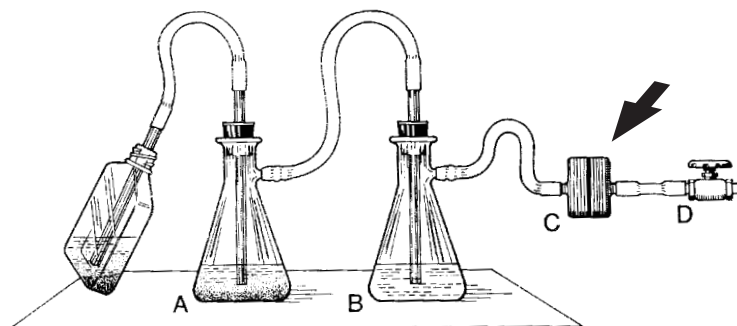


## PROTECTION OF BIOSAFETY CABINET (TISSUE CULTURE HOOD) VACUUM LINES

pub# BSU6

In many biosafety cabinets (laminar flow tissue culture hoods), the plumbed vacuum line is used to either aspirate liquids (for example, from culture flasks and plates) or provide suction for filtration of various fluids. There is a risk, even with the recommended dual aspirator or filtration flasks, that foaming of the aspirate or filtrate or overflow of flask contents will result in some material being drawn into the vacuum valve or plumbed line. If human source materials or cell cultures, or infectious agents or toxins are involved, the vacuum line may become contaminated.

To prevent contamination of the vacuum system with materials in use in the cabinet, a HEPA filter (C) must be placed in the vacuum line immediately before the valve; in most biosafety cabinets, this will be between the last aspirator flask (B) and the valve (D):



The filter should be replaced whenever there is evidence of filter failure or blockage, and, on a routine basis, no less often than annually. The cost of these filters is minimal.

This policy was established to protect laboratory and Facilities Maintenance staff in the event it became necessary to service, or replace or otherwise handle the vacuum valve or vacuum line supplying the cabinet following contamination of the valve or line with a Risk Group 2 or 3 agent being handled in the cabinet.

Several vacuum line protection filters are readily available from major scientific suppliers. Two of the most popular are the Millipore Millex™ 50mm filter units for vacuum line protection and tank/bioreactor venting and the Whatman Vacu-Gard™ filter; both are designed specifically for vacuum line protection applications. Your Department Safety Advisor (DSA) or the Biosafety Officer (BSO) can provide specific filter selection and ordering information.

