

# BioAgent Export

## Description

Some biological agents are regulated for export and may not be exported to denied parties (restricted persons), for prohibited end-uses (e.g., biological weapons), or to sanctioned countries. Please review [UF's Export Control](#) page for more information. If you intend to ship any items listed on this page, email [exportcontrol@research.ufl.edu](mailto:exportcontrol@research.ufl.edu) with the name of the institution, location (city and country), and name of the end-user(s) that the material will be exported to. Items may be shipped only for legitimate scientific or clinical purposes.

If you plan to ship any materials (even items not listed below) to *Cuba, Iran, Sudan, Syria, or North Korea*, please contact the [Export Control Office](#) first. While many of the items on the Commerce Control List are [select agents](#), those preceded by an asterisk (\*) are not, but still require an export permit.

## Bioagents Listed on the Commerce Control List

This list is subject to change (Current as of February 22, 2023).

[su\_spoiler style="fancy" icon="chevron" title=" Human and Animal Pathogens and Toxins (ECCN 1C351) "] [ \_su\_spoiler icon="chevron" title=" Viruses "]

1. African horse sickness virus
2. African swine fever virus
3. \*Andes virus
4. Avian influenza (AI) viruses identified as having high pathogenicity (HP), as follows:
5. AI viruses that have an intravenous pathogenicity index (IVPI) in 6-week old chickens >1.2 or
6. AI viruses that cause at least 75% mortality in 4- to 8-week old chickens infected IV.
7. **Note:** Avian influenza 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 (HAO). If the amino acid motif is similar to that observed for other HPAI isolates, then the isolate being tested should be considered HPAI and the virus is controlled for export.
8. \*Blue tongue virus
9. Chapare virus
10. \*Chikungunya virus
11. \*Choclo virus
12. Classical swine fever (Hog cholera virus)
13. Crimean-Congo hemorrhagic fever virus
14. \*Dobrava-Belgrade virus
15. Eastern equine encephalitis virus
16. Ebola virus (including all members of the *Ebolavirus*genus)
17. Foot-and-mouth disease virus
18. Goat pox virus

19. Guanarito virus
20. \*Hantaan virus
21. Hendra virus (Equine morbillivirus)
22. \*Japanese encephalitis virus
23. Junin virus
24. Kyasanur Forest disease virus
25. \*Laguna Negra virus
26. Lassa fever virus
27. \*Louping ill virus
28. Lujo virus
29. Lumpy skin disease virus
30. \*Lymphocytic choriomeningitis virus
31. Machupo virus
32. Marburg virus (including all members of the *Marburgvirus*genus)
33. Middle East respiratory syndrome-related coronavirus (MERS-related coronavirus)
34. Monkeypox virus
35. \*Murray Valley encephalitis virus
36. Newcastle disease virus
37. Nipah virus
38. Omsk hemorrhagic fever virus
39. \*Oropouche virus
40. Peste des petits ruminants virus
41. \*Porcine Teschovirus
42. \*Powassan virus
43. \*Rabies virus and all other members of the *Lyssavirus*genus
44. 1918 pandemic influenza virus – reconstructed replication competent forms containing any portion of the coding regions of all 8 gene segments.
45. Rift Valley fever virus
46. Rinderpest virus
47. \*Rocio virus
48. Sabia virus
49. \*Seoul virus
50. SARS-related coronavirus (SARS-CoV). As per BIS guidance, [SARS-CoV-2](#)is not subject to export control regulations.
51. Sheep pox virus
52. \*Sin Nombre virus
53. \*St. Louis encephalitis virus
54. \*Suid Herpesvirus 1 (Pseudorabies virus; Aujeszky's disease)
55. Swine vesicular disease virus
56. Tickborne encephalitis virus (Far eastern subtype, formerly Russian Spring-Summer encephalitis virus). Tickborne encephalitis virus (Siberian subtype, formerly West Siberian virus)
57. Variola virus
58. Venezuelan equine encephalitis virus
59. \*Vesicular stomatitis virus
60. \*Western equine encephalitis virus
61. \*Yellow fever virus

[/\_su\_spoiler] [\_su\_spoiler icon="chevron" title=" Bacterial and Rickettsial Agents "]

