

Premiere inhalant anesthesia systems for research and private practice veterinarians

# WASTE ANESTHETIC GAS ISSUES: AREAS OF HIGHER RISK OF EXPOSURE TO INHALANT ANESTHETICS -- RESEARCH

## 1. FILLING THE VAPORIZER

- A. FUNNEL FILL VS. PIN INDEXED (KEY FILL)
- B. Both can be problematic

#### 2. OPENING INDUCTION CHAMBER

- A. Exposure is positional
- B. Hinged vs. Sliding Top
- C. Efficacy of Flush poor
- D. Residual anesthetic in subject's hair (O2 and Iso)

#### 3. IMPROPERLY FITTED FACE MASKS

- A. Deteriorated Diaphragm
- B. NO Diaphragm
- C. Improperly Cut Diaphragm
- C. Not using Coaxial System
  - 1. Syringe case or other device
- 4. NO WAG MANAGEMENT SYSTEM
  - A. Activated Charcoal not weighed nor changed.

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- 1. Charcoal canister placed on flat surface (F/Air and others)
- 2. Charcoal canister placed on side
- B. EVAC Tubing not connected
- C. EVAC System not turned on.

## 5. STEREOTAXIC DEVICE

- A. SLOT AT BOTTOM OF NOSE CONE
  - 1. Using activated charcoal usually will not work
    - a. Gases fall into workplace through slot
    - b. Nose cone fitted too tightly can present problems with respiration
  - 2. Scoop works with in-house vacuum (attenuated)
    - a. Applying vacuum to nose cone is tricky needs to be balanced and that is difficult to accomplish
- 6. BELL JAR (Please say that you are not using this technique!!)

A. VERY HIGH RISK OF OVERDOSE and/or ANESTHETIC ACCIDENT USING ISOFLURANE (HIGH VAPOR PRESSURE ANESTHETIC)

- B. VERY HIGH RISK OF EXPOSURE IN WORKPLACE (UNLESS USED IN FUME HOOD)
   1. 30% CONCENTRATION = 300,000 ppm (OSHA TOLERANCE 2 ppm IN 1 HOUR)
- 7. RECOVERY AREA
  - A. Subjects / Patients breathing off ISO (or other inhalant anesthetic) while recovering from anesthesia

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- 8. LEAKING ANESTHESIA DELIVERY DEVICE
  - A. Hole in bag
  - B. Hole in RB sets
  - C. Hole in conductive tubing
  - D. Leaking vaporizer and/or vaporizer connections

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