

Institutional Biosafety Reviewable Agents

Class 1 Agents: All bacterial, parasitic, fungal, viral, rickettsial and chlamydial agents not included in higher classes.

Class 2 Agents:

Bacterial Agents:

- *Acinetobacter calcoaceticus*
- *Actinobacillus* (all species, except *mallei* [Class 3])
- *Aeromonas hydrophila*
- *Arizona hinshawii* (all serotypes)
- *Bacillus anthracis*
- *Bordetella* (all species)
- *Borrelia recurrentis*, *B. vincenti*
- *Campylobacter fetus*
- *Campylobacter jejuni*
- *Chlamydia psittaci*
- *Chlamydia trachomatis*
- *Clostridium botulinum*, *Cl. chauvoei*, *Cl. haemolyticum*, *Cl. histolyticum*, *Cl. novyi*, *Cl. speticum*, *Cl. tetani* *Corynebacterium diphtheriae*, *C. equi*, *C. haemolyticum*, *C. pseudotuberculosis*, *C. pyogenes*, *C. renale*
- *Edwardsiella tarda*
- *Erysipelothrix insidiosa*
- *Escherichia coli* (all enteropathogenic, enterotoxigenic, enteroinvasive & strains bearing K1 antigen)
- *Haemophilus ducreyi*, *H. influenzae*
- *Klebsiella* (all species & serotypes)
- *Legionella pneumophila*
- *Leptospira interrogans* (all serotypes)
- *Listeria* (all species)
- *Moraxella* (all species)
- *Mycobacteria* (all species-except Class 3)
- *Mycoplasma* (all species-except *Mycoplasma mycoides* & *Mycoplasma agalactiae*, Class 5)
- *Neisseria gonorrhoeae*, *N. meningitidis*
- *Pasteurella* (all species-except Class 3)
- *Salmonella* (all species & serotypes)
- *Shigella* (all species & serotypes)
- *Sphaerophorus necrophorus*
- *Staphylococcus aureus*
- *Streptobacillus moniliformis*
- *Streptococcus pneumoniae*
- *Streptococcus pyogenes*

- *Treponema carateum*, *T. pallidum* & *T. pertenue*
- *Vibrio cholerae*
- *Vibrio parahemolyticus*
- *Yersinia enterocolitica*

Fungal Agents:

- Actinomycetes (*Nocardia* and *Actinomyces* species and *Arachnia propionica*)
- *Blastomyces dermatitidis*
- *Cryptococcus neoformans*
- *Paracoccidioides braziliensis*

Parasitic Agents:

- *Endamoeba histolytica*
- *Leishmania* sp.
- *Naegleria gruberi*
- *Schistosoma mansoni*
- *Toxoplasma gondii*
- *Toxocara canis*
- *Trichinella spiralis*
- *Trypanosoma cruzi*

Viral, Rickettsial & Chlamydial agents:

- Adenoviruses (human--all types)
- Cache Valley virus
- Corona viruses
- Coxsackie A & B viruses
- Cytomegaloviruses
- Echoviruses (all types)
- Encephalomyocarditis virus (EMC)
- Flanders virus
- Hart Park virus
- Hepatitis (associated antigen material)
- Herpes viruses (except *Herpesvirus simiae*, Monkey B virus--Class 4)
- Influenza viruses (all types except A/PR8/34--Class 1)
- Langat virus
- Lymphogranuloma venereum agent
- Measles virus
- Mumps virus
- Parainfluenza virus (all types except Parainfluenza virus 3, SF4--Class 1)
- Polioviruses (all types, wild & attenuated)
- Poxviruses (all types--except Alastrim, Smallpox, Whitepox--Class 5 and Monkey pox--Class 3 or 4)
- Rabies virus (all strains--except Rabies street virus--Class 3)

- Reoviruses (all types)
- Respiratory syncytial virus
- Rhinoviruses (all types)
- Rubella virus
- Simian viruses (all types-except Herpesvirus simiae [Monkey B virus], Marburg virus-Class 4)
- Sindbis virus
- Tensaw virus
- Turlock virus
- Vaccinia virus
- Varicella virus
- Vesicular stomatitis virus [3]
- Vole rickettsia
- Yellow fever virus, 17D vaccine strain

