

**9.4T MRI FACILITY**  
**SOP#415-03 CLEANING, DECONTAMINATION, LAB UPKEEP**

**1. INTRODUCTION**

- 1.1. The static magnetic field in the 9.4T MRI Facility is always present. It is important that all those entering the facility be aware of the presence of the field, as it cannot be detected by our person in any way, i.e. magnetic fields cannot be felt, seen, or smelt.
- 1.2. There exist dangerous and potentially lethal levels of electricity in the 9.4T MRI system. As such, it is important that all individuals working around the MRI system be aware of the dangers and safety issues concerning electricity. Current carrying cables, connections and junction points in the vicinity of the main magnetic field are particularly susceptible to damage due to the extreme Lorentz forces created through the normal operation of the system. Periodically, the effects of prolonged mechanical fatigue will result in breakage causing electrical arcing, sparking and high heat levels before the system can shut down. There is therefore a high potential for personal injury and the possibility of a fire being ignited.
- 1.3. Research involving animals presents unique hazards related to naturally occurring pathogenic organisms which may be transmitted from the animals and infect the people working with and caring for these animals. Similarly, humans may transmit diseases to animals.

**2. GENERAL LAB UPKEEP**

- 2.1. ALL equipment must be returned to its original storage location at the completion of study or procedure. This includes coils, formers, foam pieces, positioning aids, tape, etc.
- 2.2. If there are empty animal cages at the completion of the experiment, return cages with dirty bedding to either Heath Science Animal Care Facility (HSACF) or Robarts External Barrier (REB) for cleaning and bedding disposal.
- 2.3. If the lab is running low of a particular item, please let the Animal Technician know. If you use the isoflurane for your study, it is courtesy to refill the vaporizer following the completion of your study. Keep in mind, depending on the length of your study, it may be necessary to refill the vaporizer several times – keep an eye on the fluid level! Similarly, oxygen and/or medical air can be depleted quickly during the course of a long study.

**3. BIOSAFETY LEVEL 1 CLEANING & DECONTAMINATING**

- 3.1. General facility cleaning will be the responsibility of ALL users of the 9.4T MRI Facility. If you make a mess – clean it up!
- 3.2. All countertops, surfaces and equipment that have come in contact with an animal, must be cleaned using either 70% isopropyl alcohol or the disinfectant provided.

**4. BIOSAFETY LEVEL 2 CLEANING AND DECONTAMINATING**

- 4.1. Depending on the Level 2 organism in question, a specific disinfectant may need to be used. If a specific disinfectant is required the Investigator is responsible to provide that disinfectant and corresponding MSDS sheet.

- 4.2. In general, for most Level 2 organisms, Quatricide<sup>®</sup>PV-15 is acceptable. All countertops, surfaces and equipment that have come in contact with an animal, must be disinfected using Quatricide<sup>®</sup>PV-15 solution after the experiment or procedure is complete. Allow 10 minutes of contact time for the disinfectant to work before wiping the surface.
- 4.3. Sweep and mop the floors after completion of experiment or procedure – there are NO exceptions to this rule! Fill the mop bucket with Quatricide<sup>®</sup>PV-15 solution as directed on the bottle.
- 4.4. All exposed surfaces (floors, countertops, magnet bore, door handles) will be sprayed or mopped with Quatricide<sup>®</sup>PV-15 and allowed 10 min wet contact time.

## **5. MSDS SHEETS**

- 5.1. The Material Safety Data Sheets are located in the 9.4T MRI Facility Prep Room.

## **6. CONTAMINATED MATERIALS**

- 6.1. All items that have been contaminated with a Biosafety Level 2 pathogen (come in contact with the animal, animal products, or any bodily fluids) must be first decontaminated as described in Section 4 and then doubled bagged. The outside of the bag must also be decontaminated using the appropriate disinfecting solution as stated above, prior to leaving the 9.4T MRI Facility. The item can then be disposed of in the appropriate manner (i.e. autoclaving, freezer, etc).