



Characteristic (D Coded) Waste Management and Disposal Guidelines

Hospitals, pharmacies, and other healthcare providers use a variety of pharmaceutical products that contain hazardous chemicals, including those that exhibit a hazardous characteristic when they become “waste.” Characteristic wastes are managed under the *New Hampshire Hazardous Waste Rules* (Env-Wm 100-1100).

Pollution Prevention techniques can reduce “waste” pharmaceuticals:

1. Return the product to the manufacturer through a “take-back” program. Review the facility’s group purchasing organization contract for further information; some of these services are included in the contract.
2. Create an inventory control program to limit the amount of products that expire before use. Resources spent on the management of expired products are resources lost.
3. Reformulate to reduce heavy metal concentration, such as mercury and m-cresol preservatives.
4. Contact New Hampshire Hospitals for a Healthy Environment at <https://www.nhha.org/index.php/nh-hospitals/nh-hospitals-for-a-healthy-environment-nh3e> for additional ideas and suggestions.

Characteristic Hazardous Wastes

Healthcare providers should sample and analyze waste to properly identify its hazardous characteristics or apply generator knowledge of the hazardous nature of the waste based on the materials or processes used to generate it. Refer to Env-Wm 502.01(c).

A characteristic hazardous waste is defined as a waste that has been identified to exhibit one or more of the following attributes; refer to Env-Wm 403:

1. Ignitable – Flash point is less than 140 F.
2. Corrosive – pH is less than or equal to 2.0
3. Reactive – Reacts violently with water or air; is explosive, or cyanide or s
4. Toxic - Fails the Toxicity Characteristic Leaching Procedure (TCLP). TCLP testing includes heavy metals, pesticides, herbicides and listed organics.

Examples of Ignitable Wastes (D001)

- Acetone Potassium Distillates
- Bromine Tablets
- Methanol
- Nitric Acid
- Petroleum N
- Triethylamine
- Xylene
- Zinc Powder

Examples of Corrosive Wastes (D002)

- Formic Acid
- Glacial Acetic
- Hydrochloric Acid
- Sodium Hydroxide

Examples of Reactive Wastes (D003)

- Cyanide
- Potassium Cyanide

Examples of Toxicity Characteristics and Maximum Concentration of Contaminants

The complete list of toxicity characteristic wastes and maximum concentrations of contaminants can be found at Env-Wm 403.06(d). The following is a sample list:

Arsenic D004 – 5.0 mg/L
Barium D005 – 100.0 mg/L
Cadmium D006 – 1.0 mg/L
Chloroform D022 – 6.0 mg/L
Chromium D007 – 5.0 mg/L
m-Cresol D024 – 200.0 mg/L
Lead D008 – 5.0 mg/L
Lindane D013 – 0.4 mg/L
Mercury D009 – 0.2 mg/L
Selenium D010 – 1.0 mg/L
Silver D011 – 5.0 mg/L

Prohibited Disposal Options of Characteristic Wastes

Waste pharmaceuticals that have been identified and exhibit a hazardous characteristic should *not* be disposed of in the following ways:

1. Solid Waste – trash.
2. Infectious Waste – red bag waste.
3. Sewerage – down the drain.

Pollution Prevention at Healthcare Facilities

Since 1998, the Department of Environmental Services' Pollution Prevention Program (NHPPP) has worked with the healthcare industry to promote pollution prevention opportunities at their facilities. Through a partnership with the New Hampshire Hospital Association, a workgroup entitled New Hampshire Hospitals for a Healthy Environment (NH3E) was formed and continues to meet to share ideas for pollution prevention strategies.

For further information on the *New Hampshire Hazardous Waste Rules*, contact the Hazardous Waste Compliance Section at 271-2942, toll free at 866-HAZWAST or hwcomp@des.nh.gov.