

# Cleanroom Contamination Control: CLEANING PROCEDURES AND PPE

CLEANROOM

Cleanroom contamination poses serious health risks. Here is an overview of cleaning and PPE basics.



## COMMON SOURCES OF CONTAMINATION

- |  |                  |  |                |
|--|------------------|--|----------------|
|  | Clothing Fibers  |  | Human Hair     |
|  | Contaminated Air |  | Ions           |
|  | Dirty Surfaces   |  | Microorganisms |
|  | Dust Particles   |  | Molecules      |
|  | Flaking Paint    |  | Rusty Pipes    |
|  | Gases            |  |                |

## CLEANING PROCEDURES

- Always use cleanroom-specific cleaning materials.
- Clean ceiling with detergent periodically.
- Clean equipment and lenses as need.
- Mop floors and vacuum dry before every shift.
- Vacuum ceilings daily.
- Vacuum walls with HEPA filter daily.
- Wash and wipe dry all windows and cleanroom pass-throughs daily.
- Wipe down work areas after each shift.

Source: [angstromtechnology.com/cleaning-your-cleanroom](http://angstromtechnology.com/cleaning-your-cleanroom)



## PPE AND GOWNING

Refer to **ISO 14644-1** to see which classification (**ISO 1 – ISO 9**) applies to your cleanroom, and then determine the proper products for:

- |                         |                         |
|-------------------------|-------------------------|
| • Aprons                | • Gloves                |
| • Beard Covers          | • Gowns                 |
| • Boots and Boot Covers | • Hairnets              |
| • Coveralls             | • Lab Coats             |
| • Face Masks            | • Shoes and Shoe Covers |
| • Frocks                | • Sleeves               |

Source: [int-enviroguard.com/blog/cleanroom-classifications](http://int-enviroguard.com/blog/cleanroom-classifications)



Re-usable garments must be laundered and sterilized after each use. Re-usable garments degrade over time, allowing particles to penetrate.

Source: [beta-static.fishersci.com/content/dam/fishersci/en\\_US/documents/programs/scientific/technical-documents/white-papers/kimberly-clark-contamination-risks-white-paper.pdf](http://beta-static.fishersci.com/content/dam/fishersci/en_US/documents/programs/scientific/technical-documents/white-papers/kimberly-clark-contamination-risks-white-paper.pdf)

## CONTAMINATION CONTROL TIPS

- Keep a separate inventory of cleanroom cleaning items.
- Move slowly to prevent air turbulence.
- Never block HEPA filter air.
- Never wear cosmetics.
- Practice proper hygiene at all times.
- Remove all PPE equipment and clothing properly.
- Replace soiled clothing immediately.
- Store or cover all equipment after each shift and during long work interruptions.
- Train employees thoroughly in cleanroom cleaning procedures.
- Wipe spills immediately.

People account for **46% of all particle contamination.\***



Human hands contain **10,000 microorganisms** per square inch.\*

\*[beta-static.fishersci.com/content/dam/fishersci/en\\_US/documents/programs/scientific/technical-documents/white-papers/kimberly-clark-contamination-risks-white-paper.pdf](http://beta-static.fishersci.com/content/dam/fishersci/en_US/documents/programs/scientific/technical-documents/white-papers/kimberly-clark-contamination-risks-white-paper.pdf)



[techsafety.com](http://techsafety.com)