OCCUPATIONAL HYGIENE AND SAFETY DIVISION

DUKE OESO

WORKING SAFELY WITH ANESTHETIC GASES IN THE LABORATORY

TIPS FOR SAFE ANESTHETIC GAS USE

EXAMPLES OF VETERINARY ANESTHESIA EQUIPMENT

- Mouse breathing circuit from Harvard Apparatus

- VetEquip VaporGuard Charcoal canister

OCCUPATIONAL HYGIENE AND SAFETY DIVISION

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EQUIPMENT AND WORK PRACTICES

- Use a vaporizer (or anesthesia machine) and breathing circuit/nose cone designed for anesthesia for the animal species you are working with. (Do NOT attempt to "improvise" anesthesia delivery with equipment not created for that purpose.)
- If using an induction chamber, flush the chamber before opening (with air or O_2) and/or minimize the time the chamber is open.

SCAVENGING WASTE GASES

- Work in a fume hood if possible or near a dedicated local exhaust "snorkel" positioned 4—6" from the induction chamber or nose cone.
- Medical vacuum systems may be used to exhaust waste anesthetic gases from an anesthesia vaporizer circuit. If your building has a lab vacuum system, it is designed for air only—check with OESO for approval to use a standard lab vacuum system for scavenging.
- If using an **isoflurane vaporizer**, you can work on the benchtop if you have a charcoal canister for scavenging. Follow the manufacturer's instructions for setting up the canister and tracking canister life.

FOR MORE INFORMATION

- See the Duke Animal Care and Use Program's policy on Safe Use of Anesthetic Gases.
- If you are concerned about employee exposure to anesthetic gases, contact OESO at 919-684-5996.
- For guidelines on animal safety during anesthesia, see the website of the Duke Animal Care and Use Program or contact DLAR or OAWA.