

# Tricaine methanesulfonate (MS-222, TMS)

## **OVERVIEW**

### HAZARD CLASSIFICATION

- Causes skin irritation
- Causes serious eye irritation
- May cause respiratory irritation

MS-222 is a widely used anesthetic agent for aquatic species. Pharmaceutical grade MS-222 working solutions must be made fresh for each use and buffered to a neutral pH for all intended uses on live vertebrate aquatic species.

➤ It is the responsibility of the PI to assure the safe use of MS-222 by laboratory staff. The PI is responsible for the appropriate training of research personnel for the safe use of this anesthetic in the species approved on the protocol.

➤ Personnel using MS-222 must be familiar with the Safety Data Sheet (SDS), which must be readily available in the lab.

Labs must have a laboratory specific SOP in place. Guidance on writing SOPs can be found <a href="here">here</a>.

➤ Handling the dry powder presents the greatest exposure risk. MS-222 becomes less hazardous once it is mixed into solution.

### PREPARATION

- Preparation in a certified fume hood provides the greatest level of protection.
- If a fume hood is unavailable, prepare in a well-ventilated room.
  - Personnel must wear a <u>fit tested N-95</u> and goggles when preparing MS-222 in an open room. N95 users must comply with UF's <u>Respiratory Protection Program</u>.
- PPE: Disposable gloves, lab coat, safety glasses/goggles, N-95 when not utilizing a fume hood.

### WASTE

- MS-222 should never be discarded into the natural environment.
- Any leftover buffered stock solution may be disposed of in the drain if it is connected to a wastewater treatment facility. If it is connected to a septic system, it will need to be discarded through EH&S Hazardous Waste Management.
- > Contaminated solids (PPE, towels, etc.) should be packaged and disposed of as non-regulated solid waste.
- > Leftover original solid material must be returned to UF for disposal through EH&S Hazardous Waste Management.
- Contaminated sharps will need to be discarded in a sharps container, closed once 3/4 full, and discarded into a biohazard box.

#### **SPILLS**

Evacuate personnel and allow aerosols to settle. Follow the EH&S guidance for chemical spill clean-up. Call EH&S (352-392-1591) for support with large spills.

#### FIRST AID

> Reference the manufacturer's SDS.