

SAFETY MEMO

May 17, 2021 – Clean Room Safety

Did you know?

What is a Clean Room?

A clean room is a room in which the environment is controlled. More specifically, the concentration of particles suspended in the air is controlled since it is specially designed to minimize the introduction of dust and thus protect pharmaceuticals from contaminants. Several other parameters, such as temperature, humidity, pressure and vibration can be controlled.

Information

The **ISO 14644-1 Standard** classifies clean rooms into nine levels ranging from 9 (dirtiest) to 1 (cleanest). Beyond the design and construction of clean rooms, operating and clothing procedures are essential for meeting standards. The type and materials of clothing or outerwear required vary depending on the level. It is therefore necessary to refer to the client's established procedures for dressing properly for entering the clean room.

It is important that the outerwear worn in the clean room is properly fitted for the employee. This is to avoid contamination of the clean room as well as to minimize the risk of injury. Outerwear or shoe covers that are too loose create the risk of snagging and falling.

Disposable shoe covers usually do not have non-slip soles. They can therefore be very slippery. It is important to adequately analyze the task to be performed or even to prohibit certain tasks when an employee wears this type of shoe cover.



Various sources of danger can be present in the enclosure of a clean room: UV rays, X-rays, radio frequencies, magnetic fields, lasers, chemicals, heat sources, pressurized gas (toxic or explosive) and exposure to nanomaterials. It is essential to be well informed about the dangers present before entering the clean room in order to adopt safe behavior.



Figure 1: Workers in a Clean Room.

How to prevent injuries

Safety points to remember when working in a clean room are as follows:

- Only your safe behavior can ensure safety in a clean room.
- Most clean room accidents are caused by tasks performed too quickly or with improper behavior.
- Safety must always take precedence over the simple completion of the task.
- Always perform a task safety analysis before starting any work.
- Ensure that all SDSs are available for the chemicals handled.
- Make sure you have had the proper training before using any piece of equipment in the clean room.
- Waste management must be well defined with containers for each type of waste.
- Know the establishment's alarm and evacuation procedures.

