Standard Operating Procedure
for work with

Chemical name/class:	**Iodine**	**CAS #:**	**7553-56-2**
PI:	**Mark Walters**	**Date:**	**November 2, 2018**
Building:	**Fitzpatrick CIEMAS**	**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 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***