

University of Notre Dame
Institutional Animal Care and Use Committee
Policy on Anesthetic Gas Monitoring

Background

Gases that leak into the environment during inhalant anesthetic procedures are referred to as waste anesthetic gases. The hazards of exposure to anesthetic gases have been documented to include sterility, miscarriage, cancer, nausea, headache, fatigue, irritability, liver and kidney disease. Safe limits of exposure have been established by OSHA and NIOSH as well as the manufacturers of the anesthetics. There are various methods used to minimize exposures. FLSC has established the following procedures to limit exposures to waste anesthetic gases.

Procedures

1. All anesthetic machines must vent to a fume hood or through an F/air™ scavenging canister.
2. All F/air canisters must be monitored by weight after each use. The canister is discarded when a 50 gram increase in weight has been achieved. The weights are recorded on the canister after each use.
3. Soda-sorb is monitored in rebreathing system anesthetic machines by hours of use. The soda-sorb is discarded after 8 hours of use irregardless of color change. The hours of use are recorded after each use on a card located on the anesthetic machine.
4. All bell jars used for inhalation anesthetic induction must be used in a fume hood to prevent exposure to personnel during the opening and closing of the charged chamber.
5. All bell jars must be aired in the hood to remove all anesthetic vapors prior to removal for disinfection.
6. All persons handling inhalation anesthetic must wear nitrile gloves.
7. Anesthetic bottles are aired for a minimum of 48 hours in the fume hood prior to disposal.
8. No nose cones are authorized for use without a tight seal around the face or muzzle unless the animal is placed in a fume hood during the anesthetic procedure.
9. All anesthetic machines are serviced annually. The service includes pressure testing of machine and all components to identify and repair any system leaks, calibration and verification of output of the vaporizer to ensure optimum performance.
10. The environment in surgical/anesthesia areas is monitored annually for levels of waste anesthetic gases. The monitoring is done by the office of Risk Management & Safety at the University of Notre Dame. Risk Management & Safety will employ the method(s) they deem most appropriate to determine the exposure of employees to environmental anesthetic waste gases.
11. Risk Management will provide a copy of the testing results and a summary of the results to FLSC management.