Use of Ventilated Hoods and Cabinets

- There are several different types of ventilated hoods and cabinets in UT Southwestern laboratories and facilities, including: fume hoods, biosafety cabinets, clean benches, and cage changing stations. They have some similarities and some differences in terms of protecting workers and their work from contamination and hazards.
- Certain units are effective for controlling exposure to infectious biological materials or chemicals while others are mostly effective for maintaining clean animals and limiting allergen spread.
-
- All of these units must be certified annually. EH&S checks the fume hoods and canopy hoods. An outside consultant must be contacted for units with HEPA filters.

Precision Air Technology (*UT System preferred*), Inc.,
281-669-6076
ENV Services, Inc.,
800-690-3368
Airscan Technologies, Inc. (ZScan),
800-800-5108

More vendor information can be found at:
http://www.utsouthwestern.edu//utsw/cda/dept145569/files/341525.html

Fume Hoods exhaust the air out of the building and are very useful for controlling exposure to volatile or hazardous chemicals. They are not as protective when used with biological agents because of the lack of filters to sterilize the air and difficulty in cleaning biological spills.

Canopy ventilation hoods are located in necropsy rooms in the ARC facilities. They are similar to fume hoods but the air exhaust is not as strong. Therefore the ability to control exposure can be limited in certain cases. Environmental Health and Safety can verify effectiveness for a particular experiment.

The following units have HEPA filters that remove particulates from the air. The airflow and filter placement vary between types of units:

Biological Safety Cabinets are used for safe work with infectious biological material. The air-flow in the cabinets protects the experiment from contamination by outside air by flowing sterile air over the work surface. It protects the researchers in the room by filtering air from the cabinet through HEPA filters that remove infectious particles (but not chemicals). Exhaust from most biosafety cabinets flows back into the room after filtration or particles. Biological hazards are removed but not chemicals. A small percentage of biosafety cabinets on campus do exhaust from the room and can be used for low concentrations of hazardous chemicals.

Cage Changing Stations have similar features to biosafety cabinets but with a lower airflow rate. They protect against allergens and can be used to do cage changes in a clean environment. They are not recommended for use with hazardous chemicals or infectious biologicals.

Dump Stations are useful for dumping cages to reduce exposure to allergens or other hazards in the bedding. Airflow and HEPA filters in the unit trap bedding particles.

Clean Benches are used to protect only the experiment and blow air directly at the researcher. Anything hazardous or allergic should not be used in those units.