

# GUIDE TO THE USP <800> GUIDELINES FOR PPE USE WHEN COMPOUNDING CHEMOTHERAPY DRUGS

There is **NO SAFE LEVEL OF EXPOSURE** to cytotoxic chemotherapy drugs for healthcare workers. Protect yourself and your team: follow the latest guidelines for personal protective equipment to reduce your risk.

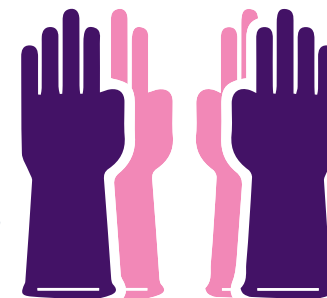
## PPE FOR USE WITH CHEMOTHERAPY



## COMPOUNDING

For those compounding and packaging chemotherapy drugs, the PPE requirements in USP<800> are rigorous, because there are so many opportunities for exposure, from weighing or mixing compounds to contacting hazardous drug residues on PPE and other garments.<sup>7</sup>

**GLOVES:** 2 PAIRS of powder-free gloves, both tested for use with chemotherapy drugs (ASTM D6978). After compounding, the outer glove can be removed to prevent contamination of the container when labelling or handling the completed compound. For sterile compounding, outer chemotherapy gloves must be STERILE. Replace gloves every 30 minutes.<sup>8</sup>



**GOWNS:** A gown for chemotherapy use must be poly-coated, disposable, with long sleeves and knitted or elastic cuffs. Gowns must close in the back, not the front.<sup>9</sup> A regular gown should be worn beneath the chemotherapy gown for compounding in a cleanroom suite.<sup>10</sup> Washable gowns are NOT permitted for use with HDs. Replace gowns every 2-3 hours, or immediately after a spill or splash.<sup>11</sup>

**EYE & FACE PROTECTION:** Wear a full face shield to protect the eyes from splashes. Add goggles if compounding outside of a C-PEC or containment isolator; eyeglasses or safety glasses do not protect<sup>12</sup> eyes adequately from splash.

**RESPIRATORY PROTECTION:** Wear a fit-tested<sup>†</sup> NIOSH-certified N95 respirator mask to protect against airborne particles and provide a barrier to splashes, droplets, and sprays around the nose and mouth. (If using a biological safety cabinet (BSC) or containment isolator, a regular face mask is sufficient.)<sup>13</sup>

<sup>†</sup> Follow OSHA regulations for training and fit-testing respiratory protection (OSHA respiratory protection standard 29 CFR 1910.134).

**HEADWEAR & FOOTWEAR:** Wear full-coverage head and hair covers (and beard and moustache covers if applicable), including coverage of any religious headwear. When compounding, wear 2 pairs of shoe or boot covers. Shoe covers worn in HD handling areas must not be worn to other areas, to avoid spreading HD contamination and exposing other healthcare workers.<sup>14</sup>



## TIPS FOR DONNING, DOFFING AND DISPOSAL OF CHEMOTHERAPY GEAR<sup>15</sup>

### TO DON:

1. Don hair cover, an N95 respirator mask, goggles and face shield, plus **2 pairs** of shoe covers before entering cleanroom areas.
2. Wash hands, then don a regular gown if needed, followed by a **chemo rated isolation gown**.
3. Apply 2 pair chemo gloves, **placing the inner glove** underneath the cuff of the chemo gown, and the outer glove over and completely covering the cuff of the chemo gown. For sterile compounding, both inner and outer chemo-gloves must be sterile.

### TO DOFF:

1. Remove outer chemo gloves first, **prior to** handling or labeling preparation containers.
2. Remove chemo gown and outer shoe covers before leaving the CPEC or cleanroom area. Remove all other garb when leaving the anteroom.

Consider all PPE worn when handling HDs to be contaminated and dispose of it immediately in an appropriate, designated waste container.<sup>16</sup>

**NEVER RE-USE DISPOSABLE PPE.**



You're Fighting Cancer.

# MAKE SURE YOU HAVE THE RIGHT BATTLE GEAR.

In December of 2017, USP published chapter USP <800> of the *USP Compounding Compendium*.<sup>1</sup> USP <800> addresses many aspects of worker and patient protection from hazardous drugs, including environmental and engineering controls and drug handling guidelines, as well as Personal Protective Equipment.

## BE IN COMPLIANCE WITH HALYARD\* CHEMO GEAR\*

Because regulations issued by OSHA and USP are **enforceable** and apply to all healthcare workers who handle hazardous chemotherapy drugs,<sup>2</sup> Halyard wants to make sure that you have the right protective gear and know how to wear it properly to comply with the new guidelines.

- PURPLE NITRILE-XTRA\* Exam Gloves
- **New!** PINK UNDERGUARD\* Nitrile Gloves
- **New!** CHEMO360\* Gowns for Chemotherapy Use
- STERLING NITRILE-XTRA\* Exam Gloves
- HALYARD PROCEDURE GOWNS for Chemotherapy Use
- FLUIDSHIELD\* N95 Respirator masks
- HALYARD\* Face Shields
- HALYARD\* Headwear and Shoe Covers



### HOW TESTED IS YOUR PPE?

HALYARD\* Gloves and Gowns for Chemotherapy<sup>4</sup> are tested for resistance to as many as

**52 Chemotherapy Drugs**

Compared to 10 or fewer for most available gowns and gloves. Make sure you have the protection you need when fighting cancer!

### GET THE LIST:

[www.gearupforthefight.com](http://www.gearupforthefight.com)

### SPILLS!

Spills of hazardous drugs (HDs) must be contained and cleaned immediately, by personnel wearing appropriate PPE, including:

- chemotherapy gloves
- an impervious gown intended for use with HDs,
- hair cover and shoe covers,
- facial and respiratory protection
- When cleaning a spill larger than can be managed with a Spill Kit, goggles and a fit-tested full-facepiece as well as chemical cartridge-type respirator or powered air-purifying respirator (PAPR) should be worn.

**Spill kits** containing all required HD cleaning materials must be readily available in all HD-handling areas.<sup>3</sup>

1. USP General Chapter <800> Hazardous Drugs – Handling in Healthcare Settings, United States Pharmacopoeial Convention, USP 40–NF 35, Second Supplement (2017), 1. [www.usp.org](http://www.usp.org)  
 2. Kienle, Patricia C, The Chapter <800> Answer Book, ASHP Publications, 2017, p vii.  
 3. USP General Chapter <800>, 11.  
 4. HALYARD\* PURPLE NITRILE-XTRA\*, STERLING NITRILE X-TRA\* and PINK UNDERGUARD\* Exam Gloves and HALYARD\* Procedure Gowns Tested for Use with Chemotherapy  
 5. Must meet ASTM standard D6878  
 6. Tested per ASTM F739  
 7. USP General Chapter <800>, 3.  
 8. USP General Chapter <800>, 6.  
 9. Ibid.  
 10. Kienle, 46-47.  
 11. Ibid.  
 12. USP General Chapter <800>, 6-7.  
 13. Ibid.  
 14. Ibid.  
 15. Kienle, 41-42.  
 16. USP General Chapter <800>, 7.

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