

# Procedures for Using Tricaine (MS222)

Biological Safety Program  
Environment, Health & Safety

## Safety and Exposure Risks

- There is evidence of respiratory hazards following exposure to Tricaine (also known as MS222).
- Potential exposure routes include inhalation, ingestion, and direct contact with skin and mucous membranes.

## Researcher Responsibilities

- Ensure all lab personnel receive appropriate training prior to beginning any work involving MS222 in aquatic species.
- Inform the manager of the aquatic facility prior to using MS222 in zebrafish, amphibians, or other aquatic, cold-blooded animals. EH&S may require a Safety Considerations meeting.
- Prepare stock solution from the powder form of MS222 using a chemical fume hood located in the lab (not at fish or aquatic facilities).
- Wear gloves (and lab coat when splash risk is present) when handling MS222 and at the time of administration to aquatic species.
- Handle MS222 solutions on the open bench in a separate tank or container. Dispose of contaminated water from tank or container as chemical waste via EH&S.
- When MS222 is added to fish or amphibian tanks, label the tank with a chemical hazard label, including the agent's full name and the administration date (see Figure 1).
- Follow the safety procedures below after using MS222:
  - For recovery procedures, return fish or aquatic species to the main aquarium after they regain the ability to swim.
  - Remove chemical hazard label(s) from tanks.
  - Dispose of tank water contaminated with MS222 as hazardous chemical waste via EH&S.
  - Decontaminate tanks and surfaces with 70% ethanol.

<b>CHEMICAL HAZARD</b>
Agent:
Date of agent admin:

Figure 1: Label for aquatic species treated with MS222.

## Minimum Personal Protective Equipment Requirements

- When working with MS222 directly:
  - Lab coat or disposable gown
  - Gloves
  - Eye protection (when splash risk is present)
- When working with MS222-treated aquatic species (post-administration):
  - Disposable gown or lab coat (when splash risk is present)
  - Gloves

## In the event of exposure to MS222:

- Wash exposed areas with copious amounts of water or rinse in eyewash for a minimum of 15 minutes.
- For acute and/or severe injuries, seek medical attention at the nearest Emergency Department.
- For more information, contact the California Poison Control Hotline (1-800-222-1222).