order to keep WAG levels below threshold, passive scavenging techniques in the mouse anesthetic environment (MAE) should include:
  - a. turning off the vaporizer at the end of induction, followed by
  - b. purging of the induction chamber with a 1.5-L/min

2. Prior to using an anesthesia machine,
  - a. Visually inspect hoses and connections,
  - b. Connect the waste gas scavenging system,
  - c. Test breathing circuit for leaks and verify it can maintain positive pressure,
  - d. Weigh the charcoal scavenging device (e.g., F/Air® or EnviroPure® canisters) to ensure weight is below the manufacturer's recommended threshold for replacement. Refer to manufacturer's directions.
3. Scavenging systems must be used in all locations where inhaled agents are used.
4. Personnel using anesthetic agents must be trained in proper anesthetic technique applicable to their usage.

**Approved:**

**Date:**