

CHARACTERISTICS

|                            |   |
|----------------------------|---|
| Synonym or Cross Reference | Fugu poison; Maculotoxin; Spheroidine; Tarichatoxin; Tetrodontoxin; TTX; Tetrodotoxin with Citrate Buffer, CAS-No. 4368-28-9.   |
| Disease                    | Interferes with the transmission of signals from nerves to muscles and causes an increasing paralysis of the muscles of the body. Tetrodotoxin poisoning can be fatal.    |
| Morphology                 | It is a colorless crystalline solid that darkens when heated above 428 degress F (220 degrees C).   |
| Zoonosis                   | Liver and sex organs (gonads) of some fish, such as puffer fish, globefish, and toadfish (order Tetraodontiformes) and in some amphibian, octopus, and shellfish species. |

RISK GROUP & CONTAINMENT REQUIREMENTS

|              |   |
|--------------|---|
| ABSL-2       | For all procedures utilizing infected animals.  |
| BSL-2/BSL-2+ | For all procedures involving suspected or known infectious specimen or cultures, work in a BSC unless otherwise approved and stated in lab-specific manual. |
| Risk Group 2 | Agents that are associated with human disease which is rarely serious and for which preventive or therapeutic interventions are often available.            |

LABORATORY HAZARDS

|                                |   |
|--------------------------------|---|
| Primary Hazards                | Parenteral injection  |
| Sources                        | Samples described in IBC protocol. Tetrodotoxin is a Select Agent with exempt quantity of 500 mg. |
| Lab Acquired Infections (LAIs) | None reported   |

PERSONAL PROTECTIVE EQUIPMENT

|                          |   |
|--------------------------|---|
| Additional Precautions   | Additional PPE may be required depending on lab-specific SOPs and IBC Protocol. |
| Minimum PPE Requirements | Lab coat, disposable gloves, safety glasses, closed toed shoes, long pants.     |

SPILL PROCEDURES

|       |  |
|-------|--|
| Large | Immediately notify all lab personnel and clear the area. Remove any contaminated PPE/clothing before exiting the lab. Lock all entry doors, post warning signage, and deny entry. Call DPS (213-740-4321) and ask to notify EH&S. Inform the PI and/or Lab Manager/Supervisor as soon as possible. |
| Small | Notify all lab personnel lab. Remove contaminated PPE and don new PPE. Cover spill area with absorbent material and add fresh 1:10 bleach:water. Allow 20 minutes (or as directed) contact time. After 20 minutes, clean up and dispose of materials.  |

VIABILITY

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|-----------------------|--|
| Disinfection          | Use 10 % dilution of household bleach (minimum 0.3% sodium hypochlorite) for 20 to 30 minutes, or an acceptable time approved by IBC and EH&S. |
| Survival Outside Host | NA   |

HEALTH HAZARDS

|                       |   |
|-----------------------|---|
| Host Range            | Humans  |
| Incubation Period     | Rapid onset: 10 to 45 minutes Delayed Onset: 3 - 6 Hours (rarely longer)  |
| Infectious Dose       | Lethal Dose: 1 to 2 mg Minimum dose necessary to cause symptoms: 0.2 mg LD50 for a 70 kg adult human is 560 ug. Death may occur within thirty minutes following exposure. |
| Modes of Transmission | Ingestion, mucous membrane exposure, inhalation and percutaneous exposure   |
| Signs and Symptoms    | Numbness, tingling of the lips and inner mouth surfaces, weakness, nausea, vomiting, diarrhea, paralysis of limbs and chest muscles, and a drop in blood pressure.        |

EXPOSURE PROCEDURES

|                   |  |
|-------------------|--|
| Medical Follow-up | Visit USC’s designated healthcare provider. Bring a copy of this PSDS.                 |
| Mucous Membrane   | Flush eyes for 5-10 minutes at eyewash station.  |
| Other Exposures   | Immediately wash affected area with soap and water for 15 minutes.                     |
| Reporting         | Immediately report incident to supervisor, notify EH&S, and complete Manager’s Report. |

MEDICAL PRECAUTIONS/TREATMENT

|                  |  |
|------------------|--|
| Prophylaxis      | None   |
| Surveillance     | Monitor for symptoms of infection                                  |
| Treatment        | None   |
| USC Requirements | Immediately report any exposures to Environmental Health & Safety. |
| Vaccines         | None available   |

REFERENCES

|   |  |
|---|--|
| BMBL<br><a href="http://tiny.cc/cdc-bmb1">http://tiny.cc/cdc-bmb1</a>                       | CDC<br><a href="https://www.cdc.gov/">https://www.cdc.gov/</a> |
| NIH Guidelines<br><a href="http://tiny.cc/nih-bio-secure">http://tiny.cc/nih-bio-secure</a> |  |

