CTAC / ICBR SOP : Filling the IVIS System Vaporizer

Title: Filling the IVIS Spectrum Gas/Vapor Anesthetic System with Isoflurane

Materials Required:

> System Vaporizer
> Bottle of Isoflurane (anesthetic)
> Vaporizer filler tube and screw neck mount

Purpose:

To fill the anesthetic system with sufficient isoflurane anesthetic to allow imaging of experimental subjects.

Background:

Vaporizer units are commonly used to provide anesthesia of subjects in the area of laboratory animal science. Isoflurane, a highly volatile compound, is mixed with medical grade oxygen or air to provide a vapor percentage sufficient to induce anesthesia. Recovery into a "normal" air mix allows rapid recovery of consciousness and mobility.
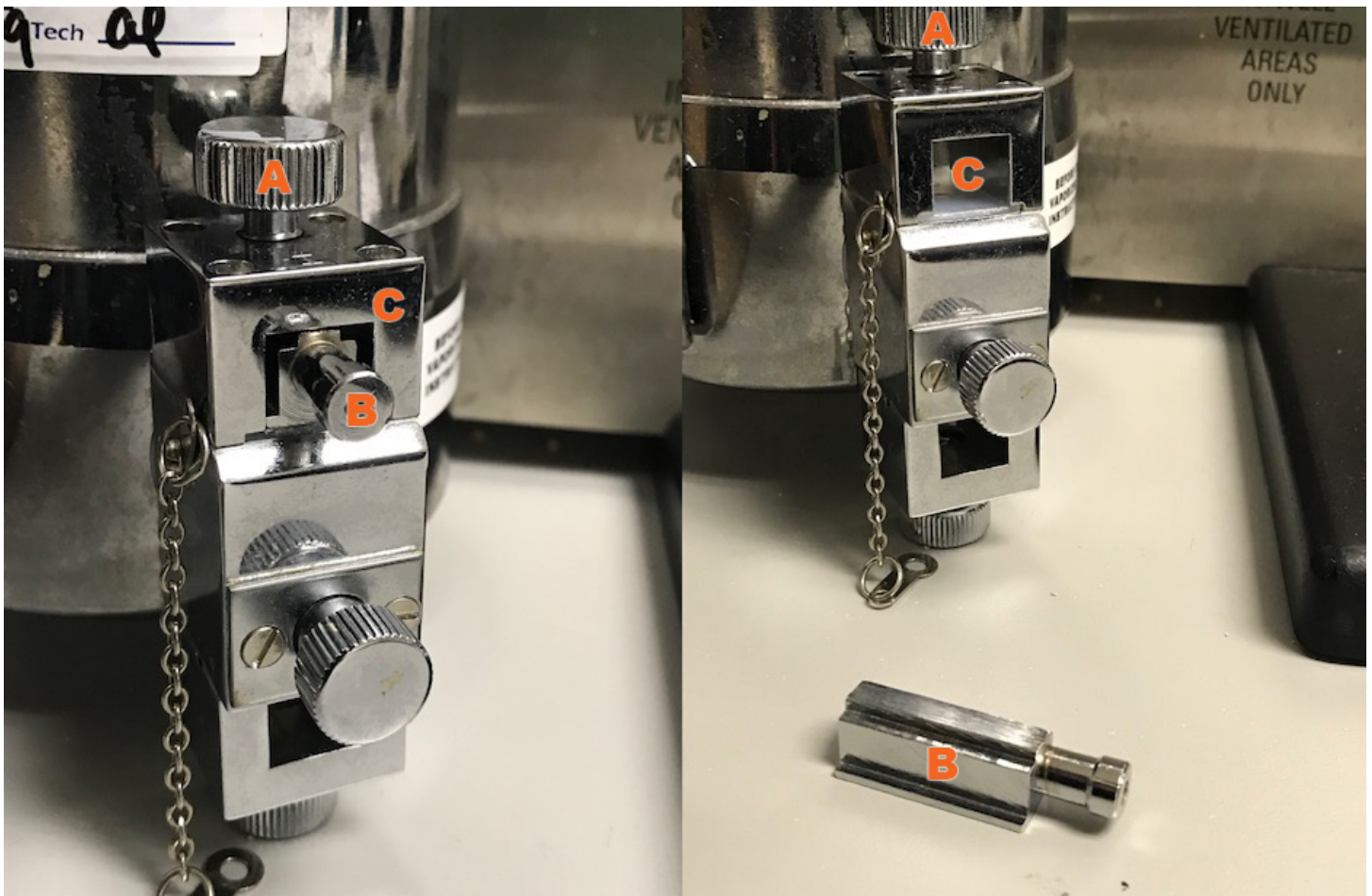
System component identification:

1. Is the fill port locking nut
2. Is the blank insert and fill port seal, shown inserted and removed
3. Is the fill port, shown ready for operation (left) and ready for receiving more anesthetic with the insert removed and the port open (right)

The CTAC provided filler tube should always be used to dispense your isoflurane into the vaporizer.

The filler tube is located on the workspace shelf central to the room and unencumbered by instrumentation, and should be returned to this location after use.

Filling the vaporizer

1. Should there be enough for your imaging session there is no need to fill the vaporizer.

2. Should there be insufficient (each user is required to cover their own isoflurane requirements) the vaporizer will need filled to cover the experimental need.

3. Ensure that the oxygen supply is not turned on to the instrument's vapor anesthetic system (green knob should be set to OFF, gas cylinder should be OFF).

4. Open the locking nut above the isoflurane delivery port.

5. Remove the metal blank, that also functions as the isoflurane delivery port seal.

6. Attach the dedicated isoflurane fill tube to the receptacle collar on your isoflurane bottle, and tighten.

7. Inset the blocky end of the fill tube into the delivery port. Due to the shape it should only go in one way, with the hole facing downwards. Ensure that the end is firmly seated in the port prior to dispensing any isoflurane.

8. Decant isoflurane using a lift and drop motion of the bottle, with respect to its base. Isoflurane will enter the vaporizer unit and the meniscus visible through the fill window will rise.

9. Fill the vaporizer with sufficient anesthetic to conduct the imaging session. Do not overfill the unit. Note: For longer imaging sessions, be prepared to increase your monitoring of existing isoflurane level and refill as required.

10. One sufficient isoflurane is within the unit, remove the fill tube, and replace the metal blank / isoflurane delivery port seal, and tighten the locking nut above it.

11. Return the fill tube to the central rack for use by other users.