1. *Bacillus anthracis*
2. *Brucella abortus*
3. *Brucella melitensis*
4. *Brucella suis*
5. *Burkholderia mallei* (formerly *Pseudomonas mallei*)
6. *Burkholderia pseudomallei* (formerly *Pseudomonas pseudomallei*)
7. \**Chlamydia psittaci* (formerly *Chlamydophila psittaci*)
8. *Clostridium argentinense* (formerly *Clostridium botulinum* Type G), botulinum neurotoxin producing strains
9. *Clostridium baratii*, botulinum neurotoxin producing strains
10. *Clostridium botulinum*
11. *Clostridium butyricum*, botulinum neurotoxin producing strains
12. \**Clostridium perfringens*, epsilon toxin producing types
13. *Coxiella burnetii*
14. *Francisella tularensis*
15. *Mycoplasma capricolum* subspecies *capripneumoniae* ("strain F38")
16. *Mycoplasma mycoides* subspecies *mycoides* SC (small colony, contagious bovine pleuropneumonia)
17. *Rickettsia prowazekii*
18. \**Salmonella enterica* subspecies *enterica* serovar Typhi (*Salmonella* Typhi)
19. \*Shiga toxin producing *Escherichia coli* (STEC) of serogroups O26, O45, O103, O104, O111, O121, O145, O157 and other Shiga toxin producing serogroups (STEC strains include, among others, enterohemorrhagic *coli* (EHEC) and verocytotoxin-producing *E. coli* (VTEC).
20. \**Shigella dysenteriae*
21. \**Vibrio cholerae*
22. *Yersinia pestis*

[/\_su\_spoiler] [\_su\_spoiler icon="chevron" title=" Biological Toxins and Subunits Thereof "]

1. Abrin
2. \*Aflatoxins
3. Botulinum toxins
4. \*Brevetoxins
5. \**Clostridium perfringens* alpha, beta 1, beta 2, epsilon and iota toxins
6. Conotoxin
7. Diacetoxyscirpenol toxin
8. \*Gonyautoxins
9. \*HT-2 toxin
10. \*Microcystin (Cyanginosins)
11. \*Modeccin toxin
12. \*Nodularins
13. \*Palytoxin
14. Ricin<sup>\$</sup>
15. Saxitoxin<sup>#</sup>
16. \*Shiga toxin (shiga-like toxins, verotoxins, and verocytotoxins)
17. *Staphylococcus aureus* enterotoxins, hemolysin alpha toxin, and toxic shock syndrome toxin

(formerly Staphylococcus enterotoxin F)

18. T-2 toxin
19. Tetrodotoxin
20. \*Viscumin (*Viscum album* lectin 1)
21. \*Volkensin toxin

[/\_su\_spoiler] [\_su\_spoiler icon="chevron" title=" Fungi "]

1. \**Coccidioides immitis*
2. \**Coccidioides posadasii*

[/\_su\_spoiler] [/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" Plant Pathogens (ECCN 1C354) " ] [\_su\_spoiler icon="chevron" title=" Bacteria "]

1. \**Clavibacter michiganensis* subspecies *sepedonicus* (*Corynebacterium michiganensis* subspecies *sepedonicum* or *Corynebacterium sepedonicum*)
2. *Ralstonia solanacearum*, race 3, biovar 2
3. *Rathayibacter toxicus*
4. \**Xanthomonas albilineans*
5. \**Xanthomonas axonopodiscitri* (*Xanthomonas campestris citri* A) (*Xanthomonas campestris* pv. *citri*)
6. *Xanthomonas oryzae*

[/\_su\_spoiler] [\_su\_spoiler icon="chevron" title=" Fungi "]

1. \**Cochliobolus miyabeanus* (*Helminthosporium oryzae*)
2. \**Colletotrichum kahawae* (*Colletotrichum coffeanum virulans*)
3. \**Magnaporthe oryzae* (*Pyricularia oryzae*)
4. \**Microcyclus ulei* (*Dothidella ulei*)
5. *Peronosclerospora philippinensis* (*Peronosclerospora sacchari*)
6. *Phoma glycinicola* (formerly *Pyrenochaeta glycines*)
7. \**Puccinia graminis graminis graminis* / *Puccinia graminis* ssp. *graminis* car. *stakmanii* (*Puccinia graminis* [syn. *Puccinia graminis* f.sp. *tritici*])
8. \**Puccinia striiformis* (*Puccinia glumarum*)
9. *Sclerophthora rayssiaezeae*
10. *Synchytrium endobioticum*
11. \**Thecaphora solani*
12. \**Tilletia indica*

