



## Focus on: Dangerous waste pharmaceutical containers

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### ADA accessibility

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Figure 1: Once medication is removed, blisterpacks are empty.

All [health care facilities](#)<sup>1</sup> must determine if dangerous waste pharmaceutical containers are empty to ensure proper disposal.

If your facility meets the definition of a health care facility, this information applies to you.

A health care facility either:

- Provides preventative, diagnostic, therapeutic, rehabilitative, or palliative care to improve the physical or mental condition of humans and animals.
- Or sells or distributes pharmaceuticals.

All health care facilities must determine if their dangerous waste pharmaceutical containers are empty. Some facilities may not manage dangerous waste pharmaceuticals under the [special requirements of dangerous waste pharmaceuticals](#),<sup>2</sup> but they are still required to determine if dangerous waste pharmaceutical containers are empty.

<sup>1</sup> <https://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-555>

<sup>2</sup> <https://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-555>

## When is a pharmaceutical container empty?

Certain types of pharmaceutical containers like syringes, unit dose containers, and IV bags are considered empty if the pharmaceuticals have been removed from the container using the practices commonly employed to remove materials from that type of container ([WAC 173-303-555\(8\)](#)).<sup>3</sup> The residues in the container are not regulated as dangerous waste. See the practices commonly employed for each type of pharmaceutical container below.

When empty, these containers can be disposed of as solid waste. For the purposes of this focus sheet, the term solid waste means non-dangerous solid waste, referring to the “regular trash.” We recommend contacting your local health department and solid waste vendor to ensure they do not have restrictions or special instructions for accepting this waste.

## Types of pharmaceutical containers

### Syringes

A syringe is empty and solid waste when two conditions are met:

1. The contents are fully administered.
2. And the plunger is fully depressed (i.e. the plunger is completely down).

Empty syringes can go into your sharps containers. It does not matter what it held, even if it held a P-listed pharmaceutical such as epinephrine.

If you have a partially full syringe, you may do either of the following:

- Manage the partially full syringe in a dangerous waste pharmaceutical container.
- Or dispose of the contents of the syringe into a dangerous waste pharmaceutical container. The now-empty syringe is solid waste and can go into a sharps container.

### Stock, dispensing, and unit-dose containers

The following containers are empty and solid waste when all contents are fully dispensed or collected as waste:

- Vials and ampules less than 1 liter
- Bottles less than or equal to 1 liter or 10,000 pills
- Unit-dose containers like blister packs, paper cups, and prepackaged medications
- Unit-dose delivery devices like patches and insulin pens



Figure 2: Place all empty syringes in your sharps container.

<sup>3</sup>[https://app.leg.wa.gov/WAC/default.aspx?cite=173-303-555#:~:text=\(8\)%20Residues%20of%20dangerous%20waste%20pharmaceuticals%20in%20empty%20containers.](https://app.leg.wa.gov/WAC/default.aspx?cite=173-303-555#:~:text=(8)%20Residues%20of%20dangerous%20waste%20pharmaceuticals%20in%20empty%20containers.)

If you have a stock, dispensing, or unit-dose container with medication still inside, it is not empty.

If you have a non-empty stock, dispensing, or unit-dose container, you may do either of the following:

- Manage the non-empty container in a dangerous waste pharmaceutical container.
- Or dispose of the contents into a dangerous waste pharmaceutical container. The now-empty stock, dispensing, or unit-dose container is solid waste.

If you have a stock or dispensing bottle greater than 1 liter or 10,000 pills, it is empty when it meets WAC 173-303-160(2). Ecology does not recommend triple-rinsing pharmaceutical containers that held P-listed acute hazardous waste. Manage non-empty bottles as dangerous waste pharmaceuticals.

### Intravenous (IV) bags

An IV bag is empty when the contents are fully administered to the patient. However, if the IV bag held a chemotherapy or other hazardous drug, it may be subject to Washington State [Labor and Industry's Hazardous Drug Rule \(Part R\)](#)<sup>4</sup> for the disposal and handling of these wastes.

