Laboratory Registration and Select Agent Transfer Tracking System

The attached table lists mouse LD_{50} values for mice dosed by the intraperitoneal route for many of the select agent toxins listed in Appendix A of 42 CFR 72.6 and should only be used as a guide. To obtain LD_{50} values for your specific toxin of interest you should consult the Registry of Toxic Effects of Chemical Substances (R-TECS) (produced by the National Institute for Occupational Safety and Health), 1996 or later version, or the supplier of the toxin.

For more information concerning RTECS we suggest you contact:

Registry of Toxic Effects of Chemical Substances (RTECS)
National Institute for Occupational Safety and Health
4676 Columbia Parkway
Cincinnati, OH 45226
Fax: (513) 533-8573
http://www.cdc.gov/niosh/rtecs.html

Refer to 42 CFR 72.6 and Federal Register Notice “Site Registration Fee Schedule and Related Matters for Facilities Transferring or Receiving Select Agents” for further information on requirements of and exemptions from the regulation.

42 CFR 72.6 - Select Agent Toxins - LD_{50} for Mice*

Toxin	R-TECS number	Species (if other than mouse)	Route (if other than IP)	LD_{50} (as given in R-TECS)	LD50 - nanograms/kg	Comments
Abrin	AA5250000			20 microgm/kg	20,000	
Abrin reconstituted (A+B mix)	AA5250030			6 microgm/kg	6,000	
Abrin A	AA5250100			10 microgm/kg	10,000	
Abrin B	AA5250200			25 microgm/kg	25,000	
Abrin C	AA5250300			16 microgm/kg	16,000	
Abrin D	AA5250400			31 microgm/kg	31,000	
Aflatoxin	AW5950000	monkey monkey	oral intramusc	1750 microgm/kg 2020 microgm/kg	1,750,000 2,020,000	
Aflatoxin 495	AW5980000					no acute tox data
Aflatoxin B Aflatoxin B1	GY1925000			9500 microgm/kg	9,500,000	
Aflatoxin B1 mixed w/ G1	AW6825000			LDLo 68 microgm/kg	680,000	
Aflatoxin B1 dichlorides, oxides, epoxides	GY1700000 GY8424000					no acute tox data
Aflatoxin B2 dihydro B1	GY1722000	duck	oral	1700 microgm/kg	1,700,000	
Aflatoxin G1	LV1720000	rat duck	IP oral	14900 microgm/kg 785 microgm/kg	14,900,000 785,000	
Aflatoxin G2 dihydro G1	LV1700000	duck	oral	2450 microgm/kg	2,450,000	
Aflatoxin M1 4-hydroxy B1	GY1880000	duck	unreported	320 microgm/kg	320,000	
Aflatoxin M2 4-hydroxy B2	GY1720000	duck	unreported	281 microgm/kg	281,000	
Aflatoxin P1	GY1775000			LDLo 150 mg/kg	150,000,000	

Aflatoxin Q1	GY1800000					no acute tox data
Aflatoxin Ro Aflatoxin Ro'	GY1934000 GY1945000					no acute tox data
Clostridium botulinum ("natural product")	XW5812500		subcut	30 picogm/kg	0.03	
C. Botulinum neurotoxin	QQ4497200			200 picogm/kg	0.2	
C. Botulinum toxin A	ED9300000				MLD 1,2	(Gill)
C. Botulinum toxin B	ED9250000				1.2--2.0	(Gill)
C. Botulinum toxin C1	ED9270000		IV		1.1	(Gill)
C. Botulinum toxin C2					1.2	(Gill)
C. Botulinum toxin D	ED9270000				0.4	(Gill)
C. Botulinum toxin E	QQ4497200				1.1	(Gill)
C. Botulinum toxin F	QQ4497200		IV		2.5	(Gill)
Clostridium perfringens					MLD 100	(Gill)
Conotoxins - , , , GI, GIIIA, GIIIB. GIVA MI, MVIIA, MVIIB, SIA, SVIB	GL1500000 YX3968000 GL2660000 YX3968100 YX3968100 YX3968200			12 microgm/kg- 30 microgm/kg	12,000-30,000	
Diacetoxyscirpenol	YD0112000			7839 microgm/kg	7,839,000	
Ricin\Ricine	VJ2625000			2 microgm/kg	2,000	
Ricin A	VJ2702000			5 microgm/kg	5,000	
Ricin A chain	VJ2702500					no acute tox data
Ricin B	VJ2704000			35 microgm/kg	35,000	
Ricin C	VJ2706000			17500 nanogm/kg	17,500	
Ricin D	VJ3677000				6,200	(Ishiguro et al.)[3]

Ricin D alanine-chain protein	VJ2720000	mouse	unreported	LDLo300 microgm/kg	300,000	
Ricin D isoleucine-chain reduced	VJ2740000	mouse	unreported	LDLo 29 microgm/kg	29,000	
Ricin nitrogen	VJ2945000	rabbit	inhalation	LC50 = 500 microgm/m3/10M		
Ricin, reduced	VJ2670000			200 microgm/kg	200,000	
Ricin, total hydrolysate	VJ2700000			4100 nanogm/kg	4,100	
Ricin toxin -Con A	GK6890000			41500 microgm/kg	41,500,000	
Saxitoxin Saxitoxin hydrate	UY8708500			8 microgm/kg	8,000	
Saxitoxin dihydrochloride hydrochloride	UY8708600			8 microgm/kg	8,000	
Saxitoxin p-bromobenzenesulfonate	DB5044850			10 microgram/kg	10,000	
Shiga toxin	XW5883000			250 nanogm/kg	250	
Shigella shiga neurotoxin	QQ4499200			1350 nanogm/kg	1350	
Staphylococcus enterotoxin	KA8082500			LDLo 1333 microgm/kg	1,333,000	
Staphylococcus enterotoxin A	KA7500000	human				data being verified
Staphylococcal enterotoxin B	XW580770	monkey	IV	LDLo 25 microgm/kg	25,000	
Staphyloccus enterotoxin F	KA8083000	rabbit rabbit	subcut IV	2 microgm/kg 10 microgm/kg	2,000 20,000	
T-2 toxin	YD0100000			3 milligm/kg	3,000,000	
T-2 toxin tetraol	YC9980000			11 milligm/kg	11,000,000	
T-2 hemisuccinate	YD0102000			7500 microgm/kg	7,500,000	
Tetrodotoxin	IO1450000			8 microgm/kg	8,000	

Tetrodotoxin citrate, 2 hydroxy ..	XF8884500	rat	IV	8 nanogm/kg	8	data being verified
Tetrodotoxin 4,9-anhydro...	XF8882000		oral IV	16900 microgm/kg 986 microgm/kg	16,900,000 986,000	
Tetrodotoxin 4,9 anhydro,8,8-diacetate	XF8883000			>50 milligm'kg	>50,000,000	
Tetrodotoxin 4-amino-4-deoxy	XF8881000		oral IV	26100 microgm/kg 477 microgm/kg	26,100,000 477,000	
Deoxytetrodotoxin	XF8885000		oral IV	2700 microgm/kg 41700 nanogm/kg	2,700,000 41,700,000	
Methoxytetrodotoxin	XF8887000		oral IV	12700 microgm/kg 322 microgm/kg	12,700,000 322,000	
Ethoxytetrodotoxin	XF8886000			692 microgm/kg	692,000	

* All LD_{50} values from R-TECS unless otherwise noted.
[2] Gill = Gill, DM. Bacterial toxins: a Table of Lethal Amounts. Microbiological Reviews 1982; 46:86-94.
[3] Ishiguro et al. Toxicon 1976; 14:157-165.