Hand washing and Garbing
Best Practices for the Cleanroom

Laura Nolan, CPhT, CSPT
Robin Bogner, PhD

What is Garbing?
The act of donning "PPE"

Garbing Requirements
Proposed USP<797> Section 3.3

The order of garbing is no longer specified in proposed USP<797>

Garb must be donned and doffed in an order that reduces the risk of contamination.

The order of hand washing and garbing depends on the placement of the sink (see 4.4 Water Sources). The order of garbing must be determined by the facility and documented in the facility’s SOP. (Proposed USP<797>

If the facility does not require dedicated cleanroom clothing – scrubs and cleanroom shoes

Step 1:
- Begins at home with showering and your choice of clothing.
  - NO: Ripped jeans or shorts
  - YES: Closed toed shoes
  - Sequins, beads, or fringe
  - Shoes without socks

Step 2: In the General Pharmacy:
- Remove all outer garments including:
  - Hoodies, coats, jackets, and vests
  - Sweaters, especially fuzzy sweaters
  - Hats, bandanas and scarves
  - Removable jewelry, watches, hair clips, belts

Avoiding rings?
Jewelry that doesn’t interfere with garbing?

Before Garbing
Proposed USP<797> Section 3.1 Personnel Preparation

Before entering a compounding area, individuals must remove any items that are not easily cleanable or that are not necessary for compounding. At a minimum, individuals must:

- Remove personal outer garments.
- Remove all cosmetics because they shed flakes and particles.
- Remove all hand, wrist, and other exposed jewelry including piercings that could interfere with the effectiveness of garbing (e.g., the fit of gloves, cuffs of sleeves, and eye protection) or otherwise increase the risk of contamination of the CSP. Cover any jewelry that cannot be removed.
- Not wear ear buds or headphones.
- Not bring electronic devices that are not necessary for compounding or other required tasks into the compounding area.
- Keep nails clean and neatly trimmed to minimize particle shedding and avoid glove punctures. Nail polish, artificial nails, and extenders must not be worn. (No longer than 2 mm in length specification)
- Wipe eyeglasses, if worn.

The designated person(s) may permit accommodations as long as the quality of the CSP and environment are not affected.
Corrective eyewear
“Wipe eyeglasses, if worn.”
When, where and with what?

Hijabs
USP is silent on religious clothing in the cleanroom
Does your facility have a policy?

UConn Training program for Handwashing and Garbing
• Written Test on Handwashing and Garbing Order
• Practice handwashing and garbing
• Formal evaluation + fingertip testing

What We Teach at UConn
Don shoe covers one at a time, on bench, while swinging leg over the line of demarcation.
Don facemask, beard cover, and head cover, using mirror to ensure all hair is covered.
Hand hygiene using particular technique for at least 30 seconds on the clock.
Don low shedding gown or coverall.

Hand Hygiene
Proposed USP <797> Section 3.2
• Remove visible debris from under fingernails under warm running water using a disposable nail cleaner.
• Wash hands and forearms up to the elbows with soap and water for at least 30 seconds.
  • Wash from finger tips downward to elbows
  • Aftal using hot water (reduce the risk of dermatitis)
  • Wipe hands with fingertips upward
  • Keep a clock within view of the sink
• Dry hands and forearms to the elbows completely with low lint disposable towels or wipers.
  • Use a non linting wipe to shut off water faucet if not handfree
• A closed system of soap (i.e., nonrefillable container) to minimize the risk of extrinsic contamination must be readily available or in close proximity to the sink.
  • Brushes must not be used
  • Hand driers must not be used
Hand Sanitizing Procedure  
- Apply an alcohol-based hand rub to dry skin following the manufacturer’s instructions for the volume of product to use.
- Apply product to one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry.
- Allow hands to dry thoroughly before donning sterile gloves.

**Professional hand sanitizer that has persistent anti-microbial activity is no longer specified.**
The minimum garbing requirements include:
- Low-lint garment with sleeves that fit snugly around the wrists and that is enclosed at the neck (gown or coverall)
- Low-lint disposable covers for shoes
- Low-lint disposable covers for head that cover hair and ears
- Low-lint disposable cover for facial hair of needed
- Face mask
- Sterile powder-free gloves
- When personnel exit the compounding area, garb except for gowns cannot be reused.
- Gowns may be reused within the same shift if the gown is maintained in a classified area.

Questions to Consider
Is there a set order for doffing?
What should the order be?
In what location?
Reusable versus single-use garb?
New garb after cleaning?