

# Using Rodent Anesthesia Machines



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Proper induction of inhaled Isoflurane anesthesia using a vaporizer delivery system is critical to performing humane surgery on animals. Levels of induction and surgical planes should be monitored carefully and often. Please refer to the document attached to the rodent anesthesia machine prior to the use of the machine.

The following illustrations may assist you in becoming familiar with the various parts of the anesthesia machine and associated equipment.



# Using Rodent Anesthesia Machines

Training in the proper use of the DLAR Rodent Anesthesia Machines ***PRIOR*** to being able to reserve/rent one is

***MANDATORY for new research personnel***



# Typical Setup for Rodent Anesthesia Components

Small scavenger system (Passive)

Oxygen supply flow meter

Tank-type Scavenger system (Active)

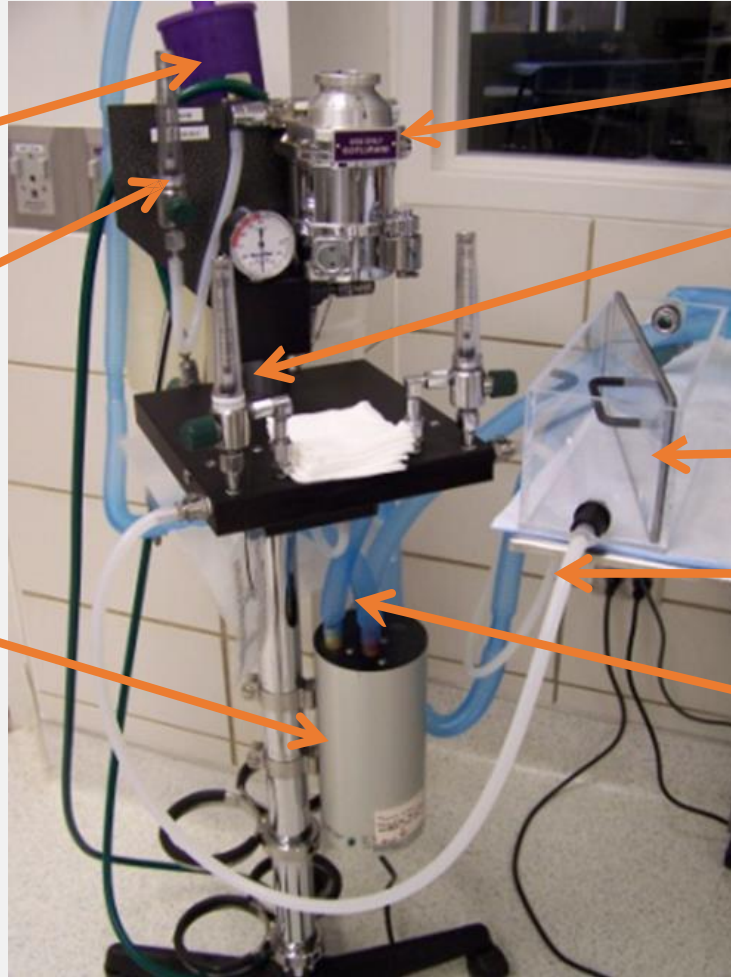
Vaporizer

Induction Chamber/Nosecone Delivery Flow Meters

Induction chamber

Induction hose

Scavenger system exhalation hose



# Typical Setup for Rodent Anesthesia Components

## Vaporizer

Holds the liquid anesthetic and regulates the amount of anesthetic that is mixed with Oxygen





