

## **Standard Operating Procedure**

### Chemical Waste Disposal

<b>Document#:</b> CHE015.01	<b>Distribution:</b> External
<b>Section:</b> Chemical Waste Management Program	<b>Effective Date:</b> 2/2021
<b>Total Pages:</b>	<b>Revision Date:</b>

This standard operating procedure outlines the process in which chemical waste generated at Temple University are to be disposed in a safe and environmentally sound manner.

#### **Procedure**

##### **1. Conduct a Chemical Waste Determination**

Effective, May 30, 2017, a chemical waste determination must be performed when a chemical is first declared a waste, or a chemical waste is first added to a container. This change was mandated by new EPA regulations and EHRS has issued revised chemical waste tags to assist waste generators with this new requirement. EHRS staff assumes responsibility for picking up all chemical waste from your laboratory or work area and for making the final waste determinations.

Refer to SOP-CHE008.02-Chemical Waste Determination for details on conducting a chemical waste determination.

##### **2. Select Waste Containers**

Generators of chemical waste must use appropriate waste containers. It is acceptable to reuse empty chemical bottles to collect chemical waste.

- Containers must be compatible with the waste chemicals. Special caution and consideration for solvent and corrosive waste to ensure the waste contents will not melt or dissolve the waste container.
- Containers must close securely such that it will not leak if inverted. Lids must be closed and secure (i.e., screw type lid) at all times waste is not being added to them. Stoppered bottles or use of paraffin wax to seal container is not acceptable.
- Containers must be in good condition. No rust, pin holes, dents, or chemical deposits.
- Separate containers must be used to collect unique or incompatible waste types.

### 3. Label-Tag Immediately

After you have determined what waste you are going to generate and have obtained the appropriate containers, you must complete and affix a white “HAZARDOUS WASTE “tag to each chemical waste container. Chemical waste tags are available from EHRS, free of charge. There are directions on back side of the tag and tags must be applied to all chemical waste containers as soon as waste is added. These tags are designed to meet the regulatory requirements, therefore, every piece of information on the tag is critical and must be completed.

- The generator is the person who is filling out the waste label, not the lab group, Principal Investigator (PI) or Supervisor unless they are the one filling out the waste tag.
- Complete the generator information:
  - Check the box next to the appropriate waste stream(s) or write it in.
  - Check the boxes for the appropriate hazards that apply to the waste. Consult SDS.
- Begin to list each constituent down to 1%. Heavy metals must be listed down to the parts per million range.
- Use only common chemical names or IUPAC nomenclature when listing the constituents on the tag.
- **Do not use:**
  - Abbreviations
  - Chemical symbols
  - Trade Names

- Non-Specific wording such as “organic waste”, “running buffer”, or “Solution A” on a tag is not acceptable.

#### **4. Add Waste to a Container**

Waste can be added only after you choose the proper container, and it is labeled and /or tagged.

Containers must be kept closed unless waste is actively being added. If using a funnel, always remove the funnel between additions and replace the container’s cap.

All commingling of waste should take place in a chemical fume hood in secondary containment. Make sure all commingling of waste are compatible before mixing them.

The minimum personal protective equipment (PPE) may be dictated by the chemical’s Safety Data Sheet(s). If not, all personnel working with chemical waste must wear the following:

- Safety glasses
- Splash goggles if working with liquid waste.
- Lab coat or appropriate work attire
- Gloves specific for the chemicals in use.

#### **5. Storing Your Waste**

Proper storage of chemical waste is extremely important. Adhere to the following procedures on chemical waste storage:

- Chemical waste containers must be stored in the Satellite Accumulation Area (CAA) at all times except when the waste is being “actively” added.
- Waste container must remain closed or sealed at all times, except when waste is being added or removed from the container.
- Liquid waste containers must be stored in secondary containment systems according to hazard class.
- Store all bulk liquid waste containers in appropriate cabinets. DO NOT store bulk liquid chemical waste containers in fume hoods that have active experiments or reactions occurring.

- Flammable Cabinets
  - Corrosive Cabinets
  - Under Fume Hood Cabinets
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- Do not allow excess accumulation of chemical waste to build up in your lab or area. See Satellite Accumulation Area (SAA) requirements for more information on the limitations of waste storage.
  - Containers can only be filled to a maximum 90% full. Head space is needed for expansion and/or ease of dispensing.
  - Chemical waste containers must be stored in the Satellite Accumulation Area (SAA) at all times except when the waste is being “actively” filled.

## 6. Inspect Your Waste Accumulation Area

All satellite accumulation areas must be inspected on a weekly basis. This inspection does not have to be a formal inspection with documentation, but personnel must inspect all chemical waste stored in their laboratories or work areas to assure the following:

- There are no leaking containers of chemical waste.
- All containers holding chemical waste are labeled with a completed white tag or labeling requirements as specified by EHRS approved Chemical Waste Disposal procedures.
- All containers are sealed and closed. This includes waste containers holding solid chemical waste.
- All liquid chemical waste is stored in secondary containment bins.
- Incompatible wastes are stored away from each other and in separate containment bins.
- There is no excessive accumulation of waste stored in the laboratory or work area.

A chemical waste self-audit form is available to assist chemical waste generators in auditing their practices. Contact EHRS with questions. There is no requirement to save or retain copies of the completed self-audit forms. This form is only an audit tool to assist generators with managing their chemical waste.

## 7. Complete Container Tag

When a container is  $\frac{3}{4}$  full and/or ready for removal, it is time to complete the tag and make sure the information is accurate.

Ensure that all the required information is recorded on the tag:

- Generator information is accurate.
- Applicable waste stream is checked.
- Applicable hazards are identified on the tag.
- All chemical constituents and amounts (%) must be known and included on the TU tag. Tag constituents must add up to 100%. Volumes are acceptable.

## 8. Submit a Chemical Waste Pickup Request

Submit an online Chemical Waste Pickup Request Form to initiate a chemical collection. Chemical waste collections are typically completed within 3 business days of submittal.

**CAUTION:** EHRS will only remove a waste container that is properly labeled or tagged and in a satisfactory container. If the container is not properly tagged, labeled or satisfactory, an attempt will be made to find the appropriate personnel to correct the problems. If no one can be located, the container will be left and EHRS will send an email to the responsible parties notifying them of the reason that the container was not removed.

### Special Collection Request

Contact EHRS to arrange for large or non-routine collections of chemical waste.