

LOW-LEVEL RADIOACTIVE WASTE (LLRW) MANIFEST

Radioactive material, low specific activity (LSA-II), 7, UN3321
University of Michigan, Environment, Health & Safety (EHS)

North Campus Transfer Facility, 1655 Dean Road, Ann Arbor, MI 48109-2159, (734)763-4568

MANIFEST #
R 12345

[SD = 7.5 gal., LD = 28 gal.]

SOLIDS (Attach Container Label to decal on the side of the drum)

**S
E
C
A**

RQ	# on Drum	Size gallon (Circle)	Isotope	Activity		Isotope	Activity		Isotope	Activity	
				(kBq)	(uCi)		(kBq)	(uCi)		(kBq)	(uCi)
		7.5 28			()			()			()
		7.5 28			()			()			()
		7.5 28			()			()			()

LIQUIDS (Place label around handle)

**S
E
C
B**

RQ	Jug #	Vol (L)	Isotope	Activity		Isotope	Activity		If chemical(s) present enter number code from back & concentration									
				(kBq)	(uCi)		(kBq)	(uCi)	Code	% by vol	Code	% by vol	Code	% by vol	Code	% by vol		
	1				()													
	2				()													
	3				()													
	4				()													
	5				()													
	6				()													
	7				()													
	8				()													

SCINTILLATION VIALS (Indicate on the box whether the vials are plastic or glass)

**S
E
C
C**

RQ	Box #	Isotope	Activity		Isotope	Activity		Isotope	Activity		Plastic or Glass	Identify Scintillation Cocktail
			(kBq)	(uCi)		(kBq)	(uCi)		(kBq)	(uCi)		
	1			()			()			()	P G	
	2			()			()			()	P G	
	3			()			()			()	P G	
	4			()			()			()	P G	
	5			()			()			()	P G	

**S
E
C
D**

RQ	Pkg. #	Sharps (✓)	Stock Vials (✓)	Other	Isotope	Activity		Isotope	Activity		Isotope	Activity		PIGS (✓)	
						(kBq)	(uCi)		(kBq)	(uCi)		(kBq)	(uCi)	LEAD	BARIUM
	1						()			()					
	2						()			()					
	3						()			()					
	4						()			()					

Retain photocopy for your files

PLEASE PRINT

Authorized User: _____ Phone: _____
 Room#/Building: _____ Date(mo/day/yr): _____
 Completed By: _____ *Signature: _____

*Signature indicates that each container has been swiped for external contamination (staple a copy of survey results to manifest).

IN CASE OF EMERGENCY CONTACT
PUBLIC SAFETY (24 HOURS) AT (734) 763-1131

DOC	mR/hr	Initials
EHS Use Only		

LSA-II
Exclusive Use Shipment

INSTRUCTIONS TO IDENTIFY CHEMICALS IN LIQUIDS

- 1 If chemical is listed below, please enter corresponding number code and approximate chemical concentration in % by volum in section B on the front side of the manifest.
- 2 If chemical constituents are not listed below, Please enter number code 99 and approximate concentration in % by volume in section B on the front side of the manifest, and list chemical name(s) and concentration(s) in Section E below.

- | | | | |
|---|---|--|--|
| 00 - Aqueous
(water based with no
added chemicals)
01 - acetamide
02 - acetic acid
100- acetic anhydride
03 - acetone
04 - acetonitrile
05 - acrylamide
06 - aflatoxin
07 - ammonium compounds:
(specify below)
08 - arsenic compounds:
(specify below)
09 - barium compounds:
(specify below)
10 - benzene
11 - benzo(a)pyrene
95 - blood
88 - boric acid
101- bovine albumin
102- bromophenol blue dye
12 - butanol
13 - cadmium compounds:
(specify below)
103- calcium chloride
104- calcium sulfate
14 - carbon tetrachloride
15 - chloroamines
16 - chlorobenzene
17 - chloroform
18 - chlorophenol
105- choline chloride
19 - chromium compounds:
106- citric acid
107- coomassie blue dye
20 - copper compounds:
96 - culture medium | 21 - cyanide compounds:
(specify below)
22 - cyclohexane
23 - DDD/DDT
108- dextran sulfate
24 - dichlorobenzene
109- DMEM media
25 - dimethylsulfoxide (DMSO)
32 - ethylene diamine
(EDTA)
33 - ethylene glycol-bis(B-amino
ethyl ether)-tetraacetic acid
(EGTA)
26 - epinephrine
29 - ethidium bromide (EtBr)
27 - ethanol
28 - ether
30 - ethyl acetate
34 - ethyl ether
31 - ethylbenzene
35 - ethylphenol
36 - formaldehyde
37 - formalin
38 - formamide
39 - formic acid
40 - glutaraldehyde
110- glycine
111- hams F12 media
112- HEPES buffer
41 - heptane
113- hexane
42 - HPLC Gels
43 - hydrochloric acid (HCl)
44 - hydroxybenzene
114- isoamyl alcohol
45 - isobutane
46 - isobutanol
47 - isopropanol | 48 - lead compounds:
(specify below)
115- magnesium chloride
97 - magnesium phosphate
116- magnesium sulfate
49 - mercaptoethanol
50 - mercury compounds:
(specify below)
51 - methanol
117- methoxyethanol
52 - methyl benzene
53 - methyl bromide
55 - methyl ethyl ketone
56 - methyl iodide
57 - methyl phenol
54 - methylene chloride
58 - naphthalene
59 - nitric acid
60 - nitrobenzene
61 - osmium compounds:
(specify below)
118- perchloric acid
62 - perflour
63 - phenol
64 - phosphoric acid
65 - phthalates
91 - potassium chloride
66 - potassium permanganate
119- potassium phosphate
67 - propanoic acid
68 - pyridine
94 - saline sodium citrate (SSC)
69 - scintillation fluid:
(specify below)
70 - selenium compounds:
(specify below)
71 - silver compounds:
(specify below) | 120- sodium acetate
72 - sodium azide
121- sodium bicarbonate
122- sodium carbonate
89 - sodium chloride
90 - sodium citrate
93 - sodium docecyl sulfate
(SDS)
73 - sodium hydroxide
74 - sodium hypochlorite
123- sodium iodide
124- sodium lauryl sulfate
(SLS)
92 - sodium phosphate
125- sodium phosphate
126- sucrose
75 - sulfuric acid
127- taurine
79 - trichloroacetic acid
(TCA)
76 - tetrachlorobenzene
77 - tetrachloroethene
128- tetrahydrofuran
78 - toluene
80 - trichloroethylene
129- trifluoroacetic acid
87 - TRIS buffer
81 - uranyl acetate
82 - uranyl nitrate
83 - urea
84 - vinyl chloride
85 - xylene
130- xylene cyanol
86 - zinc compounds:
(specify below)
99 - OTHER:
(SEE INSTRUCTIONS
ABOVE) |
|---|---|--|--|

S
E
C
D

Jug #	CODE 99 CHEMICAL NAMES(S), % BY VOL.
1	
2	
3	
4	
5	
6	
7	
8	