SOP: **EQ-03** Title: **Operation & Maintenance of the Isotec 4 Anesthesia Machine**
SOP Last Revision Date: 12MAY09

PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to describe the operation and maintenance of the Isotec 4 Anesthesia Machine. This SOP applies to the two identical units found at the Laboratory Animal Research Core's animal facilities on the campus of the University of Missouri-Kansas City.

POLICY

It is LARC policy to meet or exceed all federal, state, local regulations and institutional policies/procedures as they apply to the use of animals in research. Personnel must attend any applicable training in animal care and use, occupational health and safety, equipment operation, and Standard Operating Procedures prior to performing activities outlined in this SOP or work under the direct supervision of a trained LARC staff member.

REFERENCES

A. Laboratory Animal Research Core Personnel

B. Vetequip (www.vetequip.com), 800-466-6463, info@vetequip.com

DEFINITIONS

A. Breathing Bag = Volume measured bag used to breathe for the patient.

B. E-Tank = Portable oxygen tank affixed to the anesthesia machine.

C. Flow Meter = Knob and indicator of oxygen flow rate.

D. Manometer Gauge = Indicates the amount of flow pressure to the patient (not to exceed 20 psi).

E. Mask = Cone shaped apparatus used to cover the patients face.

F. Pop-Off valve = Knob that restricts the flow of gas from the system.

G. PSI = Pounds of pressure per square inch.

H. Scavenging System = F-Air canister that absorbs all end product anesthetic gases (not exceed 20 psi).

I. Soda Lyme Canister = Unit in line that absorbs waste CO2 from the patient.

J. Vaporizer = The carrier unit for the inhalation anesthetic (Isoflurane).

PROCEDURES

A. Position machine and couple oxygen feed line to dedicated oxygen source, or if portable unit, turn on E-Tank and listen for obvious leaks.

B. Open flow meter and slowly reduce flow rate to 1 Liter per minute.

C. Close pop-off valve and hold thumb over the open end of the anesthesia hoses allowing the system to pressurize. Check the manometer at 30 psi and hold this pressure. Turn off the oxygen while still maintaining pressure and check for leaks in the hoses, breathing bag and around soda lyme canister.

D. To fill vaporizer, make sure the vaporizer is in the off position. Open the fill port on the front of the machine and fill with isoflurane only, paying strict attention to the sight gauge so as to not over fill.

E. Check oxygen supply, recheck vaporizer and install anesthesia mask before you begin. Ensure that the Pop-Off valve is open, soda lyme canister is full

and granules are white in color, and that the F-Air canister is plugged weight is recorded. Canister should be replaced when a 50g weight increase has occurred.

ILLUSTRATIONS