

Restricted Biological Agents and Export Control Guide

Transport of biological materials across the U.S. border may require special handling, U.S. export or foreign import licenses and special Customs clearance. If you have questions about shipping your biological materials internationally please contact your [School or Institute Export Control Administrator](#); and the [Office of Environmental Health and Safety](#) and they will assist you with your shipment. Additional guidance on the Institute's [Export Control Policies and Procedures](#) can be found on the [OVPR](#), and guidance on shipping biologicals on the EH&S webpages.

Department of Commerce dual-use export control-listed pathogens and toxins are listed below. These pathogens and toxins are found on the [Commerce Control List \(CCL\) in Category 1](#) at ECCNs 1C351, 1C353, and 1C354. These lists are updated periodically, therefore prior to shipping review the regulations or consult with your [School or Institute Export Control Administrator](#) for assistance. **Export controls may apply regardless of quantity or attenuation, including small quantities or attenuated strains of Select Agents or toxins that are excluded from the lists administered by APHIS or CDC.**

Please note that export controls also apply to genetic elements and genetically modified organisms that contain DNA associated with the pathogenicity of the biological materials listed below. Severe civil and/or criminal penalties apply to international shipments or transfers without an export license of ANY export controlled pathogen or genetic material containing the controlled DNA.

You will need to contact your School or Institute's Export Control Administrator if your research involves an export controlled pathogen or genetic material containing the controlled DNA to be sent outside of the US so that an export license application can be prepared. Export licenses take 4-6 weeks for approval, please plan in advance.

Commerce Control List: Category 1 (Dual Use Biological Agents)

A

Human and Animal pathogens

Viruses

African horse sickness virus

African swine fever virus

Andes virus

Avian influenza (AI) viruses

AI viruses that have an intravenous pathogenicity index (IVPI) in 6 week-old chickens greater than 1.2; or AI viruses that cause at least 75% mortality in 4- to 8-week-old chickens infected intravenously

Note: AI viruses of the H5 or H7 subtype that do not have either of the characteristics described above should be sequenced to determine whether multiple basic amino acids are present at the cleavage site of the haemagglutinin molecule (HA0). If the amino acid motif is similar to that observed for other HPAI isolates, then the isolate being tested should be considered as HPAI and the virus is controlled.

Plant pathogens

Viruses

Andean potato latent virus (Potato Andean latent tymovirus)

Toxins

Abrin

Aflatoxins

B

Human and Animal pathogens

Viruses

Bluetongue virus

Bacteria

Bacillus anthracis

Brucella abortus

Brucella melitensis

Brucella suis

Burkholderia mallei (*Pseudomonas mallei*)

Burkholderia pseudomallei (*Pseudomonas pseudomallei*)

Plant pathogens

None

Toxins

Botulinum toxins

C

Human and Animal pathogens

Viruses

Chapare virus

Chikungunya virus

Choclo virus

Classical swine fever virus (Hog cholera virus)

Crimean-Congo hemorrhagic fever

Bacteria

Chlamydia psittaci (*Chlamydophila psittaci*)

Clostridium argentinense (formerly known as *Clostridium botulinum* Type G), botulinum neurotoxin producing strains

Clostridium baratii, botulinum neurotoxin producing strains

Clostridium botulinum

Clostridium butyricum, botulinum neurotoxin producing strains

Clostridium perfringens, epsilon toxin producing strains

Coxiella burnetii

Fungi

Coccidioides immitis

Coccidioides posadasii

Plant pathogens

Bacteria

Clavibacter michiganensis subspecies *sepedonicus* (*Corynebacterium michiganensis* subspecies *sepedonicum* or *Corynebacterium sepedonicum*)

Fungi

Colletotrichum kahawae (*Colletotrichum coffeanum* var. *virulans*)

Cochliobolus miyabeanus (*Helminthosporium oryzae*)

Toxins

Cholera toxin

Clostridium perfringens alpha, beta 1, beta 2, epsilon, and iota toxins

Conotoxins

D

Human and Animal pathogens

Viruses

Dobrava-Belgrade virus

Plant pathogens

None

Toxins

Diacetoxyscirpenol

E

Human and Animal pathogens

Viruses

Eastern equine encephalitis

Ebolavirus

Plant pathogens

None

Toxins

None

F

Human and Animal pathogens

Viruses

Foot-and-mouth disease virus

Bacteria

Francisella tularensis

Plant pathogens

None

Toxins

None

G

Human and Animal pathogens

Viruses

Goatpox virus

Guanarito virus

Plant pathogens

None

Toxins

None

H

Human and Animal pathogens

Viruses

Hantaan virus

Hendra virus (Equine morbillivirus)

Plant pathogens

None

Toxins

HT-2 toxin

I

Human and Animal pathogens

None

Plant pathogens

None

Toxins

None

J

Human and Animal pathogens

Viruses

Japanese encephalitis virus

Junin virus

Plant pathogens

None

Toxins

None

K

Human and Animal pathogens

Viruses

Kyasanur Forest disease virus

Plant pathogens

None

Toxins

None

L

Human and Animal pathogens

Viruses

Laguna Negra virus
Lassa virus
Louping ill virus
Lujo virus
Lumpy skin disease virus
Lymphocytic choriomeningitis virus