# Typical Setup for Rodent Anesthesia Components

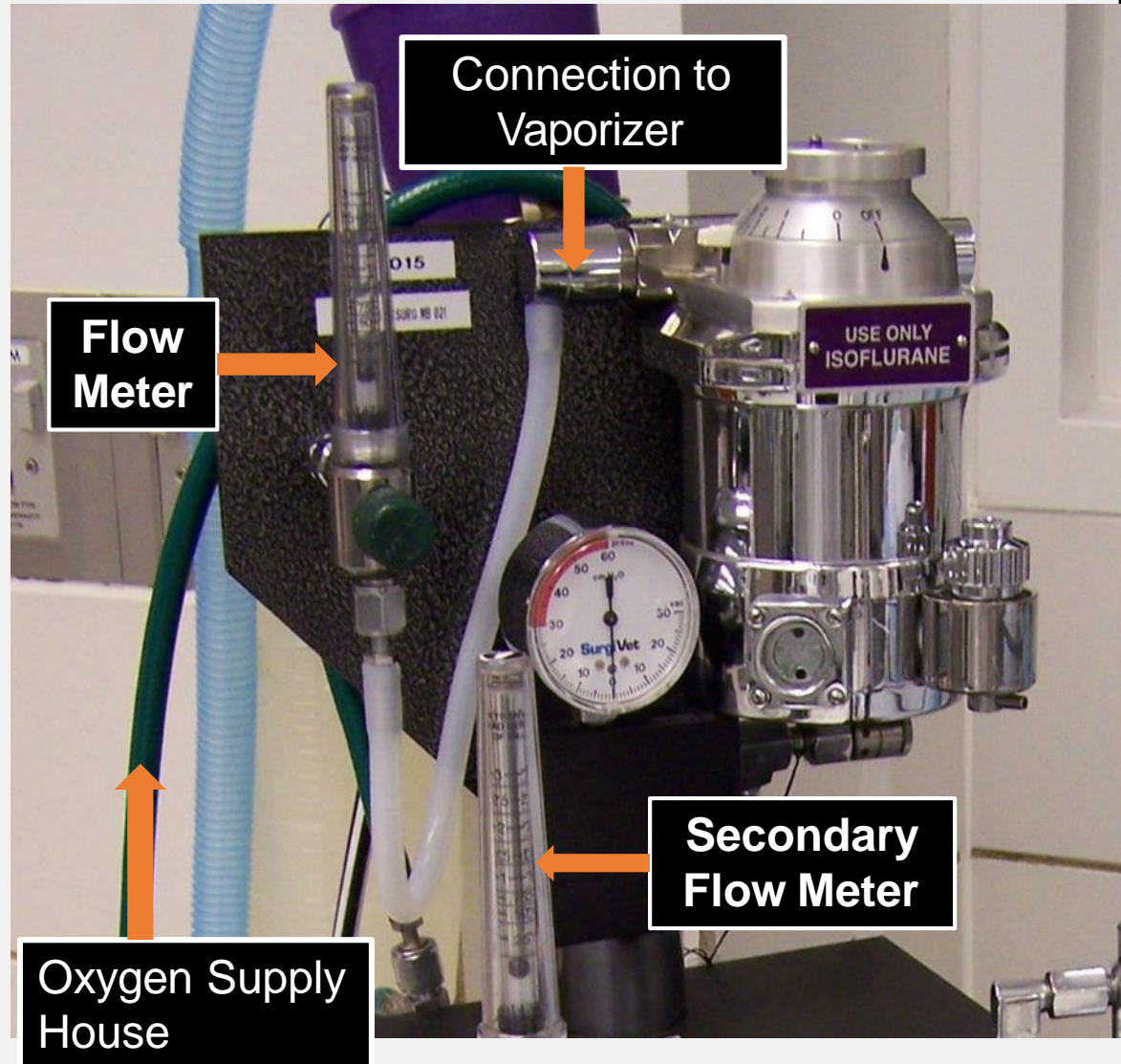
The amount of Isoflurane in the vaporizer can be seen in the sight glass located on the left side as you look at the vaporizer.



The reservoir can be accessed by unscrewing the cap and filling to the required level. The vaporizer ***MUST BE TURNED OFF BEFORE THE CAP IS REMOVED*** in order to fill the reservoir. Be careful not to overfill the chamber.

# Typical Setup for Rodent Anesthesia Components

The Oxygen **Flow Meter** is located on the left side as you look at the machine. The hose should be connected directly to the vaporizer. The settings should be between 1.5 – 3 cm depending on whether you are using single or multiple induction.



# Typical Setup for Rodent Anesthesia Components

Please be sure that all hoses are properly and securely connected before use.





# Typical Setup for Rodent Anesthesia Components

## Canister type of Scavenging System:

This system is based on the amount of weight accumulated as a result of waste gases building up in the filter media. It should be checked before and after each use of the anesthesia machine and the weight gain recorded on the canister. The canister should remain in its' holder and not be placed on a flat surface. There are vents in the bottom to allow for circulation.



