

Acute Toxin Registration

The UF EH&S Biosafety Office oversees the proper acquisition, use, storage and disposal of unfractionated mixtures and purified preparations of: 1) biological toxins with a mammalian $LD_{50} \leq 100\mu\text{g}/\text{kg}$ body weight (referred to as *Acute Toxins*), as well as natural and recombinant organisms which produce these biological toxins; 2) all select agent toxins and 3) biological toxins with a mammalian $LD_{50} > 100\mu\text{g}/\text{kg}$ body weight that are included on the [export control list](#). Examples of some biological toxins which require registration can be found on our website at <http://www.ehs.ufl.edu/Bio/toxin.htm>. SDS sheets are also useful resources for determining a toxin's LD50.

Some biological toxins are classified by the Federal Government as Select Agents due to their potential to pose a severe threat to public health and safety. Possession, use, and transfer of these toxins are highly regulated. A complete list of Select Agents can be found at <http://www.selectagents.gov/>. In small quantities, some of these toxins are exempt from select agent registration. See <http://www.ehs.ufl.edu/Bio/toxin.htm> for exempt amounts of select agent toxins. Note however that the *possession, use, or transfer of ANY select agent toxin, IN ANY QUANTITY, must be registered with the EH&S Biosafety Office.*

Biological toxins can be extremely hazardous, even in minute quantities, and require strict safeguards against their inhalation, absorption through skin or mucous membranes (typically due to a splash), ingestion, or percutaneous injury. Information on the safe use of biological toxins can be found at [Safety and Health Considerations For Conducting Work With Biological Toxins](#) and in the 5th edition of [Biosafety in Microbiological and Biomedical Laboratories \(BMBL\)](#). The use of acute toxins **requires** that each laboratory develop a standard operating procedure for the use of that toxin. A link to a template exists on our website at <http://www.ehs.ufl.edu/Bio/toxin.htm>.

We must get enough information from you to be able to make determinations about the necessary containment level, facilities, procedures, practices, and expertise/training necessary for the safe conduct of the project, so **please be thorough**. Insufficient information will delay the approval process; the form will be returned to you for revision. **Please type the form; hand written forms will be returned.** If you have any questions, please contact the Biosafety Office at 392-1591 or bsa@ehs.ufl.edu

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 Environmental Health & Safety
 Biological Safety Office
bsso@ehs.ufl.edu
 phone: (352)-392-1591
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Acute Toxin Registration #AT -
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Section 1 – Basic Information

PI Name:	Title:	
Department:	Address/Box:	
Office Phone:	Lab Phone:	Email:
Project Title:		
Project Location: Building(s):		Room(s):
Sponsor:		

Section 2 - Toxin Description

	Toxin	Toxin	Toxin	Toxin
Toxin Name				
LD50 and species it was determined in				
From where will the toxin be obtained?				
In what form will the toxin be obtained (e.g. powder, liquid)?				
Where will you prepare/reconstitute toxin (e.g. fume hood)?				
Total amount of toxin on hand at any given time?				
When handling concentrated stocks, are two people present in the lab?	Yes	Yes	Yes	Yes

Section 3 - Toxin Safety/Security

- 3.1 Is there a Chemical Hygiene Plan in place for this toxin? Yes No
- 3.2 Are MSDS sheets for the toxin(s) being used readily available in the lab? Yes No
- 3.3 Are standard operating procedures (SOPs) prepared for work with toxin(s)? Yes No
A template can be found at <http://www.ehs.ufl.edu/Bio/toxin.htm>
- 3.4 Will the toxin be secured in a locked refrigerator, freezer, or storage cabinet when not in use? Yes No
Note that if you wish to use a lockbox, the lockbox must be affixed to the refrigerator, freezer, or cabinet.
- 3.5 Will an accurate inventory of toxin be maintained in ink in a hardbound book and is the log book kept locked up? Yes No
- 3.6 Will a “toxin in use” sign be displayed when toxins are being handled? Yes No
- 3.7 Will you use needles or sharps in experiments with toxins? Yes No
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Section 4 – Animal Use

- 4.1 Will the toxin be used in animals? Yes No (if no, skip to Section 5)
- 4.2 What type of animal(s) will you use?
- 4.3 Route of toxin administration?
 Intravenous Intraperitoneal Subcutaneous Intracerebroventricular Intramuscular
 Intranasal Other:
- 4.4 Has this protocol received approval from the UF IACUC?
 No Date of intended submission:
 Yes IACUC #:
 Approval pending – date submitted to IACUC:
- 4.5 Where do you plan to house your animals?
- 4.6 Where do you plan to do animal procedures?

Section 5 - Research Description and Risk Assessment

- 5.1 Provide a short, clear summary of your research that involves the toxin(s) listed above. You must include:
- 1) a brief introduction,
 - 2) the goals/purpose of the work,
 - 3) experimental methods to be used and,
 - 4) outcomes to be measured.

5.2 Describe the major health risks associated with the toxin(s) and explain and justify the use of the toxin(s) in this project. If toxins will be used in animals, be sure to specify additional risks related to animal handling and husbandry.

5.3 Describe the primary laboratory hazards associated with the use of the toxin (e.g. accidental inoculation, ingestion).

Section 6 – Work Practices/Procedures

6.1 Will you use any of the following devices that have the potential to aerosolize toxin? *Check all that apply.*

- | | | | |
|--|-------------------------------------|---|---|
| <input type="checkbox"/> Centrifuge | If using a centrifuge does it have: | <input type="checkbox"/> Sealed rotors | <input type="checkbox"/> Sealed centrifuge cups |
| <input type="checkbox"/> Tissue grinders | <input type="checkbox"/> Sonicators | <input type="checkbox"/> Vortexers | |
| <input type="checkbox"/> Blenders | <input type="checkbox"/> Shakers | <input type="checkbox"/> Autopsy/necropsy saws | |
| <input type="checkbox"/> Intranasal/intratracheal inoculation of animals | | <input type="checkbox"/> Pressurized vessels (besides autoclaves) | |

6.2 Where is the fume hood located? *Powdered toxins must be handled in a fume hood.*

Building/room:

6.3 Is a biological spill kit prepared for use in the lab? Yes No

6.4 Is there a hand washing sink in the lab? Yes No

6.5 What personal protective equipment (PPE) will be used to minimize exposure? *Check all that apply.*

- | | | | |
|---|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> Safety glasses | <input type="checkbox"/> Goggles | <input type="checkbox"/> Faceshield | <input type="checkbox"/> Surgical mask |
| <input type="checkbox"/> N95 | <input type="checkbox"/> PAPR | <input type="checkbox"/> Gloves | <input type="checkbox"/> Lab coat |
| <input type="checkbox"/> Shoe covers | <input type="checkbox"/> Head cover | <input type="checkbox"/> Other: | |

Section 7 – Decontamination and Disposal

7.1 Do you have access to an autoclave? Yes No

Building/room:

Proper function & testing monitored by (name):

Test method:

Test frequency:

7.2 Do you have a copy of the biological waste disposal guidelines posted in the lab? Yes No

(see <http://www.ehs.ufl.edu/Bio/biowaste.htm#Policy> and <http://www.ehs.ufl.edu/Bio/BMW-waste-disposal.pdf>)

7.3 Have all personnel been trained regarding proper biological waste disposal? Yes No

7.4 How will work surfaces be decontaminated after work with toxins?

7.5 How will liquid waste contaminated with toxin be inactivated and disposed of?

7.6 How will solid waste contaminated with toxin be inactivated and disposed of?
