

Analytical Instruments:
Hazardous Waste Container**Introduction/Purpose:**

Analytical instruments, such as high-performance liquid chromatography (HPLC), inductively coupled plasma (ICP) or other spectrophotometers, flow analyzers, and related equipment, present a problem for accumulating used solvents/extracts since they must be vented and yet comply with regulations for hazardous waste. All containers collecting instrument waste must remain closed with a tight-fitting cap while the unit is in operation. It is neither acceptable to place a waste line running from the unit into an open waste container nor is it acceptable to use foil or Parafilm® as a means of closure. Figure 1 illustrates these unacceptable collection practices. Several universities including OSU have received citations in the past from the EPA during hazardous waste inspections so it is of the utmost importance that instrument waste be collected in a compliant manner.

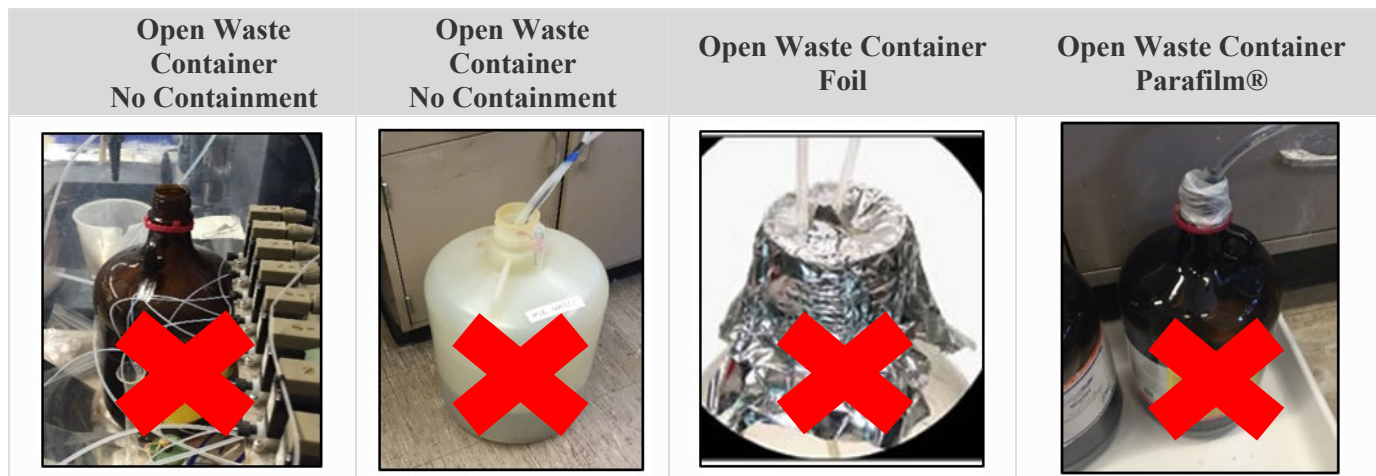
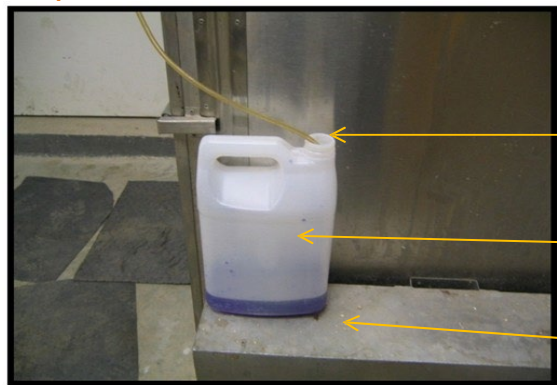


Figure 1. Improper Waste Collection Practice.

Compliance Issues:

Container is not closed and solvent vapors may be released to the environment.

No label on the container. Nothing indicates the material is hazardous waste.

No secondary containment. A spill could occur easily.

