UMassAmherst | Environmental Health & Safety

Aspiration/Vacuum Flask Set-Up

This SOP applies to setting up, using and maintaining an aspiration flask and in-line filter for aspiration of biohazardous liquids. Aspiration of biohazardous liquids generates aerosols inside the aspiration flask and could contaminate the house vacuum line. Therefore, aspiration flasks should be kept inside biosafety cabinets, and vacuum lines must be protected. Proper use and maintenance of aspiration setups is necessary for safe capture of biohazardous liquids.

Procedure:

Assembly

1. In the BSC, attach tubing to the vacuum port and to the HEPA filter
2. Attach a second tube to the other side of the filter and to the vacuum container
3. Add sufficient disinfectant to the container for the desired final concentration
4. Cap the container
5. Use a third tube to connect the inlet to an aspirating pipette

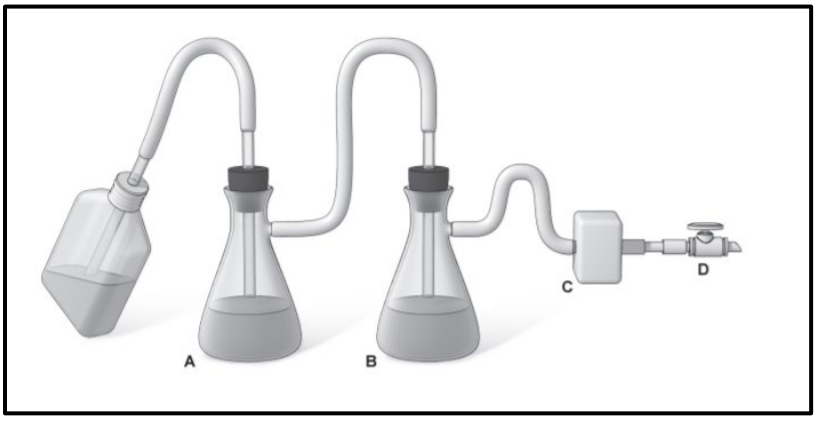
Use

6. Aspirate fluids into vacuum container using the aspirating pipette
7. Change aspiration tips between samples and dispose as biohazardous waste
8. At the end of the procedure or when the container is full, aspirate additional concentrated disinfectant to clean the vacuum tubing
9. Dispose of the aspirated liquid per the Liquid Waste SOP

Maintenance

10. Check the integrity of the vacuum connections and tubing with each use
11. Change the HEPA filter at least every 2 months or when noticeably contaminated

Cautions & Considerations

- A second container(trap) with disinfectant between the collection container and filter can help ensure fluids do not enter the filter or vacuum line
- Add fresh disinfectant for each use and ensure sufficient concentration and volume for the agent(s) used
- Ensure that unidirectional filters are installed with the inlet toward the flask and the outlet toward the vacuum
- Aspiration setups outside of the BSC must be inside secondary containment, labeled with the biohazard symbol and have aerosol-tight lids with secure couplings
- 

Resources

- Biosafety Manual
- BMBL 5th Edition