VERTICAL vs. HORIZONTAL LAMINAR AIRFLOW WORKBENCH (LAFW)
OBJECTIVES

- TO UNDERSTAND WHY LAFW ARE USED IN STERILE COMPOUNDING.

- TO BE ABLE TO DIFFERENTIATE BETWEEN A HORIZONTAL AND VERTICAL LAFW AND HOW TO WORK WITHIN THEM.
WHY DO WE USE LAFW?

- THE LAMINAR AIRFLOW WORKBENCH (LAFW) PROVIDES A SAFE WORKING ENVIRONMENT FOR THE MANUFACTURE OF STERILE PRODUCTS.

- THEY SERVE TO MINIMIZE/Eliminate THE INTRODUCTION OF PARTICULATE, MICROORGANISMS, AND OTHER CONTAMINANTS.
HORIZONTAL LAFW

- Air drawn in is cycled through pre-filter. Intended to eliminate coarse particles/particulates.
- Airflow then proceeds through the HEPA filter and is blown horizontally across the work surface.
- HEPA filter removes 99.97% of particles that are 0.3 microns or larger.
HORIZONTAL LAFW AIRFLOW
PRODUCT PLACEMENT
HORIZONTAL LAFW


- PRODUCTS HAVING CRITICAL SITES MUST REMAIN IN THE AIRFLOW AND NOT HAVE THEIR AIRFLOW OBSTRUCTED. NO PRODUCT DIRECTLY BEHIND OTHER PRODUCT, SUPPLIES, OR DEVICES.

- THE WORKER SHOULD AVOID ANY RAPID OR SWEEPING MOVEMENTS WHILE IN THE HOOD. MAKING SURE NOT TO PLACE HANDS OR PRODUCT IN FRONT OF OTHER PRODUCT.

- LAFW SHOULD NOT BE OVERLOADED.
CORRECT PLACEMENT

INCORRECT PLACEMENT
HORIZONTAL LAFW

- HORIZONTAL LAFH ARE LESS EXPENSIVE THAN VERTICAL LAFH.
- THEY ARE SUITABLE FOR COMPOUNDING MOST STERILE PRODUCTS.
- ABSOLUTELY NO CHEMOTHERAPY/HAZARDOUS DRUGS ARE TO BE COMPOUNDED IN HLAFH.
VERTICAL LAFW
VERTICAL LAFW

- Air drawn in is cycled through pre-filter. Intended to eliminate coarse particles/particulates.
- Airflow then proceeds through the HEPA filter and is blown vertically on to the work surface. Some airflow is recycled into the LAFW while the rest is exhausted externally.
- HEPA filter removes 99.97% of particles that are 0.3 microns or larger.
VERTICAL LAFW AIRFLOW
PRODUCT PLACEMENT
VERTICAL LAFW


- PRODUCTS HAVING CRITICAL SITES MUST REMAIN IN THE AIRFLOW AND MUST NOT HAVE THEIR AIRFLOW OBSTRUCTED. NO PRODUCTS/SUPPLIES DIRECTLY ABOVE OTHER PRODUCTS, SUPPLIES, OR DEVICES.

- THE WORKER SHOULD AVOID ANY RAPID OR SWEEPING MOVEMENTS WHILE IN THE HOOD. MAKING CERTAIN NOT TO PLACE HANDS OR SUPPLIES OVER PRODUCT.

- HOOD SHOULD NOT BE OVERLOADED.
VERTICAL LAFW (BIOLOGICAL SAFETY CABINETS)

- VERTICAL LAFW ARE MORE EXPENSIVE THAN HORIZONTAL LAFH DUE TO EXTERIOR OR VENTI NG.

- THEY ARE SUITABLE FOR COMPOUNDING ALL STERILE PRODUCTS.

- THEY ARE THE ONLY LAFW SUITABLE TO COMPOUND CHEMOTHERAPY AND OTHER HAZARDOUS PRODUCTS IN.
DIFFERENCES ? ? ?

- NOT MUCH DIFFERENCE IN FUNCTIONALITY OF THE LAFW. HEPA FILTERED AIR PROVIDES A STERILE ENVIRONMENT FOR THE SAFE COMPOUNDING OF DRUGS.

- THE DIRECTION OF THE AIRFLOW FUNDAMENTALLY CHANGES HOW SOMEONE WORKS WITHIN THE LAFW.

- WHILE THE HORIZONTAL IS LESS EXPENSIVE, THE VERTICAL REMAINS THE SAFEST MEANS FOR ALL DRUGS TO BE HANDLED WITHIN IT.
QUESTIONS ? ? ?
CITATIONS