Options to Achieve Compliance:

In response to regulatory concerns, Environmental Health & Safety (EH&S) developed the following performance guidelines:

1. The container must be labeled with a hazardous waste label and/or the contents must indicate the type of material being placed in it. For example: "HAZARDOUS WASTE: Acetonitrile 50 %, Methanol 50%."
2. The container should be in secondary containment since it is liquid hazardous waste.
3. To meet the closed container requirements, there must be a cover or cap on the container. Containers need to be vented using one of the following approaches. A special cap or manifold may be purchased from various sources.
4. Practices that ARE NOT acceptable include wrapping hoses with tin foil, tissue, rubber gloves, tape, wax, or other loosely fitted materials. These methods do not meet the regulatory requirements and are considered open containers by the regulatory authorities.



Figure 2. Waste Collection Options for Purchase.

- A modified cap is available through EH&S, each cap is custom modified **for no cost**. The modified cap has a quick release so lines into the waste container are not tangled. See Figure 3 for examples of acceptable modified caps. Contact EH&S for a customized tight-fitting vented cap **at NO COST** at hazardouswaste@oregonstate.edu

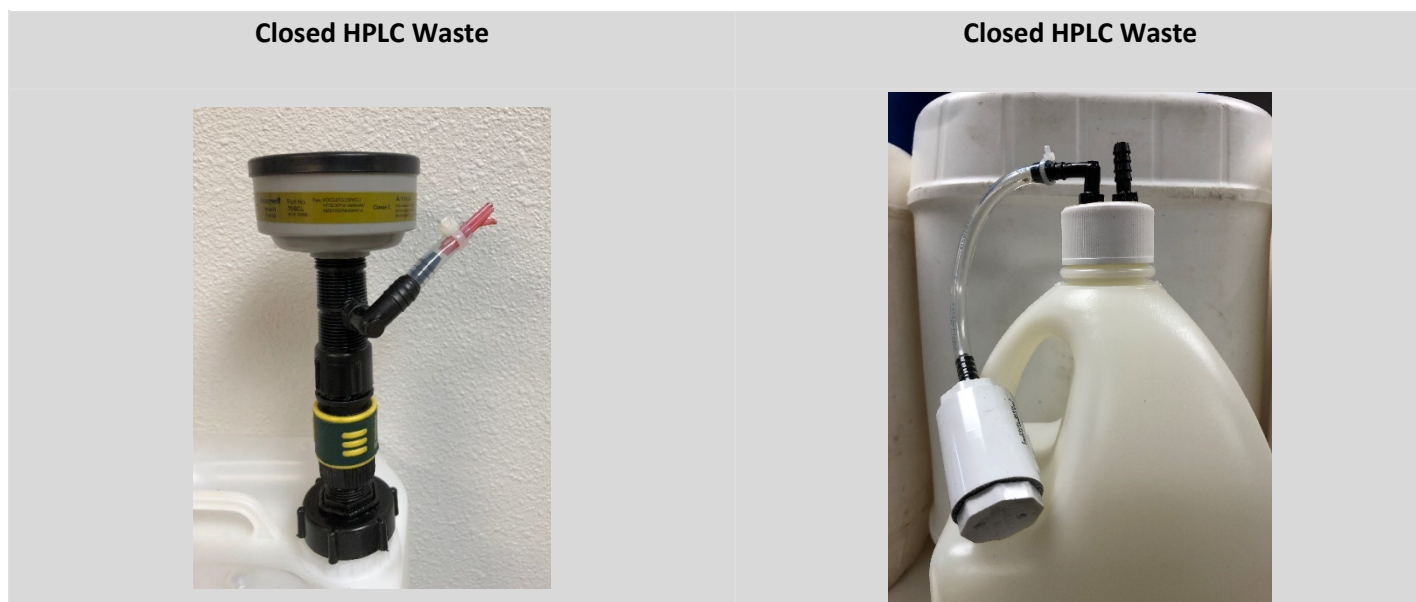


Figure 3. Proper Waste Collection with Modified Caps available through EH&S.

Contact EHS:
 safety@oregonstate.edu
 oregonstate.edu/ehs/
 541 • 737 • 2273