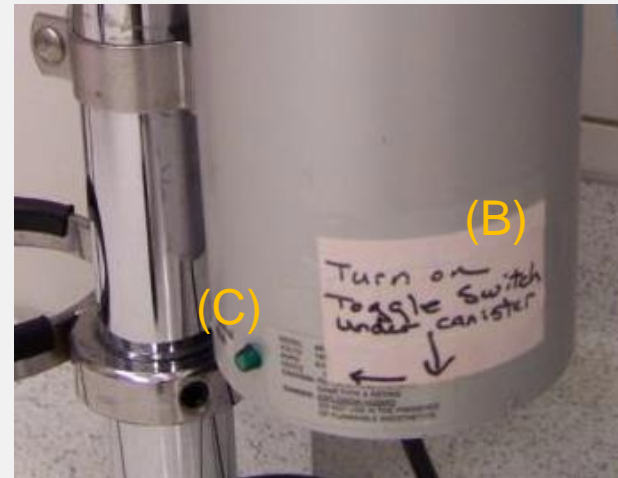
# Typical Setup for Rodent Anesthesia Components

## Active Scavenging System:

(A) Please check to be sure that all exhaust hoses are in place and well connected.



(B) This type of scavenging system requires you to turn it on at the bottom of the canister.



(C) You will see a green indicator light come on when it is working properly.

# Typical Setup for Rodent Anesthesia Components

## Adjusting the Isoflurane Vaporizer:

Push down on the white lever and turn the knob simultaneously to the desired level

***If wearing sterile gloves, remember to use sterile gauze or towels to adjust the lever***

Sterile gauze is ***NOT*** needed if your gloves are ***NOT*** sterile

**The adjustment knob is automatically locked in place when you release the white lever**



Non-Sterile  
Gloves

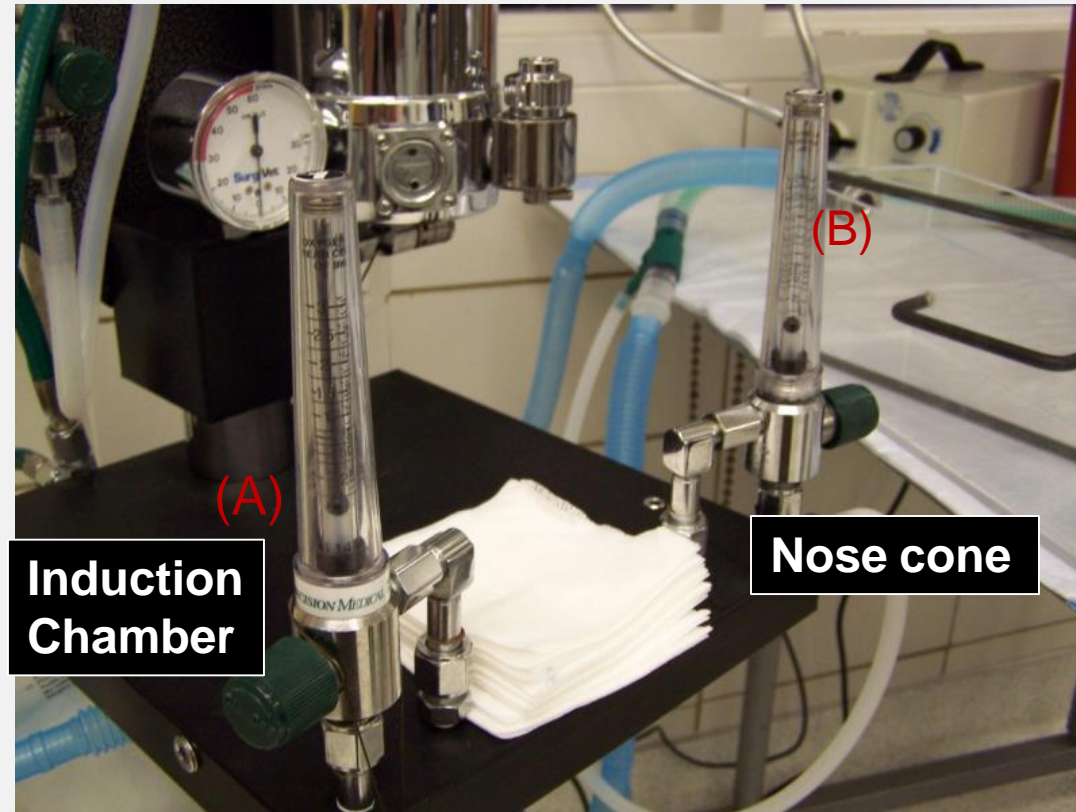


Sterile  
Gloves

# Typical Setup for Rodent Anesthesia Components

## Two Induction Chamber Delivery:

The flow meter on the left delivers anesthesia to the induction chamber (A)



