



**Duke University & Duke University Medical Center
Animal Care & Use Program
Policy**

SURGICAL DISINFECTANTS

PERFORMANCE STANDARD: All animal procedures will include appropriate aseptic technique that discourages infection, disease, or contamination and supports accurate research outcomes.

BACKGROUND: The goal prior to any invasive procedure is to rapidly kill bacteria at the site of the planned incision. No procedure, piece of equipment, or germicide alone can achieve that objective. According to work by Ruala (1990), alcohol is neither a sterilant nor a high-level disinfectant. The Alcohol has been used historically for disinfection in a variety of species and situations, and in certain cases, may actually achieve the desired outcome, but this is highly variable (dependent upon duration of contact time, agents being killed, and contamination present on the skin surface) and inconsistent (vegetative organisms are killed more quickly than spores). According to the Association for Professionals in Infection Control and Epidemiology, “ethyl alcohol and isopropyl alcohol are not effective in sterilizing instruments because they lack sporicidal activity and cannot penetrate protein rich materials and cannot kill hydrophilic viruses.”

ROLES:

1. Research and technical staff will abide by the expectations of this policy.
2. Exceptions to this policy will require prior IACUC approval.

PROTECTION POSTURES REQUIRED: PPE will be used as appropriate for the practice for procedure being performed.

POLICY: This policy provides a definitive position on the use of alcohol for this animal care program. The policy is consistent with the NIH/ILAR Guide for the Care and Use of Animals and the Position Statement by the Council on Accreditation, AAALAC, International.

1. **MAMMALIAN / AVIAN SURVIVAL SURGERY:** Alcohol alone is not acceptable for skin disinfection. The utilization of an iodophor or chlorhexidene detergent in combination with alcohol is required. Exceptions may be reviewed on a case by case basis (consultation with a Duke veterinarian and with IACUC approval).
2. **AQUATIC / AMPHIBIAN SURGERY:** The presence of protective surfactants on fish and amphibians make the use of removal agents inappropriate. Alcohol for skin disinfection is contraindicated for these species. The recommended methodology consists of a sterile saline rinse and gentle patting with sterile gauze prior to making the incision. Exceptions or alternate methodology may be reviewed on a case by case basis (consultation with a Duke veterinarian and with IACUC approval).

- 3. INSTRUMENT PREPARATION:** Alcohol is not acceptable for preparation of instruments to be used in any surgical activity. A variety of other sterilization methods exist that must be used for instrument preparation. Exceptions or alternate methodology may be reviewed on a case by case basis (consultation with a Duke veterinarian and with IACUC approval).

For more information on sterilization techniques and procedures, see the web site Guidelines & Suggestion page titled: [Sterilization Techniques](#).