

Hazardous Waste Topics at Hospitals

by

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Hazardous Waste Definition

- Characteristic
 - Ignitable
 - Corrosive
 - Reactive
 - TCLP (toxicity)
- Listings (F, K, P, U lists)
 - P & U listing are commercial chemical products (CCPs)
 - CCPs are generally unused, not used in a process

“Hot” Topics for Hospitals

- Nicotine Gum and Patches
- Epi-pens and Epinephrine
- Nitroglycerin
- Bottles, ampoules, vials, tubes
- Dispensing and delivery devices
- Formaldehyde
- Expiration dates /reverse distribution

Nicotine Gum and Patches

- Nicotine Gum or Patches (Unused)
 - Nicotine is a P-listed waste (P075)
 - If Nicotine is the sole active ingredient, or an active ingredient of 10% or more of the ingredients, it meets the P-listing
- Nicotine Gum that has been chewed or Nicotine Patches that have been worn
 - Used and no longer meets P-listing
 - Only hazardous waste if it exhibits a characteristic (most likely not)

Epi-pens or Epinephrine

- Epinephrine is a P-listed waste (P042)
- EPA guidance says that epinephrine salts are not included in the P042 listing for epinephrine (base), CAS# 51-43-4
- EPA understands that most Epi-pens use epinephrine salts rather than epinephrine base
- If Epi-pen does not include epinephrine base, then it does not meet the P042 listing

Epi-pens or Epinephrine (cont'd)

- If Epi-pens contain epinephrine base (as sole active ingredient or 10% or more as active ingredient), then unused Epi-pens meet the P042 listing
- Epi-pens meeting the P042 listing, after use, no longer meet the P-listing
- Epi-pens are syringe-like, not containers, and residues in syringes are not subject to HW rules as non-empty containers

Epinephrine ampoules

- Epinephrine salts do not meet P042 listing
- Epinephrine base as sole active ingredient or 10% or more as active ingredient, meets the P042 listing
- Ampoule is considered a “container”
- Unused Epinephrine base, remaining in ampoule, must be disposed of as a hazardous waste

Nitroglycerin

- Nitroglycerin is a P-listed Waste (P081)
- If Nitroglycerin is the sole active ingredient, or an active ingredient of 10% or more of the ingredients, it meets the P-listing
- In Maine, Nitroglycerin meets the listing regardless of whether it is reactive or not
- Unused Nitroglycerin meeting the listing (bottles, tablets, etc.) is hazardous waste

P-listed Pharmaceutical CCP Containers subject to “RCRA Empty” Requirements

- RCRA Empty means
 - All waste removed using common practice
 - No free liquids
 - Requires triple rinsing for P-listed containers, or removal and disposal of inner liner as HW
- Applicable to:
 - Bottles
 - Ampoules, Vials
 - Tubes of semi-solids (ointments creams, gels)
- Or dispose of unused / partially full items as HW

P-listed Pharmaceutical CCP Delivery or Dispensing Devices (not Listed Haz Wastes)

- Used Dispensing Devices :
 - Epi-pens (auto-injectors)
 - Nicotine Patch Wrapper
 - Nitroglycerin Patch Wrapper
 - Blister Packs of gum or pills
- Used Delivery Devices :
 - Nicotine Gum (used)
 - Nicotine Patch (used)
 - Nitroglycerin Patch (used)
- Above dispensing or delivery devices -not HW

Formaldehyde

- Formaldehyde is a U-listed waste (U122)
- If Formaldehyde is the sole active ingredient and unused, it meets the P-listing
- If used in a process or for preservation, it no longer meets the U-listing
- It would be hazardous only if it exhibits a characteristic
- Check with POTW if sewerage non-haz waste formaldehyde

Expiration dates for CCPs

- If a CCP is in its original container or packaging, unused, unexpired, meets product specifications it may qualify as exempt from Maine hazardous waste regulation.
- Try to maintain pharmaceutical inventories by expiration date, and return unneeded supplies to manufacturer, distributor or “reverse-distribution” agent prior to expiration dates.

Questions on Hazardous Waste?

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