The flow meter on the right delivers anesthesia to the nose cone (B)



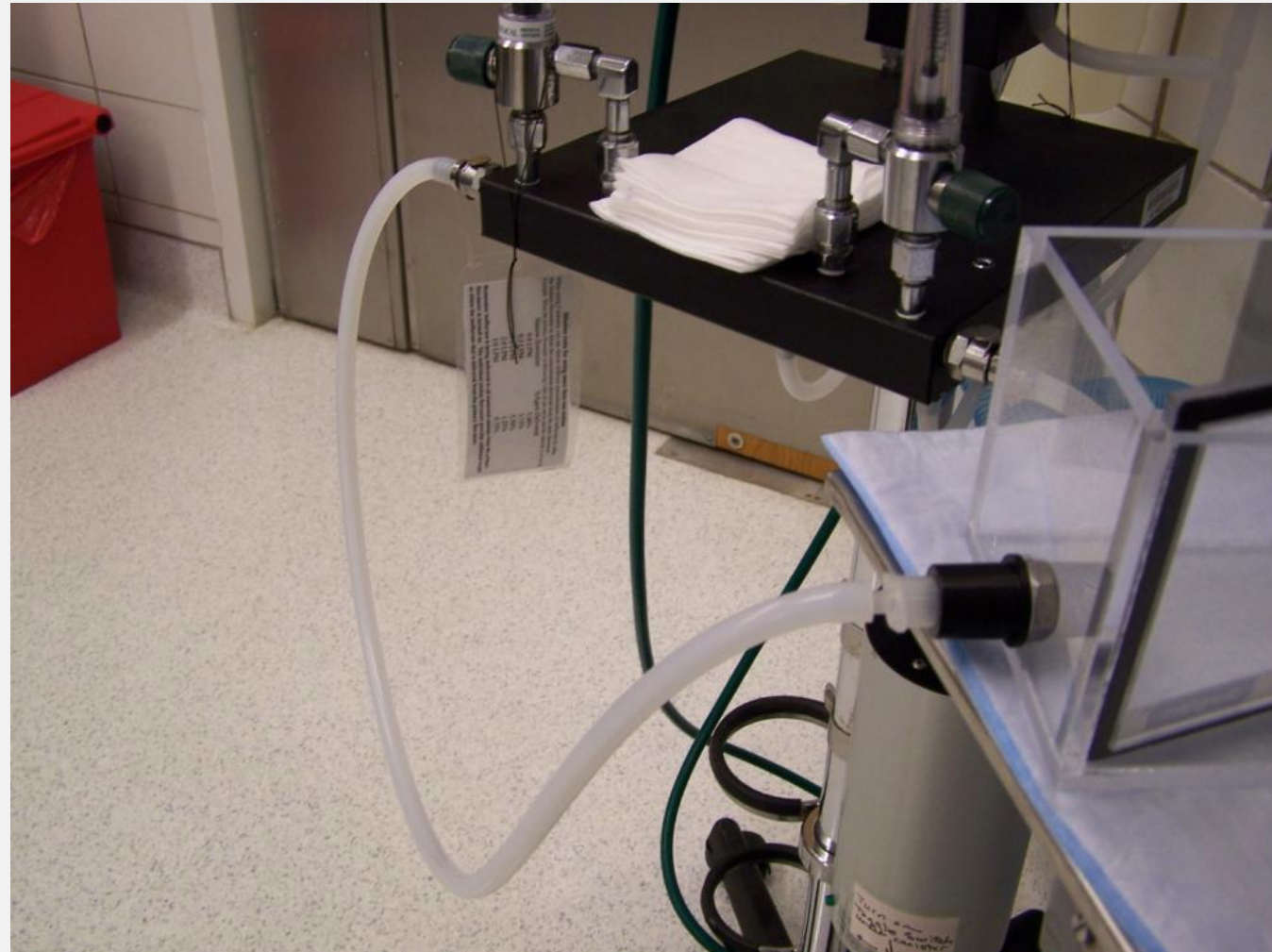
# Typical Setup for Rodent Anesthesia Components

Nose Cone:



