Assembling the In-Line Waste Collection System

Standard Operating Procedure

Revision Date: 06/22/18

State and Federal regulations require that all containers holding hazardous waste be closed except when it is necessary to add or remove waste. The regulations also apply to “In-line” waste, which is a process where chemical waste flows through tubing from a machine into a collection container. Typically, High Performance Liquid Chromatography (HPLC) and Inductively Coupled Plasma (ICP) instruments generate waste in this manner.

Example: Compliant In-Line Waste Collection System

Containers used to collect in-line waste must be closed as shown in the following example. The tubing from the machine fits into a specially designed cap that meets closed container requirements.

Examples: Non-compliant In-Line Waste Collection Systems

The following pictures are two examples of non-compliant in-line waste assemblies:

The following practices do not meet the regulatory definition of a closed container:

- Inserting waste lines into an open bottle top (a missing cap)
- Sealing a container with parafilm
- Drilling holes through an original cap and inserting waste lines through the cap
About the In-Line Waste Collection System

The in-line waste collection system:

- Meets the regulatory requirements for a closed container
- Seals the container to reduce vapor emissions
- Incorporates a check valve to prevent over pressurization of the container
- Is constructed of chemically resistant materials
- Is compatible with the solvent bottles commonly found in labs
- Is capable of collecting waste through three ports
- Can accommodate additional waste lines using another waste bottle and in-line waste collection system
- Is designed to accept hard wall 1/8 inch tubing and Luer connections

Supplies Available through Hazardous Materials Management

Hazardous Materials Management provides the following supplies. To order these supplies, call (734) 763-4568 or complete the online Waste and Supply Request form.

- In-line waste collection system kits:
  - Cap with check valve attached
  - Tubing adaptors (assorted sizes)
  - Luer plugs
  - Instructions
- Additional tubing adaptors
- A pail to use as a spill containment device.

Procedure: Assembling the In-Line Waste Collection System

1. Affix the hazardous waste label on the bottle.
2. In the in-line waste cap Luer port, insert the tubing. If using:

<table>
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<tr>
<th>IF USING...</th>
<th>THEN...</th>
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<tr>
<td>1/8 inch hard-walled tubing</td>
<td>Starting from the top of the cap, insert the end of the 1/8 inch hard-walled tubing through an unused Luer port.</td>
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<tr>
<td>Other type of tubing</td>
<td>Insert the tubing onto the barb connection of the tubing adapter. Then insert the tubing adapter into the top of the cap.</td>
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3. Plug all unused Luer ports by inserting Luer plugs into the unused ports.
4. Place the in-line cap on the bottle and twist the blue part of the cap clockwise.
5. Place the waste container in a secondary container to contain spills.

**NOTE:** The waste label must be visible when in the secondary container. If the waste label is not visible, then affix an additional completed waste label to the secondary container.