

SOP BIO-001 LAB GLASSWARE USE AND DISPOSAL

SCOPE

The procedures described in this policy refer to the disposal of lab glassware, used and empty glass and broken glass that is produced during work in the laboratory.

This policy **does not apply** to any glassware that has been previously contaminated with:

1. Biohazardous Materials;
2. Acutely Hazardous Substances according to the Code of Mass Regulations 310.30, and Policies of UMass Lowell EHS Department.
 - a. **Acutely Hazardous Substances** are “**P-List**” and “**U-List**” chemicals (listed at the end of this procedure) and Code **F027** substances (chlorophenol and tri-, tetra-, and penta- derivatives). The glass contaminated with those chemicals should be disposed of as Hazardous Waste Materials.

DEFINITIONS

Lab glassware is any item that could puncture regular trash bags and potentially cause injuries to someone handling the trash bag. It also means any intact glassware that could potentially break during waste handling activities.

The following items are considered Lab Glassware under this policy:

- Glass pipettes used or broken
- Glass Pasteur pipettes
- Empty glass bottles
- Flasks and beakers
- Vials and test tubes
- Empty broken glassware

Glassware



Glass vials



Glass containers



DISPOSAL

All glassware and/or broken glass must be disposed in cardboard boxes lined with a clear plastic bag similar to those in the pictures below:

- The boxes should be used until $\frac{3}{4}$ full;
- Use tongs or a brush and dustpan to handle broken glass;
- Call EHS at 978-934-2618 for full container pick up or request new supplies.



IMPORTANT: Never dispose of the following items in these boxes:

- Any glassware used previously with **biohazardous or infectious materials** of any kind;
- Glassware (bottles, pipettes, etc.) used previously with **Acutely Hazardous Substances**;
- Liquid waste (any amount);
- Sharps (needles, syringes, blades, lancets, scalpels);
- Plastic petri dishes or culture plates;
- Plastic vials and conical tubes;
- Regular Trash.

For any questions on glass disposal and/or biosafety issues, "P-List", "U-List" or Code F027 chemicals, contact EHS at biosafety@uml.edu or 978-934-2618.

ADDENDUM TO POLICY AND PROCEDURES FOR GLASS DISPOSAL

LIST OF ACUTELY HAZARDOUS SUBSTANCE OR “P-LIST” CHEMICALS

The following list of Acutely Hazardous Substances is known as “P-List” chemicals (listed in the Chemical Hygiene Plan pages 31-45). Any glass or material contaminated with any of the following chemical substances should be disposed as Hazardous Waste Materials.

DO NOT dispose glass contaminated with any of these “P-List” substances in the regular glass disposal cardboard box.

The current list of “P-List” Hazardous Substances may be found on the EPA Website¹. The current regulations for Hazardous Waste in Massachusetts may be found on the Energy and Environmental Affairs Website².

P### Chemical Name

P026	1-(o-Chlorophenyl)thiourea
P081	1,2,3-Propanetriol, trinitrate (R)
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P067	1,2-Propylenimine
P185	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O- [(methylamino)- carbonyl]oxime
P004	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha, 4abeta,5alpha,8alpha,8abeta)
P060	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha, 4abeta,5beta,8beta,8abeta)-
P002	1-Acetyl-2-thiourea
P048	2,4-Dinitrophenol
P051	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9 -hexachloro- 1a,2,2a,3,6,6a,7,7a octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7 beta, 7aalpha)-, & metabolites
P037	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9- hexachloro- 1a,2,2a,3,6,6a,7,7a octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7 beta, 7aalpha)-
P045	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[methylamino]carbonyl] oxime
P034	2-Cyclohexyl-4,6-dinitrophenol
P001	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1- phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P069	2-Methylactonitrile
P017	2-Propanone, 1-bromo-

¹ <http://www.epa.gov/osw/hazard/wastetypes/listed.htm>

² <http://www.mass.gov/eea/agencies/massdep/recycle/regulations/310-cmr-30-000.html>.

