The University of Kansas (KU)
Institutional Animal Care and Use Committee (IACUC)

Policy on Preparation and Storage of Tricaine Methanesulfonate (MS 222)

1.0 Scope and Application

Tricaine methanesulfonate (MS-222) is an anesthetic agent used for the sedation, anesthesia, and euthanasia of fish, amphibians, and other aquatic animals. For Principal Investigators approved to use MS-222 in animal studies, the following procedures must be followed. It is the responsibility of the Principal Investigator to provide this information, along with the Environmental Health and Safety (EHS) Hazardous Chemical Standard Operating Procedure, to research staff and students working in his/her laboratory.

2.0 Summary of Method

- Staff must wear gloves, protective clothing (lab coat), and eye protection when preparing MS-222 stock solutions in the laboratory.

- Preparation must be done in a properly exhausted chemical fume hood, biosafety cabinet, ventilated work station, or while wearing a N-95 respirator/dust mask. If respiratory protection, such as a N-95 respirator is required, personnel must complete respirator medical evaluation, undergo respirator selection, fit testing, and receive EHS training prior to use.

- Staff preparing this agent in the field must work in an area away from others, wear gloves, protective clothing, and eye protection. A fit-tested N-95 respirator/dust mask will also be necessary. Personnel must complete respirator medical evaluation, undergo respirator selection, fit testing, and receive EHS training prior to respirator use.

- MS-222 is acidic when in solution and must be buffered with sodium bicarbonate resulting in a solution of pH 7.0 - 7.5 before being used in work with animals.

- Once mixed, stock solution containers must be properly labeled and dated to expire no longer than one month after preparation. The solution must be replaced any time a brown color is observed in the liquid.

- The stock solution should be stored in in a manner that protects it from light (dark or opaque container) and either refrigerated or frozen.

Author: Keith E. Anderson, DVM
Approval Date: June 2014