



University of Colorado at Boulder

Department of Environmental Health and Safety

ENVIRONMENTAL HEALTH & SAFETY

GUIDANCE DOCUMENT FOR

SELECT AGENTS



INTRODUCTION

The term "Select Agents" refers to a collection of designated infectious agents and toxins that, by their nature, have the potential to pose a severe threat to public, animal or plant health; this threat has resulted in the creation of a number of legislative acts.

"*The Antiterrorism and Effective Death Penalty Act of 1996*," which became effective on April 15, 1997, established the first list of Select Agents and required registration for transfer of said agents. The "*Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT Act) of 2001*" established provisions that regulate the possession, usage, or transfer of hazardous agents, and required the Department of Health and Human Services (HHS) to issue rules to implement these provisions. The *Patriot Act* specifically addressed the issue of possession of Select Agents by certain "Restricted Persons" (Section 817(b) and criminalized possession of select agents except for bonafide purposes. Additionally, the "*Public Health Security and Bioterrorism Preparedness and Response Act of 2002*" expanded the list of Select Agents, required registration for possession of select agents and required security measures to prevent access to agents.

The "*Public Health Security and Bioterrorism Preparedness Response Act of 2002*" (Public Law 107-188) signed into law on June 12, 2002, requires that the United States improve its ability to prevent, prepare for, and respond to bioterrorism and other public health emergencies. It necessitates that individuals possessing, using or transferring agents or toxins deemed a threat to public, animal or plant health, or to animal or plant products, notify either the Secretary of the Department of Health and Human Services (HHS) or the Secretary of the Department of Agriculture (USDA). Subsequent to enactment of this law, requirements for possession, use, and transfer of select agents and toxins were published by HHS (42 CFR 73) and by USDA (9 CFR 121 and 7 CFR 331).

Responsibility for providing guidance for the registration of Select Agents was designated to the Centers for Disease Control and Prevention (CDC) by the Secretary, HHS, and to the Animal and Plant Health Inspection Service (APHIS) by the Secretary, USDA. In order to minimize the reporting burden to the public, HHS/CDC and the USDA/APHIS have developed a common reporting form for the registration of Select Agents.

The CDC Select Agent Program can be found at: <http://www.cdc.gov/od/sap/>

The APHIS Select Agent Program can be found at:

http://www.aphis.usda.gov/programs/ag_selectagent/index.html



DEFINITIONS

Access means the freedom or ability to obtain or make use of Select Agents. Only authorized persons are permitted access to Select Agents. Access to a Select Agents can be limited by either security containers or by escorts. For non-laboratory functions including routine cleaning, maintenance and repairs, non-approved individuals will be allowed access to areas where Select Agents are accessible only if they are escorted and monitored by an individual who has been approved.

Biological Agent means any microorganism (including, but not limited to bacteria, viruses, fungi, rickettsiae, or protozoa), or infectious substance, or any naturally occurring, bioengineered or synthesized component of any such microorganism or infectious substance, capable of causing death, disease or other biological malfunction in a human, an animal, a plant or another living organism; deterioration of food, water, equipment, supplies or material of any kind; or deleterious alteration of the environment.

Entity means any government agency (Federal, State or local), academic institution, corporation, company, partnership, society, association, firm, sole proprietorship, or other legal entity. For purposes of this document, the entity is the University of Colorado – Boulder Campus (UCB).

Principal Investigator means the one individual who is designated by the entity (UCB) to direct a project or program and who is responsible to the entity (UCB) for the scientific and technical direction of that project or program.

Responsible Official (RO) means the individual designated by the entity (UCB) to act on its behalf. This individual must have the authority and control to ensure compliance with the regulations.

Select Agent as defined by the CDC and APHIS, means biological agents or toxins deemed a threat to the public, animal or plant health, or to animal or plant products.

