

HAZARDOUS TOXICANTS AND TOXINS REQUIRING IBC PROTOCOL REGISTRATION

INSTRUCTIONS: When registering a hazardous biological or chemical agent, the IBC Protocol Registration Application form (http://www.ttuhs.edu/admin/safety/lab/e_regform_2-08.doc) must be completed first. For any chemical toxicant or biotoxin found on this list, **Addendum B** of the IBC Registration must also be completed and submitted for review. Please see the following link for **Addendum B** (http://www.ttuhs.edu/Admin/safety/lab/e_regform_7-04_B.doc).

DEFINITION: The hazardous toxicants and toxins which require an approved IBC protocol are now defined as any chemical or toxin which is a: highly toxic, hazardous chemical = LD50 (oral/rat) of ≤ 50 mg/kg. Some of these chemical agents are listed in the chart below. Note that this is not an all-inclusive list.

NOTE: Investigational quantities of most standard lab chemicals will now be exempt from IBC protocol registration, as described above. However, a complete inventory list of lab chemicals must be submitted to the IBC before any chemical use will be approved. There are no forms to fill out. The inventory can be submitted online through EH&S at <http://www.ttuhs.edu/admin/safety/chemlist> (contact Laboratory Safety in Lubbock for details) or in an Excel file. Entries in the Excel file should be sorted alphabetically and include quantities and CAS numbers if available. The file should be named as follows and submitted electronically with the rest of the application:

LastName_FirstName_Chemicals_Year

Hard copies of this inventory may be kept in the lab for documentation and use, but should not be submitted as part of this registration.

NOTE: If you are registering for the first time, you should submit a *proposed* chemical inventory for the year.

IBC PROTOCOL REGISTRATION REQUIRED:	CAS Number	Hazard Classification	Specific Hazard Type
2,3,7,8 tetrachlorodibenzo-p-dioxin (TCDD-dioxin) (0.05 mg/kg LD50)	1746-01-6	IARC1, NTP	carcinogen
3-acetylpyridine (46 uL/kg LD50)	350-03-8	"3"HEALTH	toxic
4-aminopyridine (21 mg/kg LD50)	504-24-5	"4"HEALTH	toxicant
abrin	1393-62-0	SELECT AGENT, "4"HEALTH	toxin
acrolein (44 mg/kg LD50)	107-02-8	"4" HEALTH	toxicant
aconitine (1mg/kg LD50)	302-27-2	"4"HEALTH	toxicant
actinomycin D (7.2 mg/kg LD50)	50-76-0	"4"HEALTH	carcinogen
alpha-bungarotoxin (150 ug/kg LD50 Intraperitoneal)	11032-79-4	Not Published	toxic

aminopterin (3 mg/kg LD50)	54-62-6	"4"HEALTH	toxicant
antimycin A (28 mg/kg LD50)	1397-94-0	"3"HEALTH	toxic
arterenol free base (20 mg/kg LD50)	51-41-2	"4"HEALTH	toxicant
BCNU (20 mg/kg LD50)	153-93-8	"4"HEALTH	toxicant
butyl methyl ether (TBME) (4 mg/kg LD50)	1634-04-04	"4"HEALTH	toxicant
carbamylocholine chloride (carbachol) (40 mg/kg LD50)	51-83-2	"3"HEALTH	toxic
carbon fuchsin (36 mg/kg LD50)	4197-24-4	"4"HEALTH	toxicant
Clostridium botulinum neurotoxin A	93384-43-1	SELECT AGENT, "4"HEALTH	toxin
Clostridium botulinum neurotoxin B	93384-44-2	SELECT AGENT, "4"HEALTH	toxin
Clostridium botulinum neurotoxin C	93384-45-3	SELECT AGENT, "4"HEALTH	toxin
Clostridium botulinum neurotoxin D	93384-46-4	SELECT AGENT, "4"HEALTH	toxin
Clostridium botulinum neurotoxin E	93384-47-5	SELECT AGENT, "4"HEALTH	toxin
Clostridium botulinum neurotoxin F	107231-15-2	SELECT AGENT, "4"HEALTH	toxin
Clostridium botulinum neurotoxin G	107231-16-3	SELECT AGENT, "4"HEALTH	toxin
Clostridium perfringens epsilon toxin	no CAS	SELECT AGENT, "4"HEALTH	toxin
cyanogen bromide (25-50 mg/kg l)	506-68-3	"4"HEALTH	poison, toxic
cycloheximide (2 mg/kg LD50)	66-81-9	"4"HEALTH	toxicant
cyclopiazonic acid (36 mg/kg LD50)	18172-33-3	"4"HEALTH	toxicant
cytochalasin B (11 mg/kg LD50)	14930-96-2	"4"HEALTH	toxicant
diacetoxyscirpenol (7mg/kg LD50)	2770-40-8	SELECT AGENT, "4"HEALTH	toxin
diisopropyl fluorophosphate (5mg/kg LD50)	55-91-4	"4"HEALTH	toxicant
heptachlor (40mg/kg LD50)	76-44-8	"4"HEALTH, IARC2B	carcinogen
hydrogen cyanide (10 mg/kg LD50)	74-90-8	"4"HEALTH, "4"FLAMMABILITY, CDC CHEM AGENT	toxicant, toxic gas, fire hazard
melphalan (11.2 mg/kg LD50)	148-82-3	"3" HEALTH	toxic
mercuric acetate (40.9 mg/kg LD50)	1600-27-7	"4"HEALTH	poison
mercuric chloride (1mg/kg LD50)	7487-94-7	"4"HEALTH	carcinogen
mitomycin C (23 mg/kg LD50)	50-07-7	"4"HEALTH	toxin
muscimol (45 mg/kg LD50)	2763-96-4	"3"HEALTH	toxicant
nicotine (50 mg/kg LD50)	54-11-5	"3"HEALTH, EPA	toxicant
nitric oxide (200ppm/1mm LCLO)	10102-43-9	"4"HEALTH, OXY	explosion hazard
N-nitrosomethylvinylamine (24 mg/kg LD50)	4549-40-0	IARC2B, NTP, "4"HEALTH	carcinogen
omega conotoxin GI	76862-65-2	SELECT AGENT	toxin
omega conotoxin GIV	81133-24-6	SELECT AGENT	toxin
omega conotoxin GIVA	106375-28-4	SELECT AGENT	toxin