P005 2-Propen-1-ol
 P003 2-Propenal
 P102 2-Propyn-1-ol
 P007 3(2H)-Isoxazolone, 5-(aminomethyl)-
 P027 3-Chloropropionitrile
 P047 4,6-Dinitro-o-cresol, & salts
 P059 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro-
 P008 4-Aminopyridine
 P008 4-Pyridinamine
 P007 5-(Aminomethyl)-3-isoxazolol
 P050 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10- hexachloro-1,5,5a,6,9,9a-
 hexahydro-, 3-oxide
 P127 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate
 P088 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
 P023 Acetaldehyde, chloro-
 P057 Acetamide, 2-fluoro-
 P002 Acetamide, N-(aminothioxomethyl)-
 P058 Acetic acid, fluoro-, sodium salt
 P003 Acrolein
 P070 Aldicarb
 P203 Aldicarb sulfone
 P004 Aldrin
 P005 Allyl alcohol
 P046 alpha,alpha-Dimethylphenethylamine
 P072 alpha-Naphthylthiourea
 P006 Aluminum phosphide (R,T)
 P009 Ammonium picrate (R)
 P119 Ammonium vanadate
 P099 Argentate(1-), bis(cyano-C)-, potassium
 P010 Arsenic acid H₃AsO₄
 P012 Arsenic oxide As₂O₃
 P011 Arsenic oxide As₂O₅
 P011 Arsenic pentoxide
 P012 Arsenic trioxide
 P038 Arsine, diethyl-
 P036 Arsonous dichloride, phenyl-
 P054 Aziridine
 P067 Aziridine, 2-methyl-
 P013 Barium cyanide
 P024 Benzenamine, 4-chloro-
 P077 Benzenamine, 4-nitro-
 P028 Benzene, (chloromethyl)-
 P046 Benzeneethanamine, alpha,alpha-dimethyl-
 P014 Benzenethiol

P188 Benzoic acid, 2-hydroxy-, compd with (3aS-cis)- 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b]indol-5-yl methylcarbamate ester (1:1)
 P028 Benzyl chloride
 P015 Beryllium powder
 P017 Bromoacetone
 P018 Brucine
 P021 Calcium cyanide $\text{Ca}(\text{CN})_2$
 P189 Carbamic acid, [(dibutylamino)- thio]methyl-, 2,3-dihydro-2,2-dimethyl- 7-benzofuranyl ester
 P191 Carbamic acid, dimethyl-, 1-[(dimethyl-amino) carbonyl]- 5-methyl-1H- pyrazol-3-yl ester
 P192 Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)- 1H-pyrazol-5-yl ester
 P190 Carbamic acid, methyl-, 3-methylphenyl ester
 P127 Carbofuran
 P022 Carbon disulfide
 P095 Carbonic dichloride
 P189 Carbosulfan
 P023 Chloroacetaldehyde
 P029 Copper cyanide
 P029 Copper cyanide $\text{Cu}(\text{CN})$
 P030 Cyanides (soluble cyanide salts), not otherwise specified
 P031 Cyanogen
 P033 Cyanogen chloride
 P033 Cyanogen chloride $(\text{CN})\text{Cl}$
 P016 Dichloromethyl ether
 P036 Dichlorophenylarsine
 P037 Dieldrin
 P038 Diethylarsine
 P041 Diethyl-p-nitrophenyl phosphate
 P043 Diisopropylfluorophosphate (DFP)
 P044 Dimethoate
 P191 Dimetilan
 P020 Dinoseb
 P085 Diphosphoramidate, octamethyl-
 P111 Diphosphoric acid, tetraethyl ester
 P039 Disulfoton
 P049 Dithiobiuret
 P050 Endosulfan
 P088 Endothall
 P051 Endrin
 P051 Endrin & metabolites
 P042 Epinephrine
 P031 Ethanedinitrile
 P194 Ethanimidothioc acid, 2-(dimethylamino)-N- [[[methylamino)carbonyl]oxy]-2-oxo-, methyl ester

P066 Ethanimidithioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester
 P101 Ethyl cyanide
 P054 Ethyleneimine
 P097 Famphur
 P056 Fluorine
 P057 Fluoroacetamide
 P058 Fluoroacetic acid, sodium salt
 P198 Formetanate hydrochloride
 P197 Formparanate
 P065 Fulminic acid, mercury(2+) salt (R,T)
 P059 Heptachlor
 P062 Hexaethyl tetraphosphate
 P068 Hydrazine, methyl-
 P116 Hydrazinecarbothioamide
 P063 Hydrocyanic acid
 P063 Hydrogen cyanide
 P096 Hydrogen phosphide
 P060 Isodrin
 P192 Isolan
 P196 Manganese dimethyldithiocarbamate
 P196 Manganese, bis(dimethylcarbamodithioato-S,S')-,
 P202 m-Cumenyl methylcarbamate
 P065 Mercury fulminate (R,T)
 P092 Mercury, (acetato-O)phenyl-
 P082 Methanamine, N-methyl-N-nitroso-
 P064 Methane, isocyanato-
 P016 Methane, oxybis[chloro-
 P112 Methane, tetranitro- (R)
 P118 Methanethiol, trichloro-
 P198 Methanimidamide, N,N-dimethyl-N'-[2-methyl-4- [[[(methylamino) carbonyl]oxy]phenyl]-
 P199 Methiocarb
 P066 Methomyl
 P068 Methyl hydrazine
 P064 Methyl isocyanate
 P071 Methyl parathion
 P190 Metolcarb
 P128 Mexacarbate
 P073 Nickel carbonyl
 P073 Nickel carbonyl Ni (CO)₄, (T-4)-
 P074 Nickel cyanide
 P074 Nickel cynaide Ni(CN)₂
 P075 Nicotine & salts
 P076 Nitric oxide
 P078 Nitrogen dioxide

