

January, 2019

## Safety Operating Procedure:

# Mercuric Acetate

### PHYSICAL & CHEMICAL PROPERTIES

**Class:** Acute toxicant, target organ effect, reproductive toxicant.

**Formula:**  $C_4H_6HgO_4$

**Physical state:** Solid.

**Color:** White, off-white, beige.

**Boiling Point:** unknown.

### POTENTIAL HAZARDS

- Hazardous in case of skin and/or contact.
- Hazardous in case of inhalation: may irritate respiratory tract. Symptoms: coughing, shortness of breath.
- Hazardous in case of ingestion: may irritate gastrointestinal tract. Symptoms: nausea, vomiting, diarrhea.
- May cause birth defects or other reproductive harm.
- May cause symptoms of mercury poisoning, such as: irritability, headaches, sore gums, memory loss, increased saliva, metallic taste, personality changes, and brain damage.
- May cause damage to kidneys, eyes and CNS.

### BASIC TRAINING REQUIREMENTS

- An annual chemical instruction by the safety & radiation unit.
- On-the-job training by the responsible PI or a qualified person on his behalf.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

### Respiratory protection

- A full-face particle respirator: type N100 respirator cartridges.
- Lab personnel intending to use/wear a respirator mask must be trained.
- Lab personnel intending to use/wear a respirator mask must be fit-tested.
- Respirators should be used only under any of the following circumstances:
- As a last line of defense (i.e., after engineering and administrative controls have been exhausted).
- When Permissible Exposure Limit (PEL) has exceeded or when there is a possibility that PEL will be exceeded.
- There is potential for harmful exposure due to an atmospheric contaminant (in the absence of PEL).
- As PPE in the event of a chemical spill clean-up process.

### Hand protection

- Nitrile gloves.
- Consult with your preferred glove manufacturer to ensure that the gloves you plan on using are compatible with mercuric acetate.
- Gloves must be inspected prior to use.
- Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with product.
- Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
- Wash and dry hands.

### Eye protection.

- ANSI approved safety glasses or goggles.

### Skin and body protection.

- A long-sleeved and buttoned lab coat.
- Laboratory coat sleeves must prevent skin exposure while wearing gloves.

- Full length pants.
- Close-toed shoes.
- Area of skin between shoe and ankle should not be exposed.

#### Hygiene measures

- Avoid contact with skin, eyes and clothing.
- Wash hands before breaks and immediately after handling the product.

### ENGINEERING CONTROLS

- Work with this chemical in a fume hood.
- Avoid dust formation.
- Store in secondary containment with “acute toxin” and “reproductive toxin” labels on the primary container, secondary containment and the storage location.
- Keep containers tightly closed in a dry, cool, and well-ventilated place.
- Protect from light and heat.
- Avoid strong oxidizing agents.
- Avoid reducing agents.
- Avoid strong acids.

### FIRST AID

Lab personnel must have easy access to an Emergency Eyewash & Safety Shower within 10 seconds.

#### Eye Contact

- Immediately rinse eyeball and inner surface of eyelid with water from the emergency eyewash station for 15 minutes by forcibly holding the eye open. Flush with plenty of water for at least 15 minutes lifting upper and lower eyelids and removing contact lenses.

#### Skin Contact

- Wash off with soap and plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

- Take victim immediately to hospital.

#### Inhalation

- Move person into fresh air.
- If breathing is difficult, give oxygen.
- If not breathing, supply artificial respiration.

#### Ingestion

- Do not induce vomiting. Never give anything by mouth to an unconscious person.
- Rinse mouth with water.

### SPILLS & ACCIDENTS

- Assess extent of danger.
- Help contaminated or injured persons.
- In case of personal contamination - remove clothing and rinse body thoroughly in emergency shower for at least 15 minutes.
- Evacuate the spill area: keep others from entering contaminated area (e.g., use caution tape, barriers, etc.).
- Avoid breathing vapors.
- If possible, confine the spill to a small area using a spill kit or absorbent material.
- If you are trained, you may assist in the clean-up process.
- Use appropriate personal protective equipment and clean-up material.
- Double bag spill waste in clear plastic bags, label and take to the next chemical waste pick-up.
- Seek medical attention.
- Notify supervisor and EH&S @ 2146/7 or after hours @ 2222.
- In case of a needle stick/puncture exposure - wash the affected area with antiseptic soap and warm water for 15 minutes.