Georgia State University

Institutional Animal Care and Use Committee

(IACUC)

It is the responsibility of the Georgia State University (GSU) Institutional Animal Care and Use Committee (IACUC) to ensure judicious and humane use of animals used in its teaching and research programs that is consistent with federal requirements.*

INHALATION ANESTHESIA MACHINE / VAPORIZER / WASTE GAS MAINTENANCE

As a component of maintaining properly functioning anesthetic machines, such machines should receive an inspection on a regular basis (at least once every two years) by a qualified service technician. Such an individual is able to check for leaks, replace worn parts, and check the calibration of the vaporizer. Vaporizers must be serviced and/or calibrated if the delivery of anesthetic gas is not within 20% of the metered concentration. The service technician will place documentation of the biannual inspection on each anesthetic machine inspected.

A properly functioning anesthetic machine thereby reduces the likelihood of environmental contamination of anesthetic gases and helps to ensure that the animal is receiving the desired concentration of anesthetic.

In addition, any anesthetic machine showing signs of wear or other problems must be removed from service immediately until appropriate repairs are rendered. Such signs of wear or other problems include the following: discoloration (yellowish-brown) in the “fill” sight glass of the vaporizer, cracked or damaged hoses, sticking valves or knobs, and/or animals not responding as anticipated to the level of anesthesia provided.

For personnel and animal safety and well-being, all individuals using inhalant anesthetic machines should check for leaks prior to each use of the machine. Further, such individuals should assure that the activated charcoal scavenger canister associated with the machine has not exceeded the allotted weight gain (see below).

Activated charcoal scavenger canisters (e.g. F/Air canisters) are only able to adsorb a specified amount of anesthetic gas after which time the canister is “spent” and must be replaced. Scavenger canisters must be weighed prior to being put into use and the starting weight recorded. Scavenger canisters should be weighed often enough so that they are always at a functioning weight (e.g. F/Air canisters should be disposed of after a 50 gram increase in weight – other scavenger canister brands may allow for a larger weight increase prior to disposal – follow directions on the canister itself). Because only a few spots for weight recording are provided on the canisters, a log may be kept for each canister. When canisters reach their disposal weight, they can be disposed of by contacting the GSU Biosafety Officer to arrange for pickup.

Pertinent Regulations*
U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training
Public Health Service Policy
Guide for the Care and Use of Laboratory Animals
Animal Welfare Act (AWA) and AWA Regulations

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Signature IACUC Chair: [Signature]
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