Toxin means the toxic material or product of plants, animals, microorganisms (including, but not limited to bacteria, viruses, fungi, rickettsiae or protozoa), or infectious substances, or a recombinant or synthesized molecule, whatever their origin and method of production, and includes any poisonous substance or biological product that may be engineered as a result of biotechnology, produced by a living organism; or any poisonous isomer or biological product, homolog, or derivative of such a substance.



TYPES OF SELECT AGENTS AND TOXINS

HHS-only Agents (HHS has sole authority and responsibility to regulate)

- Select agents and toxins that may affect public health and safety

USDA-only Agents (USDA has sole authority and responsibility to regulate)

- Select agents and toxins that may affect animal and plant health and animal and plant products

Overlap Agents

- Select agents and toxins subject to regulation by both HHS and USDA

SELECT AGENT AND TOXIN LIST

A complete list of Select Agents for both the CDC and APHIS can be found at: [\(Insert EHS Web Link for Select Agent List 112108 Here\)](#) It is important to always check both the CDC Select Agent Program at: <http://www.cdc.gov/od/sap/> and the APHIS Select Agent Program at: http://www.aphis.usda.gov/programs/ag_selectagent/index.html to view the most current list of Select Agents.

OVERVIEW OF REGULATIONS - 42 CFR 73, 7 CFR 331, and 9 CFR 121

The University of Colorado – Boulder Must:

- Register for each select agent or toxin it possesses, uses, or transfers
- Designate a Responsible Official (RO)
- Receive government approval of the University, RO, & individuals who need access to select agents
 - Based on Department of Justice (DOJ) check of electronic databases (“Security Risk Assessment” = SRA)
- Receive prior approval of all transfers
- Develop and implement safety and security plans
- Conduct safety and security training
- Maintain records:
 - Inventories
 - Access to agents
 - Access to areas where agents are stored or used
 - Transfer documents
- Develop an emergency response plan
- Provide notification of theft, loss, or release of a select agent or toxin



PENALTIES FOR VIOLATION OF REGULATIONS

- Civil Money
 - Up to \$250,000 for an individual for each violation
 - Up to \$500,000 for an organization for each violation
- Criminal
 - Imprisonment for up to 5 years, a fine, or both for:
 - Transfer of a select agent to an unregistered person
 - Possession of a select agent by an unregistered person
 - Knowingly making a false statement

POSSESSION, USE, OR TRANSFER OF SELECT AGENTS AND TOXINS

A. Principal Investigator's Responsibility for Notification to Responsible Official (RO)

1. If a Principal Investigator intends to possess, use, ship, or receive any Select Agent or Toxin that is regulated by the CDC or APHIS, they are required to contact Dr. Joe Rosse, Director, Office of Research Integrity (Responsible Official) at 735-5809 or 492-6254 prior to initiating any action.
2. If at anytime a Principal Investigator discovers in their possession, a Select Agent or Toxin that was not previously registered with the CDC or APHIS by the Responsible Official, they are required to notify the Responsible Official prior to initiating any action. Destruction of Select Agent or Toxin is strictly prohibited by Federal Regulations without prior notification, documentation, and registration through the RO.
3. If a Principal Investigator intends to possess, use, ship, or receive any Select Agent or Toxin that meets the "Exemption" or "Exclusion" from Regulatory requirements in 42 CFR 73, 9 CFR 121 or 7 CFR 331, they are required to notify the Responsible Official prior to initiating any action.



B. Exempt Quantities of Select Agent Toxins

1. Exempt Quantities of Select Agent Toxins:

Per the federal regulations each Principle Investigator (PI) may possess a specified amount of toxin without triggering CDC registration and other stringent requirements. Below is the list of SA Toxins and the allowable maximum exempt quantities (per PI).

