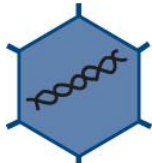



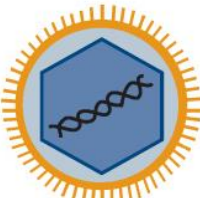



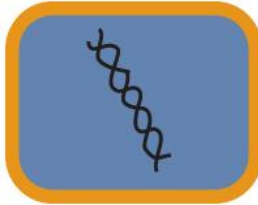


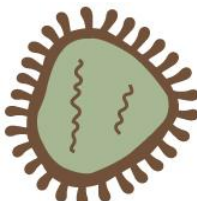





Selected* Viral Families, Viruses and Species Affected

		Virus Family (relative size) SS = single stranded DS = double stranded	Foreign Animal Disease (for US)	Zoonotic (Z)	Virus (Disease)	Humans Affected	Animal Species Affected	
DNA Virus Families								
D N A	NE	Adenoviridae  80 – 100 nm DS linear			Bovine adenoviruses A, B, C		B	
					Canine adenovirus (infectious canine hepatitis)		C	
					Caprine adenovirus		Cp	
					Equine adenoviruses A, B		Eq	
					Fowl adenoviruses A – E		A	
					Human adenoviruses A – F (respiratory and/or ocular disease)		H	NHP
					Ovine adenoviruses A, B, C		O	
					Porcine adenoviruses A, B, C		P	
D N A	E	Asfarviridae  175 – 215 nm DS linear	Φ		African swine fever		P	
D N A	NE	Circoviridae  17 – 22 nm SS circular			Chicken anemia virus		A	
					Porcine circovirus		P	
					Psittacine beak and feather disease virus		A	
D N A	E	Hepadnaviridae  42 nm partial DS circular		Z	Hepatitis B virus		H	NHP
D N A	E	Herpesviridae  150 - 200 nm DS linear	Φ		Alcelaphine herpesvirus-1 (malignant catarrhal fever)		B, Cv	
					Avian herpesvirus 1 (infectious laryngotracheitis)		A	
					Bovine herpesvirus 1 (infectious bovine rhinotracheitis)		B	
					Bovine herpesvirus 2 (pseudo-lumpy skin disease, bovine mammillitis)		B	
					Bovine herpesvirus 3/ bovine cytomegalovirus		B	
					Canine herpesvirus 1, 2 (hemorrhagic disease of pups)		C	
					Caprine herpesviruses 1, 2		Cp	
					Equine herpesvirus 1 (equine viral rhinopneumonitis; equine abortion)		Eq	
					Equine herpesvirus 2		Eq	
					Equine herpesvirus 3 (equine coital exanthema)		Eq	
					Equine herpesvirus 4 (equine viral rhinopneumonitis)		Eq	
					Feline viral rhinotracheitis virus		F	
					Human herpes simplex virus 1	H	NHP	
					Human herpes simplex virus 2	H		
					Human herpesvirus 3/ varicella-zoster virus (chicken pox, shingles)	H		
Human herpesvirus 4/ Epstein Barr virus	H							
Human herpesvirus 5/ human cytomegalovirus	H							
Human herpesviruses 6, 7 (roseola infantum)	H							

Selected* Viral Families, Viruses and Species Affected





		Virus Family (relative size) SS = single stranded DS = double stranded	Foreign Animal Disease (for US)	Zoonotic (Z)	Virus (Disease)	Humans Affected	Animal Species Affected
		Herpesviridae (continued)			Ictalurid herpesvirus 1 (channel catfish virus disease)		Fish
					Koi herpesvirus disease		Fish
					Marek's disease virus		A
				Φ	Oncorhynchus masou virus disease (or salmonid herpesvirus type 2 disease)		Fish
					Ovine herpesvirus-1		O
					Ovine herpesvirus-2 (malignant catarrhal fever)		B, Cp, Cv, O, P
					Porcine herpesvirus 2/ porcine cytomegalovirus		P
				Pseudorabies virus (Aujeszky's disease)		B, C, Cp, F, O, P	
DNA	NE	Iridoviridae  125 – 300 nm DS linear	Φ		Epizootic haematopoietic necrosis (EHN)		Fish
					Largemouth bass disease		Fish
DNA	NE	Papovaviridae  45 - 55 nm DS circular			Bovine papillomavirus		B
					Equine papillomavirus		Eq
					Human papillomavirus		H
DNA	NE	Parvoviridae  18 - 26 nm SS linear			Adeno-associated viruses 1-6		H
					B19 virus		H
					Canine minute virus/ canine parvovirus 1		C
					Canine parvovirus 2 ("parvo")		C
					Feline panleukopenia virus (Feline parvovirus)		F
				Porcine parvovirus		P	
DNA	E	Poxviridae  250 X 200 X 200 nm DS linear		Z	Bovine papular stomatitis virus		H B
				Z	Contagious ecthyma/contagious pustular dermatitis/orf virus		H C, Cp, Cv
				Φ Z	Cowpox virus		H B, F, R
					Feline pox virus		F
					Fowlpox virus		A
				Φ	Lumpy skin disease virus		B, Bf
				Φ Z	Monkeypox virus		H NHP, R
				Z	Pseudocowpox virus (milker's nodules)		H B
				Φ	Sheep and goat pox viruses		Cp, O
					Smallpox virus (Variola)		H
		Swinepox virus		P			
		Z	Vaccinia virus		H B, L, P		