Class 3 Agents:

Bacterial Agents:

- Bartonella (all species)
- Brucella (all species)
- Francisella tularensis
- Mycobacterium avium, M. bovis, M. Tuberculosis
- Pasteurella multocida, type B ("buffalo" and other foreign virulent strains) [3]
- Pseudomonas mallei [3]
- Pseudomonas pseudomallei [3]
- Yersinia pestis

Fungal Agents:

- Coccidioides immitis
- Histoplasma capsulatum
- Histoplasma capsulatum var. duboisii

Viral, Rickettsial & Chlamydial Agents:

- Monkey pox (when used in vitro) [4]
- Arboviruses (all strains-except Class 2 & 4)
- Arboviruses (from US in Class 3-except Class 2), West Nile & Semliki Forest viruses (classified up or down)
- Dengue virus (when used for transmission or animal inoculation experiments)
- Lymphocytic choriomeningitis virus (LCM)
- Rabies street virus
- Rickettsia (all species-except Vole Rickettsia used for transmission, animal inoculation experiments)
- Yellow fever virus (wild, when used in vitro)

Class 4 Agents:

Bacterial Agents: None

Fungal Agents: None

Parasitic Agents: None

Viral, Rickettsial & Chlamydial Agents:

- Ebola fever virus
- Monkey pox (when used for transmission or animal inoculation experiments) [4]
- Hemorrhagic fever agents, including Crimean hemorrhagic fever, (Congo), Junin and Machupo viruses
- Lassa virus
- Marburg virus
- Tick-borne encephalitis virus complex, including Russian spring-summer encephalitis, Kyasanur forest disease, Omsk hemorrhagic fever and Central European encephalitis viruses
- Venezuelan equine encephalitis virus, epidemic strains (used for transmission or animal inoculation experiments)
- Yellow fever virus (wild, used for transmission or animal inoculation experiments)

Classification of Oncogenic Viruses on Basis of Potential Hazard Low-Risk:

- Ad7-SV40
- Adenovirus
- Avian Leukosis
- Bovine Leukemia
- Bovine papilloma
- CELO
- Dog Sarcoma
- Guinea Pig Herpes
- Hamster Leukemia
- Lucke (Frog)
- Marek's
- Mason-Pfizer Monkey Virus
- Mouse mammary tumor
- Murine Leukemia
- Murine Sarcoma
- Polyoma
- Rat Leukemia
- Rat mammary tumor
- Rous Sarcoma
- Shope Fibroma
- Shope Papilloma

- SV-40

Moderate Risk:

- Ad2-SV40
- EBV
- FeLV
- FeSV
- GaLV
- HV Ateles
- HV Saimiri
- SSV-1
- Yaba

Class 5 Agents:

Animal Disease Organisms forbidden entry into U.S. by law: Foot & Mouth disease viruses
Organisms & Vectors Forbidden:

- African horse sickness virus
- African swine fever virus
- *Besnoitia besnoiti*
- Borna disease virus
- Bovine infectious petechial fever
- Camel pox virus
- Ephemeral fever virus
- Fowl plague virus
- Goat pox virus
- Hog cholera virus
- Louping ill virus
- Lumpy skin disease virus
- *Mycoplasma agalactiae* (contagious agalactia of sheep)
- *Mycoplasma mycoides* (contagious bovine pleuro-pneumonia)
- Nairobi sheep disease virus
- Newcastle disease virus (Asiatic strains)
- *Rickettsia ruminantium* (heart water)
- Rift valley fever virus
- Rhinderpest virus
- Sheep pox virus
- Swine vesicular disease virus
- Teschen disease virus
- *Theileria annulata*
- *Theileria bovis*
- *Theileria hirci*
- *Theileria lawrencei*
- *Theileria parva* (East Coast fever)

- Trypanosoma evansi
- Trypanosoma vivax (naganal)
- Vesicular exanthema virus
- Wesselsbron disease virus
- Zyonema

Organisms which may not be studied in the U.S. except at specified facilities:

Alastrim [4] Small pox [4] White pox [4] Federal Register/Vol. 49-No. 227/Friday, November 23, 1984/ Notices