

## High Performance Liquid Chromatography Waste

There are various techniques performed in the laboratory that may produce line-waste. The most commonly observed technique at UNC Charlotte is High Performance Liquid Chromatography (HPLC). Due to the hazardous characteristics of the solvents used in this analytical technique, the majority of the waste produced by HPLC is considered hazardous by the EPA. Knowing this, all line-waste containers must be outfitted with the proper air-tight cap, luer plugs, labeling, and secondary containment in order to comply with EPA/NCDEQ hazardous waste regulations.

### Improper HPLC Container Examples

- HPLC containers should not be left open or sealed with aluminum foil/Parafilm® in place of an air-tight cap. Specially engineered caps may be purchased from 49er mart or you may modify an existing cap.
- If there are additional ports in the cap (See Figure 3), luer plugs should be used to fill the open ports which creates an air tight seal to prevent vapors from escaping the container.
- All HPLC waste containers should have secondary containment incase of an accidental overflow.
- All HPLC waste containers should have a hazardous waste label attached. For more information on hazardous waste labelling, see the UNC Charlotte EHS Hazardous Waste Fact Sheet.

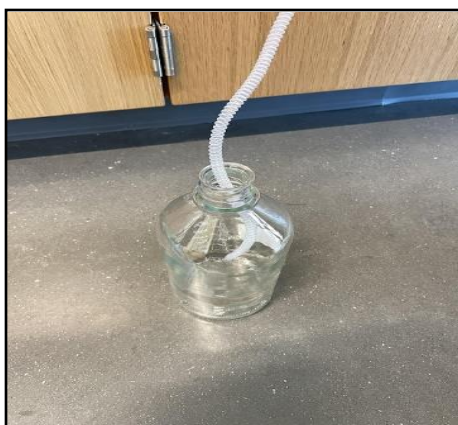


Figure 1: Open Container, No Secondary Containment

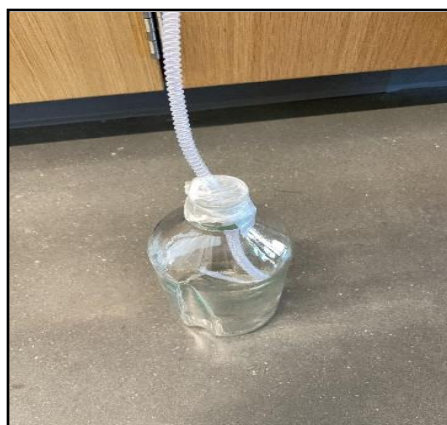


Figure 2: Parafilm®, No Secondary Containment



Figure 3: Cap Without Luer Plugs

### Proper HPLC Container Examples

- Existing caps may also be modified by drilling a hole that is equivalent in size to the line. Additional holes may be drilled to accommodate for exhaust filters or air valve tubing. Once full, a non-modified cap should be placed on the waste container and EHS should be contacted for waste disposal.
- Safety cans with appropriate fittings are acceptable alternatives for HPLC waste containers.

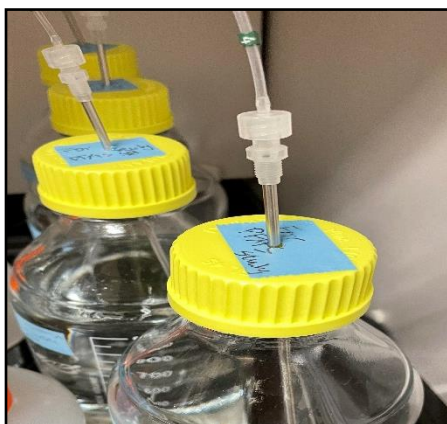


Figure 4: Modified Cap w/ No Other Openings



Figure 5: Safety Can w/ Fittings for HPLC



(4) Color-Coded Caps w/ 2 fittings each for 1/8" OD tubing  
 (4) plugs to seal unused ports  
 (1) black fitting for 2.2 or 2.3mm OD seal or needle wash tube

Figure 6: Engineered Caps w/ Luer Plugs