# STANDARD OPERATING PROCEDURES FOR HAZARDOUS AND PARTICULARLY HAZARDOUS CHEMICALS

For

##  Cadmium Chloride

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| 1. PROCEDURE /  PROCESS | Cadmium Chloride is used in **Building, Room.** **Insert procedure here:** |
| 2. CHEMICAL NAME(S) and associated  PHYSICAL and  HEALTH HAZARDS | **Cadmium Chloride – CAS# 10108-64-2;** also known as Cadmium Dichloride; Caddy.* **Toxic if swallowed. Fatal if inhaled.**
* **Cadmium Chloride is a human carcinogen, classified by IARC as Group 1: Carcinogenic to Humans and by the NTP as Known to be a Human Carcinogen.**
* **Cadmium Chloride is a possible teratogen. It** **may damage fertility or the unborn child.**
* **May cause genetic defects.**
* **May cause “metal fume fever”, a flu-like illness with symptoms of metallic taste in the mouth, headache, fever and chills, aches, chest tightness and cough.**
* **Cadmium Chloride can cause nausea, vomiting, diarrhea and abdominal pain.**
* **Inhaling Cadmium Chloride can irritate the nose, throat, and lungs. Higher exposures may cause a build-up of fluid in the lungs (pulmonary edema), a medical emergency.**
* **Causes damage to organs through prolonged or repeated exposure. Repeated low exposures can cause liver and kidney damage, anemia, and loss of sense of smell.**

 Signal Word: **DANGER**Exposure Limits:**DOSH:** TWA: 0.005 mg/m3 (8 Hour)**ACGIH:** TWA: 0.002 mg/m3 (8 Hour); TLV: 0.01 mg/m3 (Total Particulate)Toxicological Data:**ORAL (LD50)**: 88 mg/kg [Rat]; 63 mg/kg [Guinea Pig].**INHALATION (LC50)**: >4.5 mg/m3 2 hours [Rat-Male] \***Always refer to the Safety Data Sheet for the most detailed information**\* |
| 3. NAME OF TRAINER /  RESOURCE PERSON | **Principal Investigator Name, Building, Room, Phone Number****Secondary contact Name, Building, Room, Phone Number** |
| 1. LOCATION OF

 HEALTH & SAFETY  INFORMATION | The Safety Data Sheet (SDS) for Cadmium Chloride is located in the Laboratory Safety Manual located in **Building, Room**.Labeling: In addition to the standard label that identifies contents, hazards, precautionary measures, and emergency contact information, containers should also be marked as highly toxic and carcinogenic. |
| 5. PROTECTIVE  EQUIPMENT | Wear chemical safety goggles, nitrile rubber gloves and a fully-buttoned lab coat. Wash hands after removing gloves. Work within a properly functioning, certified laboratory chemical fume hood. If working outside of fume hood, correct PPE and an approved, certified respirator with the correct cartridges should be worn. (**Note**: You must be medically cleared, fit tested and enrolled in WSU’s Respiratory Protection Program to wear a respirator).  |
| 1. WASTE DISPOSAL

 PROCEDURES | **Waste Cadmium Chloride and its solutions** must be managed as Dangerous Waste. It should be collected in a sealable, compatible waste container. The container should be stored away from incompatible materials such as oxidizing agents and bromine triflouride.A completed Dangerous Waste label should be attached when waste is first added to the container. When container is full or no longer being used complete a Chemical Collection Request Form, and deliver to the Waste Accumulation Area Operator at **Building, Room, Phone Number.****Empty Cadmium Chloride containers** must be managed as Dangerous Waste. Do not rinse out the container, simply attach a completed Dangerous Waste label, complete a Chemical Collection Request Form, and deliver to the Waste Accumulation Area Operator at **Building, Room, Phone Number.** |
| 7. DESIGNATED AREA  INFORMATION | The cadmium chloride is stored and dispensed in **Building, Room**.**Always work in a properly functioning, certified laboratory chemical fume hood.** Use process enclosures, local exhaust ventilation, or other engineering controls to reduce dust/aerosol generation. If used outside of enclosure, ensure that appropriate certified respiratory protection and PPE is worn. (**Note**: You must be medically cleared, fit tested and enrolled in WSU’s Respiratory Protection Program to wear a respirator).The designated area(s) should be shown on the floor plan in the laboratory’s Chemical Hygiene Plan.  |
| 8. DECONTAMINATION  PROCEDURES | **Upon Accidental Exposure**: In case of **eye contact**, flush eyes with copious amounts of water at an emergency eyewash station for at least 15 minutes and seek medical attention. In case of **skin contact**, flush skin with copious amounts of water for 15 minutes and seek medical attention. For exposure over a large portion of the body, remove clothing and shoes and rinse thoroughly in an emergency shower for at least 15 minutes. Seek medical attention. In case of **inhalation**, move person to fresh air and immediately seek medical attention. In case of **ingestion**, immediately seek medical attention and follow instructions on SDS.**Upon Accidental Release**: **Large Spill**: If a large amount of cadmium chloride is spilled outside the fume hood, immediately evacuate and secure area and call 911 to contact EH&S. **Small Spill**: If a small amount of cadmium chloride is spilled (it can be cleaned up in 10 minutes) and you have been appropriately trained to clean it up, you may do so. Trained personnel should wear at the minimum nitrile rubber gloves, chemical safety goggles, and a fully-buttoned lab coat. Additional PPE such as respirators may be necessary depending upon material and concentration. (**Note:** You **must** be medically cleared, fit tested and enrolled in WSU’s Respiratory Protection Program to wear a respirator.) If it is necessary to use a respirator and personnel are not cleared to wear a respirator and not trained to appropriately clean up the spill, the employee should immediately evacuate, secure area, and call 911 to contact EH&S.Use appropriate tools to collect material and place material in an appropriate waste disposal container (resealable bag, etc.) and dispose of as hazardous waste (see above WASTE DISPOSAL PROCEDURES).As with all accidents, report any exposure as soon as possible to your Principal Investigator or Supervisor. Additional health and safety information on cadmium chloride can be obtained by referring to the SDS or by calling the EH&S Office (335-3041). |
| 1. SPECIAL STORAGE

 AND HANDLING  PROCEDURES | Store in a cool, dry, well-ventilated area away from sources of heat or ignition. Keep container tightly closed. Store segregated from incompatible chemicals (below). Do not ingest. Store highly toxic or infectious materials separately in a locked safety storage cabinet or room. Keep away from incompatible chemicals such as oxidizing agents and bromine triflouride.  |

**Certification of Hazard Assessment**

Is this document a certification of Hazard Assessment for the processes identified within? ***Yes No***

If yes, provide the name of the person certifying the Hazard Assessment and the date it was performed:

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Name Date

The location of the Hazard Assessment is indicated in the document preceding this form.

**Certificate of Employee Training**

Name of person providing training for employees working with this process:

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The following employees have been trained in when, where and how to use selected PPE, the maintenance, limitations and disposal of the PPE selected, and have demonstrated the correct use of the PPE selected on the reverse of this certification.

**Name**  **Date Trained**

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