

# Bio-agents controlled under the Export Administration Regulations (EAR)

University of Pittsburgh

Office of Export Controls Services – EChelp@pitt.edu

Below is a list of agents restricted for export by the U.S Department of Commerce. This list is provided as a reference and may not reflect the most current information. **Check the Category 1 of the *Commerce Control List* in the EAR to see the most updated version.**

<http://www.bis.doc.gov/index.php/regulations/export-administration-regulations-ear>

You shall contact the Office of Export Controls Services before disclosing, transmitting, sending or shipping any of these bio-agents to a foreign national or to a foreign country.

## Human Pathogens - ECCN 1C351

<b>Viruses</b>
Andes virus
Chapare virus
Chikungunya virus
Choclo virus
Congo-Crimean haemorrhagic fever virus (a.k.a. Crimean-Congo haemorrhagic fever virus)
Dengue fever virus
Dobrava-Belgrade virus
Eastern equine encephalitis virus
Ebola virus
Guanarito virus
Hantaan virus
Hendra virus (Equine morbillivirus)
1918 Pandemic Influenza virus – reconstructed replication competent forms containing any portion of the coding regions of all eight gene segments
Japanese encephalitis virus
Junin virus
Kyasanur Forest virus
Laguna Negra virus
Lassa Fever virus
Louping ill virus
Lujo virus
Lymphocytic Choriomeningitis virus
Machupo virus
Marburg virus
Monkey pox virus
Murray Valley encephalitis virus
Nipah virus
Omsk haemorrhagic fever virus
Oropouche virus
Powassan virus
Rift Valley fever virus
Rocio virus
Sabia virus
SARS-associated coronavirus (SARS-CoV)
Seoul virus
Sin nombre virus
St Louis encephalitis virus
Tick-borne encephalitis virus (See 1C351.a.35 for Eastern subtype or 1C351.b.3 for Siberian subtype)

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Variola virus
Venezuelan equine encephalitis virus
Western equine encephalitis virus
Yellow fever virus
<b>Bacteria</b>
Bacillus anthracis
Brucella abortus
Brucella melitensis
Brucella suis
Burkholderia mallei (Pseudomonas mallei)
Burkholderia pseudomallei (Pseudomonas pseudomallei)
Chlamydophila psittaci (formely known as chlamydia 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 types
Coxiella burnettii
Enterohaemorrhagic Escherichia coli, serotype O157 and other verotoxin producing serotypes
Francisella tularensis
Rickettsia prowazekii
Salmonella typhi
Shiga toxin producing Escherichia coli (STEC) of serogroups O26, O45, O103, O104, O111, O121,O145, O157, and other shiga toxin producing serogroups
Shigella dysenteriae
Vibrio cholerae
Yersinia pestis
<b>Toxins and “subunits” thereof</b>
Abrin
Aflatoxins
Botulinum toxins
Cholera toxin
Clostridium perfringens toxins
Conotoxin
Diacetoxyscirpenol toxin
HT-2 toxin
Microcystin (Cyanginosin)
Modeccin toxin
Ricin
Saxitoxin
Shiga toxin
Staphylococcus aureus enterotoxins, hemolysin alpha toxin, and toxic shock syndrome toxin (formerly known as Staphylococcus enterotoxin F);
T-2 toxin
Tetrodotxin
Verotoxin and other Shiga-like ribosome inactivating proteins
Viscum Album Lectin 1 (Viscumin)

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Volkensin toxin
<b>Fungi</b>
Coccidioides immitis
Coccidioides posadasii

### Animal Pathogens - ECCN 1C352

<b>Viruses</b>
African swine fever virus
African horse sickness virus
Avian influenza (AI) viruses identified as having high pathogenicity (HP) as follow: <ul style="list-style-type: none"><li>- AI viruses that have an intravenous pathogenicity index (IVPI) in 6 week old chickens greater than 1.2; or</li><li>- AI viruses that cause at least 75% mortality in 4 to 8 week old chickens infected intravenously</li></ul>
Bluetongue virus
Foot and mouth disease virus
Goat pox virus
Lumpy skin disease virus
Lyssa virus (a.k.a Rabies)
Newcastle disease virus
Peste des petits ruminants virus
Porcine enterovirus type 9 (swine vesicular disease virus)
Porcine herpes virus (Aujeszky's disease)
Rinderpest virus
Sheep pox virus
Swine fever virus (Hog cholera virus)
Teschen disease virus
Vesicular stomatitis virus
<b>Bacteria</b>
Mycoplasma, as follows : <ul style="list-style-type: none"><li>- Mycoplasma mycoides subspecies mycoides SC (small colony) (a.k.a. contagious bovine pleuropneumonia)</li><li>- Mycoplasma capricolum subspecies capripneumoniae ("strain F38)</li></ul>

### Plant Pathogens – ECCN 1C354

<b>Viruses</b>
Andean potato latent virus (Potato Andean latent tymovirus)
Potato spindle tuber viroid
<b>Bacteria</b>
Clavibacter michiganensis subspecies sepedonicus (syn. Corynebacterium michiganensis subspecies sepedonicum or Corynebacterium sepedonicum)
Ralstonia solanacearum, race 3, biovar 2
Rathayibactor toxicus
Xanthomonas albilineans
Xanthomonas axonopodis pv. citri (Xanthomonas campestris pv. citri A) (Xanthomonas campestris pv. citri)
Xanthomonas oryzae

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<b>Fungi</b>
Colletotrichum kahawae (Colletotrichum coffeanum var. virulans)
Cochliobolus miyabeanus (helminthosporium oryzae)
Microcyclus ulei (syn. Dothidella ulei)
Peronosclerospora philippinensis (a.k.a. Peronosclerospora sacchari)
Phoma glycinicola (formerly Pyrenochaeta glycines)
Puccinia graminis ssp. graminis var. graminis / Puccinia graminis ssp. graminis var. stakmanii (Puccinia graminis [syn. Puccinia graminis f. sp. tritici])
Puccinia striiformis (syn. Puccinia glumarum)
Magnaporthe oryzae (Pyricularia oryzae)
Sclerophthora rayssiae var. zea
Synchytrium endobioticum
Tilletia indica
Thecaphora solani

### Genetic element and genetically-modified organisms – ECCN 1C353

<b>Genetic elements</b>
Genetic elements that contain nucleic acid sequences associated with the pathogenicity of microorganisms controlled by 1C351.a to c., 1C352, or 1C354.
Genetic elements that contain nucleic acid sequences coding for any of the “toxins” controlled by 1C351.d or “sub-units of toxins” listed above.
<b>Genetically modified organism</b>
Genetically modified organisms that contain nucleic acid sequences associated with the pathogenicity of microorganisms controlled by 1C351.a. to c., 1C352, or 1C354.
Genetically modified organisms that contain nucleic acid sequences coding for any of the “toxins” controlled by 1C351.d or “sub units of toxins” listed above.

#### Notes:

- “Genetic elements” include inter alia, chromosomes, genomes, plasmids, transposons, and vectors, whether genetically modified or unmodified, or chemically synthesized in whole or in part
- “Genetically modified organisms” include organisms in which the genetic material (nucleic acid sequences) has been altered in a way that does not occur naturally by mating and/or natural recombination, and encompasses those produced artificially in whole or in part.

**For export of materials and equipment, please check the Category 2 of the Commerce Control List in the EAR. More specifically ECCN 2B352 controls “Equipment capable of use in handling biological materials”.**

<b>DOCUMENT HISTORY AND VERSION CONTROLS</b>		
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