### Common Questions about IV Bags

Do I need to remove the tubing or needle attached to the IV bag before disposing of it?

If it has an attached needle, remove the needle and manage in the sharps container. The tubing can remain attached to the IV bag.

How do I dispose of a partially empty IV bag?

Determine if the contents of the IV bag are a dangerous waste pharmaceutical.

If the contents of the IV bag are a dangerous waste pharmaceutical, place the IV bag and tubing in a dangerous waste pharmaceutical container. [Sewering dangerous waste pharmaceuticals is prohibited.](#)<sup>5</sup>

- **Don't** open IV bags to drain contents for collection.
- **Don't** manage IV bags in a way that could lead to a release. Minimize leakage by sealing the IV bag and tubing into a container prior to disposal.

If the contents of an IV bag are not a dangerous waste pharmaceutical, it is solid waste.

Can I sewer partially used saline bags, dextrose bags, or lactated ringer bags?

Yes, if the contents are not dangerous waste and you can obtain a discharge authorization from your delegated publicly owned treatment works (POTW) or the [Ecology Water Quality Program](#).<sup>6</sup> We recommend you don't discharge any solutions with medications to the sewer.

<sup>4</sup> [https://lni.wa.gov/safety-health/safety-rules/chapter-pdfs/WAC296-62.pdf#WAC\\_296\\_62\\_500](https://lni.wa.gov/safety-health/safety-rules/chapter-pdfs/WAC296-62.pdf#WAC_296_62_500)

<sup>5</sup> [https://app.leg.wa.gov/WAC/default.aspx?cite=173-303-555#:~:text=\(6\)%20Prohibition%20of%20sewering%20dangerous%20waste%20pharmaceuticals.](https://app.leg.wa.gov/WAC/default.aspx?cite=173-303-555#:~:text=(6)%20Prohibition%20of%20sewering%20dangerous%20waste%20pharmaceuticals.)

<sup>6</sup> <https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-quality-permits/Water-Quality-individual-permits>

## Other Containers

Other pharmaceutical containers, like inhalers, aerosol cans, nebulizers, and tubes of ointments, gels, or creams, are difficult to empty completely. These containers are only considered [empty](#)<sup>7</sup> when:

- All wastes have been removed from the container using practices commonly employed.

And the lesser of either:

- No more than 1 inch of waste remains at the bottom of the container.
- No more than 3% by weight of the total capacity remains in the container.

The definition of “empty” in WAC 173-303-160(2) includes triple-rinsing for containers that held acute hazardous waste. However, we recommend not triple-rinsing of these **other** containers that held P-listed pharmaceuticals. Triple-rinsing pharmaceutical containers typically generates more dangerous waste than the original container, leading to added management requirements and disposal cost. The rinsate must be collected and managed as dangerous waste pharmaceuticals.

Health care facilities **must** manage dangerous waste pharmaceutical containers that are not empty as a [dangerous waste pharmaceutical](#).<sup>8</sup>

## Common Questions about Other Containers

How do I dispose of tubes of ointments, gels, or creams?

Tubes that held ointments, gels or creams cannot be considered an empty container under section 555(8)(d) unless the conditions in WAC 173-303-160(2) are met.

If the item (i.e. ointment, gel, or cream) designates as a dangerous waste pharmaceutical, you must manage the waste tubes as a [non-creditable dangerous waste pharmaceutical](#).<sup>9</sup>

How do I dispose of spent inhalers?

### Inhalers with powder propellants

Inhalers with powder propellants are considered unit-dose containers. Once the counter reaches “0” the inhaler is considered empty. You can dispose it as solid waste.