HHS Toxins	Amount
Abrin	100 mg
Conotoxin	100 mg
Diacetoxyscirpenol (DAS)	1000 mg
Ricin	100 mg
Saxitoxin	100 mg
Shiga-like ribosome inactivating proteins	100 mg
Tetrodotoxin	100 mg

HHS/USDA Overlap Toxins	Amount
Botulinum neurotoxins	0.5 mg
Staphylococcal enterotoxins	5 mg
<i>Clostridium perfringens</i> epsilon toxin	100 mg
Shingatoxin	100 mg
T- 2 toxin	1000 mg

It is important to ensure that the total amount of toxin per PI in a laboratory is maintained below these limits at all times for exemption from registration and the attendant restrictive requirements. Due to the severe penalties associated with non-compliance with the Select Agent rules, it is imperative that each laboratory using and storing toxins maintains current inventory information for these substances.

C. Requirements for Possession of Exempt Quantities of Select Agent Toxins

The Principle Investigator is responsible for ensuring the following:

- 1. Standard Operating Procedures (SOPs):** Prepare written SOPs for toxin-involved research processes.
- 2. Personnel Training:** Provide initial lab-specific safety training to staff on toxin-involved processes, with updates as necessary. Training topics should include:
 - toxin-associated hazards
 - engineering controls used to minimize exposure (i.e., fume hood use)
 - personal protective equipment to be used when handling toxin (PPE)
 - safe handling and storage
 - proper decontamination and disposal
 - administrative requirements (recordkeeping, inventory, security).



3. **Proper PPE:** Appropriate personal protective equipment must be provided (i.e., gloves, safety goggles, lab coat or disposable lab coat).
4. **Engineering Controls:** Proper use of fume hood, biosafety cabinet or glove box with toxin-associated procedures.
5. **Inactivation:** Use the toxin manufacturer accepted inactivation procedures or the toxin specific procedures described in the *EH&S Guidance Document for Disinfectants and Sterilization* (insert web site link to this document) prior to disposal of remaining stock and/or empty containers. For additional guidance, please contact EH&S at 492-6025.
6. **Disposal:** After inactivation, dispose of residual wastes (liquids/ solids) per EH&S Hazardous Waste Management procedures. Please refer to the *Generators' Guide to Hazardous Material / Waste Management* at: <http://ehs.colorado.edu/Download/HWBook2004.pdf>
7. **Storage/Security:** Items must be:
 - Stored with compatible materials within secondary containment; AND
 - Provided one layer of physical security (i.e., toxin secured within a locked freezer, or secured within a permanently fixed lockbox).
8. **List of PI-Approved Users:** A documented list to be maintained of PI-approved toxin users (including those having access to toxin materials). The lab must keep track of who uses the stock (and who has access to the freezer), but it is not necessary to record each use. Before becoming an Approved User, the PI must ensure that each person has received training as specified in this section.
9. **Inventory Maintenance:** Inventory of Select Agent toxins is very important in helping PIs ensure inadvertent breaching of exempt quantity levels. Inventories are to be promptly updated after every container of Select Agent toxin is:
 - acquired by purchase,
 - depleted by research, **OR**
 - inactivated
10. **Documented Self-Inspection:** Annual Self-Inspections: Are to be conducted using the *Annual Exempt Quantities Select Agent Toxin Checklist* at **(Include EHS Web Site Link for Annual Exempt Quantities Select Agent Toxin Checklist 112108 Here)**
 - inspections must be performed initially after acquiring the Select Agent toxin and at least annually thereafter,
 - documentation of inspections must be kept for the duration of Select Agent possession,
 - a copy of the completed *Annual Exempt Quantities Select Agent Toxin Checklist* must be sent to EH&S at 413 UCB, **AND**
 - EH&S will provide an annual laboratory audit to review compliance with institutional requirements on possession of select agent toxins.



D) Possession of Select Agent Toxins Above Exempt Quantities:

1. If a Principal Investigator intends to possess, use, ship, or receive any Select Agent or Toxin that is regulated by the CDC or APHIS, they are required to contact Dr. Joe Rosse, Director, Office of Research Integrity (Responsible Official) at 735-5809 or 492-6254 prior to initiating any action.