

Recommendations for Pharmacy Cleaning to Comply With USP <800>

Hazardous drugs are commonly found in pharmacies and other healthcare settings. This technical bulletin provides an overview of USP <800> and describes protocols that can be used with recommended Clorox Healthcare® products to ensure compliance with USP <800> cleaning guidelines.

Overview of USP <800> Hazardous Drugs – Handling in Healthcare Settings

In February 2016, the U.S. Pharmacopeial Convention (USP) issued USP <800> guidelines on the handling of hazardous drugs in healthcare settings.¹ These guidelines were developed to ensure that pharmacists and pharmacy technicians are protected from hazardous drugs during the course of their work, and that patients are not receiving drugs contaminated with other hazardous drugs or potentially harmful microorganisms.

Hazardous drugs (HD) include those used in oncology, antivirals, some bioengineered drugs and hormones that can pose a reproductive risk. The National Institute for Occupational Safety and Health (NIOSH) maintains a list of HD which can be found on the NIOSH website.²

USP <800> was implemented on December 1, 2019 and the guidelines apply to all HD touch points – receipt, storage, compounding, dispensing, administration and disposal – in, but not limited to: pharmacies, hospitals, non-acute care settings (including home healthcare) and veterinary settings.

A key part of the guidelines describes how to clean up after the use of hazardous drugs. Pharmacies in which hazardous drugs are compounded must ensure that the process and products used for cleaning compounding surfaces are in compliance with the steps outlined in the USP <800>, which are shown below.

Summary of Cleaning Steps (adapted from USP <800> Table 5)

Step	Purpose	Example Agents
Deactivation	Render drug inactive or inert	As listed in the HD labeling or other agents that may incorporate Environmental Protection Agency (EPA)-registered oxidizers (e.g., peroxide formulations, sodium hypochlorite, etc.)
Decontamination	Remove inactivated drug residue	Materials that have been validated to be effective for HD decontamination, or through materials proven to be effective through testing, which may include alcohol, water, peroxide or sodium hypochlorite
Cleaning	Remove organic & inorganic material	Germicidal detergent
Disinfection (for sterile compounding areas)	Destroy microorganisms	EPA-registered disinfectant and/or sterile alcohol

- ▶ The cleaning steps apply to all areas where HD are handled, and all reusable equipment and devices.
- ▶ Comprehensive written procedures are required for these steps, and for sterile compounding disinfection.
- ▶ All personnel carrying out these activities must be appropriately trained.
- ▶ Selection of agents for cleaning is important. They must be appropriate for the type of HD contaminant(s), the location and be compatible with surface materials.
- ▶ Oxidizing agents are commonly used for deactivation, but no single agent has been proven to deactivate all classes of HD.
- ▶ Agents should be applied with wipes and not spray bottles to avoid spreading HD residue; wetting dry wipes with agents prior to application or use of ready-to-use wipes is permitted.

Recommendations for using Clorox Healthcare® wipes to comply with USP <800> cleaning guidelines

Clorox Healthcare® Bleach Germicidal Wipes and Clorox Healthcare® Hydrogen Peroxide Cleaner Disinfectant Wipes are EPA-registered disinfectants and oxidizers, and are also considered to be germicidal detergents. They are approved for use in pharmacies and chemotherapy hoods and have been tested for their ability to remove representative hazardous drugs from contaminated surfaces. These products can be used as part of the four cleaning steps outlined in USP General Chapter <800> Hazardous Drugs — Handling in Healthcare. The following protocol, when used with either Clorox Healthcare® Bleach Germicidal Wipes or Clorox Healthcare® Hydrogen Peroxide Cleaner Disinfectant Wipes and with a three-minute contact time for disinfection, has been shown to remove >99.9% of five representative hazardous drugs from a stainless steel surface (see table below).³

Recommended Protocol

1. Remove any excess liquid from the surface using a clean, dry cloth or wipe.
2. Take a new disinfectant wipe and fold it in half. Wipe the surface until completely wet. Wipe in unidirectional strokes, overlapping a portion of the previously wiped surface each time. If you are cleaning a large area, you may need to use several wipes.
3. Discard the wipe according to your facility's protocol.
4. To disinfect the surface, take a second disinfectant wipe and wipe the surface until completely wet using the same technique as in step 2. Ensure that the surface remains visibly wet for three minutes. Discard the wipe according to your facility's protocol.
5. Saturate a clean, dry wipe with sterile 70% alcohol and then wipe the surface using the same technique as in step 2. Discard the wipe according to your facility's protocol.

Percent removal of representative hazardous drugs from a stainless steel surface using the 5-step protocol

Clorox Healthcare® Disinfectant	Hazardous drug				
	methotrexate	cyclophosphamide	cisplatin	5-fluorouracil	vincristine sulfate
Bleach Germicidal Wipes	100%	99.93%	100%	100%	100%
Hydrogen Peroxide Cleaner Disinfectant Wipes	99.90%	99.91%	99.98%	99.92%	99.92%

Clorox Healthcare® Product Recommendations for Use in Pharmacies


Clorox Healthcare® products can be incorporated into your general pharmacy cleaning and disinfection protocols to help keep your pharmacy clean and in compliance with pharmacy regulations. We recommend the following two products for use in pharmacy settings to comply with USP <800> cleaning guidelines:

Clorox Healthcare® Bleach Germicidal Wipes

Clinical Wipes (5"x6") EPA Reg. No. 67619-12
Item No. 30577, 150 ct. canister, 6/case

Multi-Purpose Wipes (6.75"x9")
Item No. 35309, 70 ct. canister, 6/case
Item No. 31424, 50 ct. carton, 6/case
Item No. 31469, 20 ct. soft pack, 24/case

Terminal Wipes (12"x12")
Item No. 30358, 110 ct. bucket, 2/case
Item No. 30359, 110 ct. refill, 2/case




Clorox Healthcare® Hydrogen Peroxide Cleaner Disinfectant Wipes

Clinical Wipes (6.75" x 5.75") EPA Reg. No. 67619-25
Item No. 30825, 155 ct. canister, 6/case

Multi-Purpose Wipes (6.75"x9")
Item No. 30824, 95 ct. canister, 6/case
Item No. 31426, 50 ct. carton, 6/case

Terminal Wipes (12"x11")
Item No. 30826, 110 ct. bucket, 2/case
Item No. 30827, 110 ct. refill, 2/case




References:

1. US Pharmacopoeia. USP General Chapter <800> Hazardous Drugs—Handling in Healthcare Settings. <http://www.usp.org/compounding/general-chapter-hazardous-drugs-handling-healthcare> Accessed January 15, 2019
2. The National Institute for Occupational Safety and Health. NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings, 2016 <https://www.cdc.gov/niosh/docs/2016-161/default.html> Accessed January 11, 2019.
3. Testing conducted by Maxaam Labs, a Bureau Veritas Company, December 2018

For product resources and implementation tools, contact your Clorox sales representative or Call: 800-234-7700
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NI-5116