

Microbiology clean room design specification

1, Design Technology Index:

A, Technical Specifications Description:

The air-conditioning system consists of modular ** KW cooling capacity of air conditioning units in experimental area.

Cleanliness (level10000) $\geq 0.5\mu\text{m} \leq 350000$ pieces / m³

Microbiology planktonic bacteria level10000 ≤ 100 /m³

Settlement bacteria level10000 ≤ 3 pieces / plate

Lighting: bench 300LX, other production areas of 150LX.

Room adjacent to the room is relatively static pressure difference $\geq 5\text{pa}$, relative outdoor static pressure $\geq 10\text{pa}$.

Room temperature 18-26 ° C, relative humidity of 45-60%. indoor

Noise Indoor $\leq 60\text{db}$ (A).

Power Supply: AC220V/380V-50HZ

B, Exhaust port is equipped with high efficiency filters, filter outlet with high static pressure box, in order to achieve clean air intake

Net, what is more, It is convenient to replace the high efficiency filter.

C, Generally ventilation mode is up intake and down exhaust, indoor air vents should be located in interior regions with the highest risk of being contaminated, unilateral arrangement, shall not be impeded.

D, Return air port depends on the residual pressure valve automatically adjusting the pressure indoor to maintain positive pressure clean Status.

2, Design Description:

The basic ideas for laboratory design is economic and practical. Purification required level is level10000. There are a better, two more, air shower, and a buffer such as pre-test preparations for laboratory design. Make use of people and materials separation principle, in order to reduce experimental contamination, and ensure safety.

A, the compact and reasonable layout meet the laboratory operations and air cleanliness level requirements, while seeking for scientific and economic principles which take into account laboratory requirements and the optimal development and operating costs.

B, To set the air shower at the entrance of the clean room ,it can effectively remove the dust carried by the body to reduce the amount of dust in clean room ,at the same time Air shower also plays a role as an air cutout to prevent the non-clean air through the door into the clean area.

C, Clean room are required to supply a certain proportion of fresh air interior, cleaned and filtered air goes into the various laboratories to compensate for ventilation, to ensure positive pressure and staff needs.

D, frequency of use of air volume depends on air volume control valve to control the area with the different requirements of cleanliness levels , as well as the regulation of pressure gradient, to ensure the air from "clean" area flowing to "pollution" area, pressure difference among the different levels in clean room is $\geq 5\text{pa}$, pressure difference between clean rooms and outdoor is $\geq 10\text{pa}$.

E, There is UV light disinfection unit in clean room.

F, Transfer windows is all stainless steel material, mechanical interlock control, sterilization devices inside.

G, Observing window is closed clean windows, the door is hermetic clean door.