

The Gazette

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HOW TO ENTER IN CLEAN ROOM

A cleanroom is an environment, typically used in manufacturing or scientific research that has a low level of environmental pollutants such as dust, airborne microbes, aerosol particles and chemical vapors. If you have been asked to work in one, you'll need to take the appropriate steps to avoid introducing contamination.

There is no single type of cleanroom or single set of rules for entering, so make sure to get training and instruction for the particular cleanroom you will enter.

STEP 1

Understand the purpose of cleanroom protocol. Processors require clean rooms because any speck of dust can damage the processes that occur inside them. Physical contaminants include skin cells that flake off, dandruff, clothing fibers, and loose hair. Paper, pencils, packaging materials, and many other things shed dust, and even tiny particles can damage the delicate products built and tested in clean rooms.

STEP 2

Know what class of cleanroom you are entering. There are a couple of different sets of standards, but in general, the lower the number, the cleaner the cleanroom.

STEP 3

Recognize that humans are generally the single largest source of contamination within a cleanroom.

STEP 4

Follow the instructions given by your employer or whoever operates and maintains the cleanroom. Clean room apparel varies. It may consist of gloves, a cap, and smock at its most basic all the way up to a full "bunny suit". These are the general instructions.

STEP 5

Shower in the morning on any day you will enter a cleanroom.

STEP 6

Do not wear cosmetics, hair spray, perfumes, or colognes into a cleanroom.

The Gazette

n.9 September 2024

STEP 7

Wear appropriate attire under your cleanroom garb. Skirts, high-heeled shoes, shorts, and in some cases, short-sleeved shirts are not appropriate attire. Also steer clear of clothing that is especially fuzzy or tends to produce a lot of lint or static electricity.

STEP 8

Clean or change your shoes on the way in. Wherever possible, do not wear outdoor shoes into the cleanroom environment; change into a clean and appropriate pair of shoes dedicated for the lab environment. If there is a machine at the door for this purpose (spinning brushes), use it. Place your foot and shoe together inside it. Hold the handle to steady yourself, then press the button. You'll feel a slight tug on your shoe from the moving brushes, but it won't damage your shoe.

If there is an adhesive doormat, step on it several times.

STEP 9

Stow personal items you won't be taking into the cleanroom. Leave them at your desk or use lockers, if they are provided.

STEP 10

Discard candy, gum, or anything else in your mouth.

STEP 11

Put on your cleanroom gear in the correct order. Top-to-bottom is a good general rule to follow, and it is a good idea to use a bench to separate the "dressed" area from the "getting dressed" area.

Start putting on your cleanroom gear on the "getting dressed" side of the bench.

Put on a hair cover (bouffant cap) and/or hood. Use a beard cover to cover any facial hair beard or mustache). Adjust hood when closing snaps on front and back so it is snug and comfortable.

Put on coveralls or a smock. If in two parts, put on jacket first, then pants. Zip or snap it closed all the way up, over the neck of the hood if you are wearing one. Close any snaps at the cuffs to gather the sleeves snugly around your wrists.

Sit on the bench to put on shoe covers or booties. Be sure to tuck pants inside the booties, and don't let the booties touch the ground on the "getting dressed" side of the bench. Alternatively, use an automatic shoe cover dispenser.

Put on latex gloves, or the appropriate substitute for those allergic to latex. Tape sleeves and ankles if necessary.

STEP 12

Act as if you are now a surgeon: don't touch anything until you are in the cleanroom. If it is necessary to touch surfaces or items, be sure to change the affected glove before entering the cleanroom.

The Gazette

n.9 September 2024

STEP 13

Pass through the air shower if there is one and step on any additional adhesive mats as you enter.
(Normally, air shower is widely applied in Electronics)

STEP 14

Keep cleanroom protocol in mind whenever you work within a cleanroom.

Keep your cleanroom apparel on at all times when working in the cleanroom.

Do not bring in any of the following items: pencils (note that graphite is conductive), erasers, non-cleanroom paper, wood, abrasives, or packaging materials such as cardboard. Keep non-cleanroom paper in a plastic sleeve if you must refer to it. Use only cleanroom tape. Be aware of what else you bring in.

Correctly wipe down any equipment you bring in. Do not remove cleanroom equipment from a cleanroom.

Move slowly and evenly. Rapid, sudden, or jerky movements can shed many particles.

STEP 15

Replace any cleanroom attire that is worn or soiled. Even cleanroom apparel gets dirty as you wear it and work in it. If it has been a while, make sure you have yours cleaned and get a fresh one.

Use fresh gloves, hair covers, and disposable shoe covers every time you enter.

You can reuse smocks, coveralls, reusable shoe covers, and reusable caps or hoods, but exchange or have them cleaned periodically.

STEP 16

Remove cleanroom attire in the opposite order from that in which you donned it. Remove cleanroom attire each time you leave the cleanroom. Do not exit the cleanroom wearing or carrying cleanroom attire. Put it on each time you enter and take it off and store it correctly each time you leave.

SOURCE: WILL CLEANROOM