omega conotoxin GIIIA	129129-65-3	SELECT AGENT	toxin
omega conotoxin MI	83481-45-2	SELECT AGENT	toxin
omega conotoxin MVIIA	107452-89-1	SELECT AGENT	toxin
omega conotoxin MVIIB	no CAS	SELECT AGENT	toxin
omega conotoxin MVIIC	147794-23-8	SELECT AGENT	toxin
omega conotoxin SIA	no CAS	SELECT AGENT	toxin
omega conotoxin SVIB	no CAS	SELECT AGENT	toxin
osmium tetroxide (14 mg/kg LD50)	20816-12-0	"4"HEALTH	carcinogen
pentachlorophenol (PCP) (27mg/kg)	87-86-5	IARC2B, "4"HEALTH	toxicant, poison
phenyl mercuric acetate (PMA) (22 mg/kg LD50)	62-38-4	"4"HEALTH	toxicant
phosphorus (red) (3 mg/kg LD50)	7723-14-0	"4"HEALTH, CDC CHEM AGENT	toxicant
phosphorus (white) (3 mg/kg LD50)	7723-14-0	"4"HEALTH, CDC CHEM AGENT	toxicant
picrotoxin (15 mg/kg LD50)	124-87-8	"4"HEALTH	toxin
potassium cyanide (5 mg/kg LD50)	151-50-8	"4"HEALTH, CDC CHEM AGENT	toxicant
potassium dichromate (25 mg/kg LD50)	7778-50-9	"4"HEALTH	poison, carcinogen
ricin toxin subunit A	96638-28-7	SELECT AGENT, "4"HEALTH	toxin
ricin toxin subunit B	96638-29-8	SELECT AGENT, "4"HEALTH	toxin
saxitoxin/STX (0.26 mg/kg LD50)	35554-08-6	SELECT AGENT, "4"HEALTH	toxin
Shiga and Shiga-like toxins (1 and 2)	no CAS	SELECT AGENT, "4"HEALTH	toxin
silver nitrate (50 mg/kg LD50)	7761-88-8	"4"HEALTH	toxicant
sodium arsenite anhydrous (41 mg/kg LD50)	7784-46-5	"4"HEALTH	poison, carcinogen
sodium azide (27 mg/kg LD50)	26628-22-8	"4"HEALTH	toxicant
sodium cyanide (6.64 mg/kg LD50)	143-33-9	"4"HEALTH, CDC CHEM AGENT	toxicant
sodium fluoride (31 mg/kg LD50)	7681-49-4	"3"HEALTH	toxicant
strychnine (23.5 mg/kg LD50)	57-24-9	"4"HEALTH, CDC CHEM AGENT	toxicant
T-2 toxin (2.7 mg/kg LD50)	21259-20-1	SELECT AGENT, "4"HEALTH	toxin
tetramethylammonium chloride (50 mg/kg LD50)	75-57-0	"4"HEALTH	poison
tetrodotoxin (10 mg/kg LD50)	4368-28-9	SELECT AGENT, "4"HEALTH	toxin
vinorelbine (26-34 mg/kg LD50)	125317-39-7	"3" HEALTH	toxic
vitamin d2 (calciferol) (10 mg/kg LD50)	50-14-6	"3"HEALTH	toxic
vitamin d3 (cholecalciferol) (42 mg/kg LD50)	67-97-0	"3"HEALTH	toxic
wortmannin (18 mg/kg LD50)	19545-26-7	"4"HEALTH	toxicant

KEY:

All Yellow and several of the Green highlighted agents meet the criterion of ≤ 50 mg/kg LD50 (rat, oral)

- All SELECT AGENTS are highlighted in Green.

- LD50 values are indicated if current tox data is available
- “Number Ratings 1-4” of HEALTH, FLAMMABILITY, REACTIVITY, or OXY (Specific Hazard measurements of hazard severity (“4” is most severe) established by the NFPA (National Fire Protection Association) rating symbols.
IARC1 (UN International Agency for Research on Cancer) = sufficient evidence of carcinogenicity in humans
IARC2B= limited evidence of carcinogenicity in humans
NTP (National Toxicology Program) = is known to be or assumed to be a human carcinogen
SELECT AGENT = select agents as designated by the CDC/NIH and/or USDA.
CDC CHEM AGENT = agents designated by the CDC as potential chemical warfare agents.
EPA = on the EPA’s extremely hazardous substances list.