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# **Examples of Hazardous Wastes** at Health Care Facilities

The health care industry in Hillsborough County has more than 5,000 health care providers and nearly two hundred pharmacies. Wastes generated by businesses in this industry have the potential to be hazardous, including waste medications, disinfectants, used personal protective equipment (PPE), and more. In accordance with state and federal rules, all businesses must evaluate the solid wastes that they generate to ensure the waste is nonhazardous before it can be discarded into the regular trash.

Wastes generated at health care facilities can present unique challenges when performing hazardous waste determinations. This document provides examples of hazardous wastes commonly generated in the health care industry and is intended to aid businesses when performing required hazardous waste determinations. This document is not intended to be a reference or substitute for applicable regulations. Although the lists are intended to be comprehensive, they may not include all hazardous wastes generated by your health care facility.

Wastes that are determined to be hazardous must be managed and disposed of in accordance with the applicable hazardous waste rules. Please note that the business owner is responsible for determining the quantity of hazardous waste generated each month, managing the hazardous waste while it is at the facility, and ensuring its proper disposal. Additionally, all health care facilities should be aware that the universal pharmaceutical waste (UPW) rules have been repealed.

Please contact the Small Quantity Generator (SQG) Program at (813) 627-2600 if you have any questions about this list or the applicable rules.

Potentially <b>P-Listed</b> <sup>1,2</sup> Hazardous Wastes in Health Care Facilities			
Waste Code	Chemical Name	Alternative Names	Use or Other
		/Brand Names	Notes
P001	Warfarin & salts (conc. > 0.3%)	Coumadin Dicumarol	Blood thinner
P008	4-Aminopyridine	Amprya	Potassium channel blocker
P012	Arsenic trioxide	Trisenox	Chemotherapy
P030	Nitroprusside	Nitropress Nipride Nitroprussic acid	Vasodilator
P065	Mercury fulminate (R,T)	·	Primary explosive
P075	Nicotine & salts	Habitrol Nicotrol Prostep Beta-pyridyl-alpha-N methylpyrrolidine Tetrahydronicotyrine	Smoking cessation aid
P092	Phenylmercury Acetate		Disinfectant
P105	Sodium Azide		Preservative
P108	Strychnine		Veterinary stimulant
P188	Physostigmine salicylate	Eserine salicylate	Glaucoma (ophthalmic solution) & Alzheimer's treatment
P204	Physostigmine  ute hazardous wastes due to their ext	Eserine	Glaucoma (ophthalmic solution) & Alzheimer's treatment

<sup>1</sup>P-listed wastes are acute hazardous wastes due to their extreme toxicity. Facilities that generate or accumulate more than 2.2-lb of acute hazardous wastes in a single month are large quantity generators of hazardous waste. (40 CFR 261.33)

<sup>2</sup>In order for a waste to meet the definition of a P-Listed waste, the material must be UNUSED. (40 CFR 261.33)

Potentially <b>U-Listed</b> <sup>1</sup> Hazardous Wastes in Health Care Facilities			
Waste Code	Chemical Name	Alternative Names	Use or Other
		/Brand Names	Notes
U010	Mitomycin C	Mitomycin	Chemotherapy
		Mutamycin	
U002	Acetone		Nail polish remover
U006	Acetyl chloride		Cholesterol testing
U015	Azaserine		Chemotherapy
			Antifungal
U034	Chloral Hydrate		Controlled Substance,
			Sedative

Pot	entially <b>U-Listed</b> ¹ Hazardous	Wastes in Health (	Care Facilities
U035	Chlorambucil	Leukeran	Chemotherapy
U039	p-chloro-m-cresol		Antiseptic
U044	Chloroform	Trichloromethane	Anesthetic
U058	Cyclophosphamide	CTX	Chemotherapy
		Cytoxan	
		Neosar	
		Procytox	
U059	Daunomycin	Daunorubicin	Chemotherapy
		Cerubidin	
		Rubomycin	
		Idarubicin/Idamycin	
U075	Dichlorodifluoromethane	Fluori-Methane	Topical anesthetic
U089	Diethylstilbesterol	DES	Chemotherapy
		Stilbestrol	
		Stilphostrol	
U115	Ethylene oxide		Sterilizing gas
U121	Trichloromonofluoromethane		Topical anesthetic
U122	Formaldehyde		Preservative
			*Waste formalin that
			has been <b>used</b> for
			tissue preservation
			does not meet the
			hazardous waste definition
U129	Lindane	G-Well shampoo	Lice and scabies
0129	Lindane	Kwell shampoo	treatment
U131	Hexachloroethane	Kweli shampoo	Deworming agent
U136	Bromoform		Sedative
U150	Melphalan	Alkeran	Chemotherapy
0130	Weiphalan	L-Pam	Chemotherapy
U151	Mercury	ETUIT	Dental amalgams
U155	Methylpyrilene	Methapyrilene	Antihistamine
U164	Methylthiouracil	cmapycm	Thyroid inhibitor
U177	Ethyl ether		,
U182	Paraldehyde	Paral	Controlled substance
0102	r di dideniyae	, arai	Sedative
U187	Phenacetin	Acetophenetidin	Analgesic (veterinary
			use)
U188	Phenol		Disinfectant
U196	Pyridine		Flea, lice, tick spray as
			sole active ingredient
U200	Reserpine		Antihypertensive
			Antiadrenergic
U201	Resorcinol	m-hydroxyphenol	Keratolytic agent
U205	Selenium Sulfide	Exsel shampoo	Antimitiotic
		Selsun	