P076 Nitrogen oxide NO
 P078 Nitrogen oxide NO₂
 P081 Nitroglycerine (R)
 P082 N-Nitrosodimethylamine
 P084 N-Nitrosomethylvinylamine
 P040 O,O-Diethyl O-pyrazinyl phosphorothioate
 P085 Octamethylpyrophosphoramidate
 P087 Osmium oxide OsO₄, (T-4)-
 P087 Osmium tetroxide
 P194 Oxamyl
 P089 Parathion
 P024 p-Chloroaniline
 P199 Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
 P020 Phenol, 2-(1-methylpropyl)-4,6-dinitro-
 P009 Phenol, 2,4,6-trinitro-, ammonium salt (R)
 P048 Phenol, 2,4-dinitro-
 P034 Phenol, 2-cyclohexyl-4,6-dinitro-
 P047 Phenol, 2-methyl-4,6-dinitro-, & salts
 P202 Phenol, 3-(1-methylethyl)-, methyl carbamate
 P201 Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate
 P128 Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
 P092 Phenylmercury acetate
 P093 Phenylthiourea
 P094 Phorate
 P095 Phosgene
 P096 Phosphine
 P041 Phosphoric acid, diethyl 4-nitrophenyl ester
 P094 Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
 P039 Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
 P044 Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
 P043 Phosphorofluoridic acid, bis(1-methylethyl) ester
 P071 Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
 P089 Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
 P040 Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester 3
 P097 Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester
 P204 Physostigmine
 P188 Physostigmine salicylate
 P110 Plumbane, tetraethyl-
 P077 p-Nitroaniline
 P098 Potassium cyanide
 P098 Potassium cyanide K(CN)
 P099 Potassium silver cyanide
 P201 Promecarb
 P203 Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime

P070 Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
 P101 Propanenitrile
 P069 Propanenitrile, 2-hydroxy-2-methyl-
 P027 Propanenitrile, 3-chloro-
 P102 Propargyl alcohol
 P075 Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts
 P204 Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro- 1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-
 P114 Selenious acid, dithallium(1+) salt
 P103 Selenourea
 P104 Silver cyanide
 P104 Silver cyanide Ag(CN)
 P105 Sodium azide
 P106 Sodium cyanide
 P106 Sodium cyanide Na(CN)
 P108 Strychnidin-10-one & salts
 P018 Strychnidin-10-one, 2,3-dimethoxy-
 P108 Strychnine & salts
 P115 Sulfuric acid, dithallium(1+) salt
 P110 Tetraethyl lead
 P111 Tetraethyl pyrophosphate
 P109 Tetraethyldithiopyrophosphate
 P112 Tetranitromethane (R)
 P062 Tetrphosphoric acid, hexaethyl ester
 P113 Thallic oxide
 P113 Thallium oxide Tl_2O_3
 P114 Thallium(I) selenite
 P115 Thallium(I) sulfate
 P109 Thiodiphosphoric acid, tetraethyl ester
 P045 Thiofanox
 P049 Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$
 P014 Thiophenol
 P116 Thiosemicarbazide
 P026 Thiourea, (2-chlorophenyl)-
 P072 Thiourea, 1-naphthalenyl-
 P093 Thiourea, phenyl-
 P185 Tirpate
 P123 Toxaphene
 P118 Trichloromethanethiol
 P119 Vanadic acid, ammonium salt
 P120 Vanadium oxide V_2O_5
 P120 Vanadium pentoxide
 P084 Vinylamine, N-methyl-N-nitroso-
 P001 Warfarin, & salts, when present at concentrations greater than 0.3%

P121 Zinc cyanide
P121 Zinc cyanide $\text{Zn}(\text{CN})_2$
P122 Zinc phosphide Zn_3P_2 , when present at concentrations greater than 10% (R,T)
P205 Zinc, bis(dimethylcarbamodithioato-S,S')-,
P205 Ziram

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