### Aerosol inhalers

Aerosol inhalers may be managed either:

- Under the [special requirements](#)<sup>10</sup> as a dangerous waste pharmaceutical.
- Or as an [aerosol can](#).<sup>11</sup>

Note: If you manage an aerosol inhaler as an aerosol can, do not puncture the inhaler. Check with your waste vendor to ensure they will accept it for disposal as solid waste

<sup>7</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-303-160>

<sup>8</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/2004049.html>

<sup>9</sup> <https://app.leg.wa.gov/WAC/default.aspx?cite=173-303-555#:~:text=%22Noncreditable%20dangerous%20waste,spills%20of%20pharmaceuticals>

<sup>10</sup> <https://ecology.wa.gov/programs/hwtr/pharmaceuticals/index.html>

<sup>11</sup> [https://ecology.wa.gov/programs/hwtr/dangermat/aerosol\\_cans.html](https://ecology.wa.gov/programs/hwtr/dangermat/aerosol_cans.html)



Figure 3: Inhalers are managed based on whether they include powder propellants or aerosol.

Can I triple-rinse a P-listed waste container to be considered empty?

No. If the container is not empty under WAC 173-303-555(8), then you should manage it as a dangerous waste pharmaceutical. Do not triple rinse it to meet the definition of empty under WAC 173-303-160(2). Triple-rinsing pharmaceutical containers is impractical and generates more waste.

Refer to Ecology’s [Pharmaceutical waste codes](#) webpage for examples of P-listed pharmaceutical wastes.

How do I dispose of epinephrine auto-injectors?

#### Used epinephrine auto-injectors

After an epinephrine auto-injector is used as the manufacturer intended, it still contains epinephrine. The remaining epinephrine is unusable and cannot be removed from the auto-injector. The used epinephrine auto-injector must be managed as a non-creditable dangerous waste pharmaceutical.

#### Unused epinephrine auto-injectors

- **Expired injectors:** You must manage these as a dangerous waste pharmaceutical with [waste code](#)<sup>12</sup> P042.
- **For Non-expired injectors do one of the following:**
  - Redistribute them elsewhere for intended use prior to expiration.
  - Send them to a reverse distributor.
  - Manage them as noncreditable dangerous waste pharmaceuticals.

How do I dispose of an empty container that held warfarin pills?

- If it held 10,000 pills or fewer and is emptied using all normal means, the container is solid waste.
- If the container is not empty, it carries the P001 waste code and must be managed as a dangerous waste pharmaceutical.

<sup>12</sup> <https://ecology.wa.gov/RCRA-waste-codes>



How do I dispose of vials, syringes and IV bags that held arsenic trioxide?

- Waste arsenic trioxide is a P-listed waste. If the container is empty using all normal means (e.g. fully depressed syringe or fully administered IV bag), it is solid waste.
- If the container is not empty, you must manage it as a dangerous waste pharmaceutical with waste code P012.

Do I need to segregate my arsenic trioxide or other heavy metal dangerous waste pharmaceuticals from all other dangerous waste pharmaceuticals?

- This depends on the waste, how it is packaged, and how it is managed. Work with your hazardous waste vendor to determine if you must manage the heavy metal pharmaceutical waste separately from all your other dangerous waste pharmaceuticals.
- Dangerous waste pharmaceuticals managed as overpacked containers (also known as “labpacks”) must have specific labeling listed in [WAC 173-303-555\(9\)](https://www.wa.gov/leg/default.aspx?cite=173-303-555(9)).<sup>13</sup>



Figure 4: Most empty pill containers can be disposed of as solid waste.

### Additional resources

For dangerous waste pharmaceutical requirements review:

- [Dangerous Waste Pharmaceuticals Guide](#)<sup>14</sup>
- [Pharmaceutical waste webpage](#)<sup>15</sup>
- [NIOSH Alert: Preventing Occupational Exposures to Antineoplastic and Other Hazardous Drugs in Health Care Settings](#)<sup>16</sup>

<sup>13</sup> [https://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-555#:~:text=\(III\)-,Labpacks,-Labpacks%20that%20will](https://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-555#:~:text=(III)-,Labpacks,-Labpacks%20that%20will)

<sup>14</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/2004049.html>

<sup>15</sup> <https://ecology.wa.gov/programs/hwtr/pharmaceuticals/index.html>

<sup>16</sup> <https://www.cdc.gov/niosh/docs/2004-165/>