[/\_su\_spoiler] [\_su\_spoiler icon="chevron" title=" Viruses "]

1. \*Andean potato latent virus (Potato Andean latent tymovirus)
2. \*Potato spindle tuber viroid

[/\_su\_spoiler] [/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" Genetic Elements and Genetically Modified Organisms (ECCN 1C353) " ] Any genetically modified organism that contains, or any genetic element that codes for, any of the following:

1. Any gene, genes, translated product or translated products specific to any virus controlled by 1C351.a or .b or 1C354.c
2. Any gene or genes specific to any bacterium controlled by 1C351.c or 1C354.a or any fungus

controlled by 1C351.e or 1C354.b and which:

1. In itself or through its transcribed or translated products represents a significant hazard to human, animal, or plant health.
2. Could endow or enhance pathogenicity.
3. Any toxins, or their sub units, controlled by 1C351.d

#### Technical Notes

1. "Genetically modified organisms" include organisms in which the nucleic acid sequences have been created or altered by deliberate molecular manipulation.
2. "Genetic elements" include, inter alia, chromosomes, genomes, plasmids, transposons, vectors, and inactivated organisms containing recoverable nucleic acid fragments, whether genetically modified or unmodified, or chemically synthesized in whole or in part. Nucleic acids from an inactivated organism are considered to be "recoverable" if the inactivation and preparation of the material is intended or known to facilitate isolation, purification, amplification, detection, or identification of nucleic acids.
3. This ECCN does not control nucleic acid sequences of shiga toxin producing *Escherichia coli* serogroups O26, O45, O103, O104, O111, O121, O145, O157 and other shiga toxin producing serogroups, other than those genetic elements coding for shiga toxin, or for its subunits
4. "Endow or enhance pathogenicity" is defined as when the insertion or integration of the nucleic acid sequence or sequences is/are likely to enable or increase a recipient organism's ability to be used to deliberately cause disease or death. This might include alterations to, inter alia: virulence, transmissibility, stability, route of infection, host range, reproducibility, ability to evade or suppress host immunity, resistance to medical countermeasures, or detectability.

[/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" Vaccines, immunotoxins, medical products, diagnostic and food testing kits, as follows (1C991) "] List of Items Controlled:

1. Vaccines against items controlled by ECCN 1C351, 1C353 or 1C354
2. Immunotoxins containing items controlled by 1C351.d
3. Medical products containing botulinum toxins controlled by ECCN 1C351.d.3 or conotoxins controlled by ECCN 1C351.d.6
4. Medical products containing items controlled by ECCN 1C351.d (except botulinum toxins controlled by ECCN 1C351.d.3, conotoxins controlled by ECCN 1C351.d.6, and items controlled for CW reasons under 1C351.d.11 or .d.12)
5. Diagnostic and food testing kits containing items controlled by ECCN 1C351.d (except items controlled for CW reasons under ECCN 1C351.d.11 or d.12)

[/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" International Traffic in Arms Regulations (ITAR) "] US State Department Regulations, Part 121, The US Munitions List, control the export of biological materials regulated as "defense articles". See [Category XIV: Toxicological Agents including Chemical, Biological Agents, and Associated Equipment](#) . **MULTIPLE** Export Controls, **INCLUDING** a License will be required to export, use, or possess the following:

(b) Biological agents and biologically derived substances specifically developed, configured, adapted, or modified for the purpose of increasing their capability to produce casualties in humans or livestock, degrade equipment or damage crops.

(f) Equipment and its components, parts, accessories, and attachments specifically designed or modified for military operations and compatibility with military equipment as follows:

- The dissemination, dispersion or testing of the biological agents listed in paragraph (b);
- The detection, identification, warning or monitoring of the biological agents listed in paragraph (b);
- Sample collection and processing of the biological agents listed in paragraph (b);
- Individual protection against the biological agents listed in paragraph (b);
- Collective protection against the biological agents listed in paragraph (b);
- Decontamination or remediation of the biological agents listed in paragraph (b).

Additional items associated with, or specific to, the biological agents listed in paragraph (b) are also controlled under the ITAR including medical countermeasures (pre- and post-treatments, vaccines, antidotes, medical diagnostics); modeling or simulation tools; equipment, components, parts, accessories and attachments, exclusive of incinerators specifically designed/modified for the destruction of biological agents in paragraph (b); technical data and defense services.

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