Chemical name/class: Iodine  CAS #: 7553-56-2
Pl: Mark Walters
Building: Fitzpatrick CIEMAS
Date: November 2, 2018
Room #: Sample Prep
Designated Work Area: Vitrobot Hood in Sample Prep

1. Circumstances of Use:
   Iodine is mostly used for staining samples to provide contrast when imaging with the MicroCT

2. Potential Hazards:
   Be aware of these specific hazards of Iodine:
   • Very hazardous in case of skin contact (irritant), eye contact (irritant), ingestion, and inhalation.
   • Skin contact can produce inflammation and blistering.
   • Severe over exposure can produce lung damage, choking, unconsciousness or death.
   • Extremely corrosive in presence of stainless steel and steel

3. Engineering Controls:
   • Always work with Iodine in the designated “Vitrobot” hood in the Sample Preparation Lab.
   • An eyewash and safety shower are available in the immediate area.

4. Work Practice Controls:
   • Use only in a designated “Vitrobot” hood in the Sample Preparation Lab.
   • Keep containers closed as much as possible. Only open a container when it is inside the designated “Vitrobot” hood and you are wearing the proper PPE (section 5).
   • Contaminated items are to be disposed of properly as hazardous waste, following SMIF’s hazardous waste policy (see section 7).

5. Personal protective equipment (PPE):
   • Fastened lab coat
   • Nitrile gloves
   • Safety glasses or goggles

6. Transportation and Storage:
   • Iodine solutions must be in sealed shatter-resistant containers and stored in the enclosure beneath the “Vitrobot” hood in the
   • Wear the designated PPE (section 5) when transporting an iodine bottle or container to the vitrobot hood.

7. Waste Disposal:
   Iodine waste should be sealed in a shatter-resistant container and then packed into a zip lock bag and properly labeled with the type of waste, your name, and date. The waste bag should be completely sealed.
   • The Bagged, sealed, and labeled Iodine waste should be placed in the Vitrobot hood for pickup by SMIF staff.
   • Empty Iodine bottles should be left in the Vitrobot hood for pickup by SMIF staff.
8. **Exposures/Unintended contact:**

   Contact Employee Occupational Health and Wellness (EOHW) at 919-684-3136 for medical advice on occupational chemical exposures. For an actual chemical exposure:
   - Flush exposed eyes or skin with water for at least 15 minutes.
   - If there is respiratory irritation associated with exposure, remove all persons from the contaminated area and contact the OESO spill team.
   - Exposed persons should seek immediate medical attention at the nearest emergency department.
   - Call 911 from a campus phone or 919-684-2444 from any phone to request assistance if needed. Contact Employee Occupational Health and Wellness at 919-684-8115 for exposure-related advice.

   The work-related injury or illness report found at: [http://www.hr.duke.edu/benefits/medical/workcomp/report.php](http://www.hr.duke.edu/benefits/medical/workcomp/report.php) should be completed within 24 hours. Follow-up medical attention should be sought through Duke Employee Occupational Health and Wellness (919-684-3136).

9. **Spill Procedure:**

   In the event of a spill, follow SMIF spill procedures and immediately contact SMIF staff. Only SMIF staff and/or appropriate OESO personnel should clean up spills.

   **Spills Contained Inside a Chemical Hood**
   - Avoid breathing vapors from the spill and leave the immediate area of the chemical hood.
   - Alert people in the immediate area of the spill.
   - Notify SMIF immediately by calling emergency numbers posted near the phone.
   - Wait for instructions from SMIF or for SMIF personnel to arrive to complete the clean-up of the affected area.

   **Spills Outside of a Chemical Hood**
   - Attend to injured or contaminated persons and remove them from exposure.
   - Press the closest manual alarm button (blue box) and evacuate the lab.
   - Make yourself available to the SMIF staff and/or emergency responders and be prepared to tell the following: What chemical(s) are involved, how much was spilled, where the spill is located, nature of any injuries.

10. **Training of personnel:**

    - All personnel are required to complete the SMIF General Lab Safety session and the SMIF Chemical Safety and Wet Hood training session.
    - All personnel shall read and fully adhere to the *Wet Hood Operating Procedure* and the *SMIF Lab Safety and Procedures Manual*. 