



BSB Central Vacuum Use Guidelines

1. PURPOSE & SCOPE

The Biosciences Research Building (BSB) is equipped with a Central House Vacuum System. The vacuum employs a powerful pump to distribute vacuum suction throughout the BSB via a copper piping system and vacuum turret valves located at the lab benches and in biosafety cabinets. In order to maintain the system and protect maintenance personnel who service the system, all efforts must be made to prevent the entry of aspirated fluids/particulates/vapors, especially hazardous chemicals and infectious fluids or aerosols. Fluids that enter the pipes will enter the vacuum system and contaminate the main pump. The entry of supposedly “nonhazardous” fluids may result in damaging moisture accumulation and corrosive effects. These guidelines shall be followed in order to ensure the proper use of the vacuum system. It is strongly recommended that researchers apply the same guidelines to their privately owned vacuum pumps.

2. PROPER USE

To prevent the entry of fluids and aerosols into the central vacuum system, JABSOM EHSO requires all users to employ the setup shown in the figure below.

- **Flask A**, equipped with a sparger to minimize splatter, collects the fluids, and is usually filled with an appropriate decontamination solution (e.g., fresh bleach solution).
- **Flask B**, equipped with a sparger to minimize splatter, serves as a fluid overflow flask (so it's either empty or filled with decontamination solution).
- An in-line **HEPA filter (C)** can filter particulates* before they reach the **vacuum system (D)**.
- **Note: once the HEPA filter becomes wet or contaminated with moisture, it must be replaced as it is no longer effective.**
- **HEPA Filters must be routinely monitored and replaced when necessary and as soon as there is moisture contamination.**
- **Each laboratory should implement a routine HEPA filter check and replace when there are signs of moisture contamination or after one year of use, whichever is sooner.**
- Researchers are responsible for purchasing the HEPA filters which are available at the BSB Stockroom.