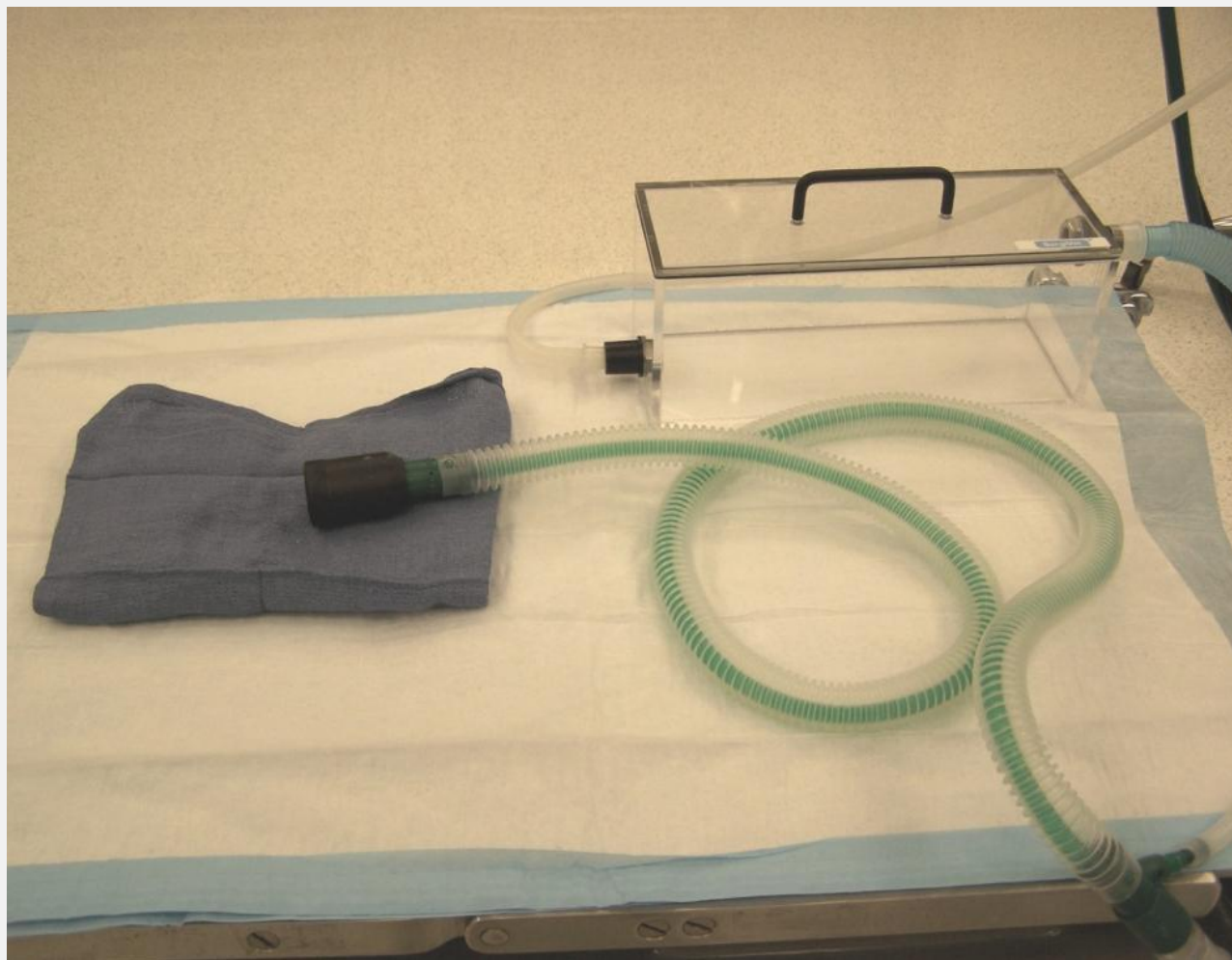
# Typical Setup for Rodent Anesthesia Components

## Induction Chamber:



# Typical Setup for Rodent Anesthesia Components

Dual Setup:





# Safety Precautions

Be ***EXTREMELY*** cautious when using ***ANY*** flammable liquids or materials such as Ethanol or alcohol

Equipment that generates heat or risk of spark such as hot bead sterilizers or items used to cauterize should be kept away from oxygen and anesthetics such as Isoflurane

Be certain the scavenger system is turned on





# Safety Precautions

Dangers of Fire and Explosion are **VERY REAL**



# For Assistance Call

## VETERINARY SERVICE SUPPORT PERSONNEL

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**Research**  
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