# Built safety fume hood for laboratory equipment.

A fume hood, also known as a fume cupboard or fume cabinet, is a piece of laboratory equipment designed to control and minimize exposure to hazardous fumes, vapors, or dust. It provides a safe working environment by containing and removing potentially harmful substances generated during experiments or procedures.

Here are some key features and functions of a fume hood:

1. Ventilation: Fume hoods have a built-in ventilation system that draws air in from the laboratory and exhausts it outside or through a filtration system. This airflow creates a negative pressure inside the hood, preventing the escape of hazardous substances into the laboratory.

2. Containment: Fume hoods are constructed with a front sash, usually made of transparent material such as safety glass, which can be raised or lowered. The sash acts as a physical barrier, protecting the user from direct contact with chemicals or other dangerous materials inside the hood.

3. Airflow control: Fume hoods typically have adjustable airflow controls to regulate the volume and direction of air within the hood. These controls allow users to optimize the capture and removal of hazardous substances based on the specific experiment or procedure being conducted.

4. Filtration options: Some fume hoods are equipped with filtration systems to remove or neutralize toxic or hazardous substances from the air before it is released back into the laboratory. These hoods are often referred to as ductless or filtered fume hoods.

5. Monitoring and safety features: Advanced fume hoods may include sensors and alarms to monitor and alert users about factors such as airflow velocity, temperature, and the presence of specific gases or vapors. These features help ensure the safety of the user and maintain the effectiveness of the hood.

Fume hoods are essential in laboratories where hazardous substances are handled or experiments produce harmful byproducts. They play a crucial role in protecting researchers, preventing contamination, and maintaining a safe working environment. It is important to follow proper procedures and guidelines when working with fume hoods to ensure their effective and safe use.