Protocol for Exempt Quantities of Saxitoxin Select Agent Toxin

Scope
This protocol applies to laboratories that possess and use exempt quantities of saxitoxin. The select agents and toxins regulation (42 CFR Part 73) states that Saxitoxin below 500 mg is excluded from these regulations.

Inventory Control/Recordkeeping
Maintain records or readily available documentation to substantiate the total saxitoxin quantity is below the specified exemption threshold of 500 mg.

Inactivation of Saxitoxin
Use a freshly made 1% sodium hypochlorite solution to decontaminate work surfaces and spills. All Saxitoxin solutions should be inactivated with sodium hypochlorite, by ensuring that a final sodium hypochlorite concentration of 1% is achieved. Allow for a 30-minute contact time to achieve complete inactivation.

Personal Protective Equipment (PPE)
At minimum, PPE for handling saxitoxin should include the following:
- **Eye Protection:** Safety glasses must be worn at all times when handling saxitoxin. Chemical splash goggles must be worn to provide protection from splashes.
- **Face Shield:** Face shields are worn in addition to either chemical-splash goggles or safety glasses when the potential for splashing exists. Face shields are required when protection of the entire face is needed.
- **Gloves:** Appropriate gloves shall be worn when handling saxitoxin and its solutions. Glove selection should be made according to the procedures and the reagents used with saxitoxin
- **Protective Clothing:** Lab coats must be worn at all times when handling saxitoxin.

Laboratory Handling
- Use caution when handling saxitoxin.
- Use PPE and engineering controls to minimize exposures.
- Concentrated forms should be stored and used in designated areas, away from public access.
- Practice good laboratory hygiene, including hand washing and decontamination of work surfaces.

Engineering Controls
- Use a chemical fume hood for all work, such as sonification, that could generate dispersible or aerosolized saxitoxin. Keep the hood sash as low as possible while using the fume hood.

Training Requirements
- **Biosafety Training:** The Biosafety Online Quiz must be completed by all Saxitoxin users initially and every two years as a refresher.
- **Lab-specific training:** The PI/Supervisor must ensure that saxitoxin users understand the hazards associated with saxitoxin, exposure controls, signs/symptoms of exposure, emergency procedures, and this protocol. All Saxitoxin users must sign this protocol below.
Labels and Signs

- Stock and sample storage areas must be identified with a warning label, e.g., Caution Saxitoxin.
- The presence of select agents shall be listed on the Space Hazard Placard.
- Consider storing stock in secondary containment for added safety.

Spill Procedures

Preplanning

PIs/Supervisors should prepare their laboratory for typical spill scenarios expected in the laboratory, including necessary materials and equipment. The PI/supervisor should inform laboratory personnel about the risks associated with Saxitoxin exposure, proper inactivation procedure, and methods to safely cleanup spills.

Each laboratory area should have spill cleanup materials available to respond to the largest spill anticipated for that area. At a minimum, the following spill cleanup materials should be available in the laboratory:

- Appropriate PPE (lab coat, gloves, face shield, etc)
- Absorbent pads and related materials
- Sodium hypochlorite solution used to prepare fresh 1% solutions
- Forceps or other devices to pick up contaminated material (especially sharps)
- Sharps disposal container

Spill Cleanup Procedures

All lab personnel should review and follow the spill cleanup procedures that are listed in the WHOI Biosafety Manual.

Medical emergency

Personnel with suspected or actual exposures to saxitoxin should immediately go to the emergency room.

Waste Management

After materials that may be contaminated with saxitoxin are properly inactivated, and if they do not contain other hazardous materials, then those items may be disposed with normal trash after all associated hazard warning labels are removed or defaced. If the saxitoxin waste items cannot be properly inactivated and/or if they contain other hazardous materials, the EH&S Office should be contacted for assistance. The WHOI Biosafety Manual and Hazardous Waste Generator Procedure provide additional requirements/information: http://ehs.whoi.edu.

Assistance

The EH&S Office should be contacted (x3347) for questions or assistance with this protocol.