

**TITLE: IACUC Policy on Rodent Surgery Instrument Sterilization**

**PURPOSE:** Standardize approved methods for instrument sterilization for rodent surgeries.

**REVIEW/REVISIONS:** Permanent amendment/revisions to this policy must be presented to the IACUC for review before implementation and should be developed by the IACUC membership and/or UAC/BSS.

**EFFECTIVE DATE:** December, 1994; **Revised/Re-Approved:** 12/7/00, 11/2/06, November 1, 2007

**PERSON(S) RESPONSIBLE:** All University Animal Care and Research personnel participating in rodent surgeries and/or responsible for preparing instruments for rodent surgery.

**POLICY/PROCEDURES:**

The IACUC authorizes University Animal Care to adopt the following policy with regard to instrument sterilization for rodent surgeries.

- 1) All instruments used in survival rodent surgeries must be steam or gas sterilized (this can be done by B.S.S. for a fee) prior to each group of surgeries (biological indicator monitoring of sterilizer effectiveness is advisable).
- 2) Instruments must be kept on sterile non-porous drapes during use.
- 3) Instruments must be cleaned of blood and debris by brushing or wiping with sterile water or saline and sterile gauze sponges between surgeries.
- 4) If contamination has occurred, instruments must be placed in a chemical agent or a glass bead sterilizer for the appropriate period of time for the method used to be effective (or the pack replaced by a new one).
- 5) If a chemical agent is used, instruments must be rinsed with sterile water or saline before being used on the next animal.
- 6) Surgical gloves and blades should be changed between each animal or after contamination.
- 7) Following surgery, all instruments must be thoroughly cleaned and preferably placed in an ultrasonic cleaner and rinsed.

The effectiveness of chemical sterilizing agents is currently under review by various government agencies and it appears that the manufacturer's recommendations will change.

Any questions regarding this policy should be directed to University Animal Care Surgery Section at 626-7304.

**PROVISO:**

- \* Exceptions must be specifically justified as an essential component of the research protocol and reviewed/approved by the IACUC.

**JUSTIFICATION:**

During the 1994 AAALAC Site Visit, the University of Arizona Animal Use Program was cited for investigators using chemical agents as a surgical instrument soak. Sterilants kill all microorganisms with the possible exception of some parasitic life forms. Disinfectants have a much lower level of effectiveness. Both PHS policy and AAALAC require that



rodent surgeries be performed using aseptic procedures (aseptic techniques, gloves, caps, masks and sterile instruments and preferably a scrub top) as well as separate surgical and animal prep areas. It often is not possible to have a fresh pack of sterile instruments available for repetitive rodent surgeries. Thus, resterilization or decontamination procedures must be available. It should be noted that agents such as zepharin, Nolvasan® (chlorhexidine) and Betadine (povidine iodine) are disinfectants not sterilants and therefore inappropriate for solitary use.

Available methods of sterilization include steam, gas, glass bead, and chemical agents. Chemical agents include phenols, glutaraldehyde, and chlorine dioxide. Glutaraldehyde is mutagenic, phenols are corrosive and both require special disposal procedures. Chlorine dioxide has a short sterilizing useful life (1 day) and is corrosive to metals. All agents require rinsing with sterile solutions prior to tissue contact. Glass bead sterilizers will sterilize only the portion of the instrument placed in the beads.