

**STANDARD OPERATING PROCEDURE:**  
**CLEANING AND DECONTAMINATION – LEVEL 1 & 2 EXPERIMENTS**

**1. INTRODUCTION**

- 1.1. 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.
- 1.2. 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.
- 1.3. 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.

**2. GENERAL LAB UPKEEP**

- 2.1. All equipment must be returned to its original storage location at the completion of study or procedure.
- 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. All electrical equipment, power supplies, computers, etc, are stored on counters or approved mobile carts to facilitate the cleaning and decontamination process.

**3. BIOSAFETY LEVEL 1 CLEANING AND 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! If the garbage is full – empty it!
- 3.2. All countertops, surfaces and equipment that have come in contact with an animal, must be disinfected using Quatsyl®-D Plus solution after the experiment or procedure is complete. Allow 10 minutes of contact time for the disinfectant to work.
- 3.3. Sweep and mop the floors after completion of experiment or procedure – there are no exceptions to this rule! Fill the mop bucket with Quatsyl®-D Plus solution as directed below in Section 3.4.1.
- 3.4. If a specific disinfectant is required for a protocol, the Investigator is responsible to provide that disinfectant and corresponding MSDS sheet which is to be kept on file in the 9.4T Tech Office.

#### 3.4.1. DILUTIONS FOR DISINFECTION

##### 3.4.1.1. QUATSYL®-D PLUS by Pfizer

##### 3.4.1.2. Quatsyl®-D Plus is for cleaning up after Biosafety Level 1 animals only.

3.4.1.2.1. To clean and disinfect hard surfaces, use 4 mL of Quatsyl®-D Plus per litre of water. Prepare fresh solutions daily or when solution becomes visibly dirty.

3.4.1.2.2. To clean badly soiled areas, use up to 12 mL per litre of water.

3.4.1.2.3. To disinfect, allow treated surfaces to stand for at least 10 minutes before wiping or rinsing.

3.4.1.2.4. Quatsyl®-D Plus should not be mixed with other cleaning or disinfecting compounds or products

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

4.1. General facility cleaning will be the responsibility of ALL users of the 9.4T MRI Facility. If you make a mess – clean it up! If the garbage is full – empty it!

4.2. All countertops, surfaces and equipment that have come in contact with an animal, must be disinfected using Quatricide®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®PV-15 solution as directed below in Section 4.5.1.

4.4. If a specific disinfectant is required for a protocol, the Investigator is responsible to provide that disinfectant and corresponding MSDS sheet which is to be kept on file in the 9.4T Tech Office.

4.5. All exposed surfaces (floors, countertops, magnet bore, door handles) will be sprayed or mopped with Quatricide®PV-15 and allowed 10 min wet contact time.

##### 4.5.1. DILUTIONS FOR DISINFECTION

##### 4.5.1.1. QUATRICIDE®PV-15 by Pharmalac

##### 4.5.1.2. Quatricide®PV-15 is for cleaning up after Biosafety Level 2 animals only.

4.5.1.2.1. Quatricide®PV-15 is a disinfectant/detergent that will clean, disinfect and deodorize in one step.

4.5.1.2.2. Quatricide®PV-15 is Fungicidal, Bactericidal and Virucidal (against certain enveloped and non-enveloped viruses).

4.5.1.2.3. Quatricide®PV-15 is used at a dilution of 16ml in 1L of water.

#### 5. MSDS SHEETS

5.1. The Material Safety Data Sheets are located in the 9.4T MRI Facility Tech Office.

#### 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 double 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).

ROBARTS RESEARCH INSTITUTE  
CENTER FOR FUNCTIONAL AND METABOLIC MAPPING:  
9.4T MRI FACILITY

SOP#415-01

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*SOP Approval Signatures*

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Dr. Robert Bartha, Facility Director

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Date

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Dr. Greg Dekaban, RRI Biosafety Officer

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Date

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Ron Noseworthy, RRI Occupational Health & Safety Officer

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Date