Plant pathogens

None

Toxins

None

M

Human and Animal pathogens

Viruses

Machupo virus
Marburgvirus (includes all members of the Marburgvirus genus)
Middle East respiratory syndrome-related coronavirus (MERS-related coronavirus)
Monkeypox virus
Murray Valley encephalitis virus

Bacteria

Mycoplasma capricolum subspecies *capripneumoniae* ("strain F38")
Mycoplasma mycoides subspecies *mycoides* SC (small colony) (a.k.a contagious bovine pleuropneumonia)

Plant pathogens

Fungi

Microcyclus ulei (*Dothidella ulei*)
Magnaporthe oryzae (*Pyricularia oryzae*)

Toxins

Microcystins (Cyanginosins)
Modeccin

N

Human and Animal pathogens

Viruses

Newcastle disease virus
Nipah virus

Plant pathogens

None

Toxins

None

O

Human and Animal pathogens

Viruses

Omsk hemorrhagic fever virus

Oropouche virus

Plant pathogens

None

Toxins

None

P

Human and Animal pathogens

Viruses

Peste-des-petits ruminants virus

Porcine Teschovirus

Powassan virus

Plant pathogens

Viruses

Potato spindle tuber viroid

Fungi

Puccinia graminis (syn. *Puccinia graminis* f. sp. *tritici*)

Puccinia graminis subspecies *graminis* var. *graminis*

Puccinia graminis subspecies *graminis* var. *stakmanii*

Puccinia striiformis (syn. *Puccinia glumarum*)

Peronosclerospora philippinensis (*Peronosclerospora sacchari*)

Phoma glycinicola (formerly *Pyrenochaeta glycines*)**

Toxins

None

Q

Human and Animal pathogens

None

Plant pathogens

Toxins

None

R

Human and Animal pathogens

Viruses

Rabies virus and all other members of the Lyssavirus genus

Reconstructed 1918 Influenza virus

Note: Includes reconstructed replication competent forms of the 1918 pandemic influenza virus containing any portion of the coding regions of all eight gene segments.

Rift Valley fever virus

Rinderpest virus

Rocio virus

Bacteria

Rickettsia prowazekii

Plant pathogens

Bacteria

Ralstonia solanacearum, race 3, biovar 2

*Raythayibactor toxicus***

Toxins

Ricin

S

Human and Animal pathogens

Viruses

Sabia virus

Seoul virus

Severe acute respiratory syndrome-related coronavirus (SARS-related coronavirus);

Sheeppox virus

Sin Nombre virus

St. Louis encephalitis virus

Suid herpesvirus 1 (Pseudorabies virus; Aujeszky's disease)

Swine vesicular disease virus

Bacteria

Salmonella enterica subspecies enterica serovar Typhi (*Salmonella typhi*)

Shiga toxin producing *Escherichia coli* (STEC) of serogroups O26, O45, O103, O104, O111, O121, O145, O157, and other shiga toxin producing serogroups

Note: Shiga toxin producing *Escherichia coli* (STEC) includes, inter alia, enterohaemorrhagic *E. coli* (EHEC), verotoxin producing *E. coli* (VTEC) or verocytotoxin producing *E. coli* (VTEC)

Shigella dysenteriae

Plant pathogens

Fungi

Sclerophthora rayssiae var. *zeae*

Synchytrium endobioticum

Toxins

Saxitoxin

Shiga toxins (shiga-like toxins, verotoxins, and verocytotoxins)

Staphylococcus aureus enterotoxins, hemolysin alpha toxin, and toxic shock syndrome toxin (formerly known as *Staphylococcus enterotoxin F*)

T

Human and Animal pathogens

Viruses

Tick-borne encephalitis virus (Far Eastern subtype, formerly known as Russian Spring-Summer encephalitis virus)

Tick-borne encephalitis virus (Siberian subtype, formerly known as West Siberian virus)

Plant pathogens

Fungi

Tilletia indica

Thecaphora solani

Toxins

T-2 toxin

Tetrodotoxin

U

Human and Animal pathogens

None

Plant pathogens

None

Toxins

None

V**Human and Animal pathogens****Viruses**

Variola virus

Venezuelan equine encephalitis virus

Vesicular stomatitis virus

Bacteria

Vibrio cholerae

Plant pathogens

None

Toxins

Viscumin (Viscum album lectin 1)

Volkensin

W**Human and Animal pathogens****Viruses**

Western equine encephalitis virus

Plant pathogens

None

Toxins

None

X**Human and Animal pathogens**

None

Plant pathogens**Bacteria**

Xanthomonas albilineans

Xanthomonas axonopodis pv. *citri* (*Xanthomonas campestris* pv. *citri* A) (*Xanthomonas campestris* pv. *citri*)

*Xanthomonas oryzae**

Toxins

None

Y**Human and Animal pathogens****Viruses**

Yellow fever virus

Bacteria

Yersinia pestis

Plant pathogens

None

Toxins

None

Z

Human and Animal pathogens

None

Plant pathogens

None

Toxins

None

This species of proteobacteria is identified on the APHIS "select agents" list, but only the pathovar *Xanthomonas oryzae* pv. *oryzae* (syn. *Pseudomonas campestris* pv. *oryzae*) is identified on the Australia Group "List of Plant Pathogens for Export Control"

"Identified on the APHIS "select agents" list but is not identified on the Australia Group "List of Plant Pathogens for Export Control"