Potentially <b>U-Listed</b> <sup>1</sup> Hazardous Wastes in Health Care Facilities			
U206	Streptozocin	Streptozotocin Zanosar	Chemotherapy
U216	Thallium 210	Thallium chloride	Radionuclide used in stress tests
U237	Uracil mustard	Uramustine	Chemotherapy
U244	Thiram		Antiseptic
U248	Warfarin & salts (conc. ≤ 0.3%)	Coumadin Dicumadin	Blood thinner
U328	Toluidine Blue	o-toluidine	Stain
<sup>1</sup> In order for a waste to meet the definition of a U-Listed waste, the material must be UNUSED. ( <u>40 CFR 261.33</u> )			

Potential <b>F-Listed</b> <sup>1</sup> Hazardous Wastes in Health Care Facilities			
Waste Code	Chemical Name	Alternative Names	Use or Other
		/Brand Name	Notes
F003	Xylene	Xylol	Used in histology slide
		Dimethylbenzene	processing
F003	Acetone	Propanone	Laboratory use
F003	Methanol	Methyl alcohol	Gram Stains, Urology
F005	Toluene	Toluol	Used in histology slide
		ant mintures/blands Cos 40 CFF	processing

<sup>1</sup>These F-listings apply to spent solvents and certain spent solvent mixtures/blends. See <u>40 CFR 261.31</u> for more information and the complete list of hazardous wastes from non-specific sources (F-list).

Potential <b>D-Code</b> <sup>1</sup> Hazardous Wastes in Health Care Facilities				
Waste	Criteria	Potential	Notes	
Code/Characteristic		Examples		
D001/	- A liquid, other than	Acetic Acid	These are just a few	
Ignitable	an aqueous solution	Actinomycin D solution	examples and not a	
	containing < 24%	in methanol	comprehensive list.	
	alcohol by volume,	Benzoin (w/alcohol		
	with a flash point less	carrier)		
	than 140°F <b>OR</b>	Alprostadil (w/alcohol		
	- A non-liquid capable	carrier)		
	of causing fire through	Amyl nitrite (oxidizer)		
	friction, absorption of	Carmustine		
	moisture, or	Clindamycin		
	spontaneous chemical	Compound W		
	changes and, when	Drysol (w/alcohol		
	ignited burns so	carrier)		
	vigorously and	Erythromycin topical		
	persistently that it	gel		
	creates a hazardous	Etoposide		
	OR	Eugenol		

Potential <b>D</b>	-Code¹ Hazardous ¹	Wastes in Health Car	e Facilities
D002/	- An ignitable compressed gas  A liquid with a pH ≤ 2	Flexible Collodion Gentian Violet HurriCaine spray Nyquil (>24% alcohol) Pacitaxel Pentobarbital Tretinoin Oxygen gas Compounding	
Corrosive	or ≥ 12.5 OR A liquid that corrodes steel	chemicals Salicylic Acid Tresaderm (veterinary antibiotic)	
D003/ Reactive	A waste that is normally unstable and readily undergoes violent change without detonating OR A waste that reacts violently with water OR A waste that forms potentially explosive mixtures with water OR A waste that is cyanide or sulfide bearing and can generate toxic gases, vapors, or fumes.		No current examples available.  Most formulations of medicinal nitroglycerin do not meet the definition of "reactive" and are therefore not considered hazardous wastes.
D004/Toxic	Arsenic ≥ 5.0 mg/l	Arsenic trioxide (P012) Carbarsone Glycobiarosol Thiacetarsamide	Chemotherapy Antiprotozoal Agent Antiprotozoal Agent Chemotherapy
D005/Toxic	Barium ≥ 100 mg/l	Barium hydroxide Barium sulfate suspension Barium sulfide Barium chloride	Some barium contrasts are used in radiology
D006/Toxic	Cadmium ≥ 1.0		Unknown use medicinally
D007/Toxic	Chromium ≥ 5.0 mg/l	M.T.E. (4, M.D.) M.T.E. (5, M.D.) Phophocol P32 Injection Catgut sutures	

Potential <b>D</b>	-Code¹ Hazardous	Wastes in Health Car	e Facilities
		Chromium Trioxide	
D008/Toxic	Lead ≥ 5.0 mg/l	Lead shielding Thallium 210 contaminate Batteries	
D009/Toxic	Mercury ≥ 0.2 mg/l	Thimerosal Tetanus Toxoid Meningococcus vaccine Flu vaccines (Fluzone, Fluvirin, FluLavel, Afluria) Phenylmercuric acetate Phenylmercuric nitrate Mercuric chloride B-5 fixative Chloromerodrin Crotalidae (Antivenin) Dental amalgam Hematin Merbromin Merthiolate	Mercury is often used as a preservative in vaccines, ophthalmic drops, and nasal sprays. Mercury compounds can also be found in many laboratory reagents.
D010/Toxic	Selenium ≥ 1.0 mg/l	Selsun Exsel M.T.E. (4, M.D.) M.T.E. (5, M.D.)	Dandruff shampoos and mineral supplements can contain selenium.
D011/Toxic	Silver ≥ 5.0 mg/l	Argyrol S.S. Arzol silver nitrate Photographic (fixer) waste Silvadene Silver Sulfadiazine Silver nitrate applicator sticks	Mainly used in wound care.
D013/Toxic	Lindane ≥ 0.4 mg/l	G-Well Shampoo Kwell Shampoo	Lice and scabies treatment.
D022/Toxic	Chloroform ≥ 6.0 mg/l	Chloroform	Not often used medicinally, potential lab use.
D024/Toxic  1Wastes with D codes are define	m-Cresol ≥ 200 mg/l	Human insulin (Aspart, Glargine, Isophane, Detemir, Novolog, Novolin, Lantus, Humalog QuickPen)	Preservative in some insulin.