Selected* Viral Families, Viruses and Species Affected


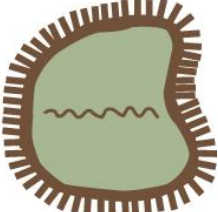


		Virus Family (relative size) SS = single stranded DS = double stranded	Foreign Animal Disease (for US)	Zoonotic (Z)	Virus (Disease)	Humans Affected	Animal Species Affected
RNA	E	Arenaviridae  110 - 300 nm SS linear segments	Φ	Z	Lassa virus	H	NHP, R
				Z	Lymphocytic choriomeningitis virus	H	C, NHP, P, R
			Φ	Z	Machupo virus (Bolivian hemorrhagic fever)	H	NHP, R
RNA	E	Arteriviridae  50 - 70 nm SS linear			Equine arteritis virus (equine viral arteritis)		Eq
					Lactate dehydrogenase elevating virus		R
					Porcine respiratory and reproductive syndrome virus		P
					Simian hemorrhagic fever virus		NHP
RNA	NE	Astroviridae  28 - 30 nm SS linear			Avian nephritis viruses 1, 2		A
					Bovine astrovirus		B
					Feline astrovirus (gastroenteritis)		F
					Human astroviruses 1-8 (gastroenteritis)		H
					Ovine astrovirus (gastroenteritis)		O
					Porcine astrovirus (porcine acute gastroenteritis)		P
RNA	NE	Birnaviridae  60 nm DS linear segments			Infectious bursal disease virus		A
					Infectious pancreatic necrosis (IPN) (hemorrhagic kidney syndrome)		Fish
RNA	E	Bunyaviridae  80 - 120 nm SS linear segments	Φ		Akabane virus (Akabane/congenital arthrogryposis-hydranencephaly)		B, Cp, O
					Cache Valley virus	H	B, O
				Z	California encephalitis virus	H	R
			Φ	Z	Crimean-Congo hemorrhagic fever virus	H	A, B, C, L, O
			Φ*	Z	Hantaviruses (various serotypes)*	H	R
				Z	Jamestown Canyon virus	H	Cv
				Z	La Crosse virus (La Crosse encephalitis)	H	Cp, Cv, R
			Φ	Z	Nairobi sheep disease virus	H	Cp, O, R
Φ	Z	Rift Valley fever virus	H	B, C, Cp, F, O			
RNA	NE	Caliciviridae  30 -38 nm SS linear			Bovine enteric calicivirus		B
					Canine calicivirus		C
					Feline caliciviruses (upper respiratory disease)		F
					Fowl calicivirus		A
				Z	Hepatitis E virus	H	P
					Noroviruses (Norwalk and Norwalk-like viruses)	H	
					Porcine enteric calicivirus		P
			Φ		Rabbit hemorrhagic disease virus		L
					San Miguel sea lion virus		Other, P
			Φ	Z	Vesicular exanthema of swine virus (vesicular exanthema)	H	B, Eq, NHP, P

A=avian; B=bovine; Bt=bat; C=canine; Cp=caprine; Cv=cervine; Eq=equine; F=feline; Fr=ferret; H=human; L=lagomorph; R=rodent; NHP=non-human primate; O=ovine; P=porcine; **Diseases in RED or with a Φ = Foreign Animal Diseases**

Selected* Viral Families, Viruses and Species Affected

R N A	E: Enveloped NE: Nonenveloped	Virus Family (relative size) SS = single stranded DS = double stranded	Foreign Animal Disease (for US)	Zoonotic (Z)	Virus (Disease)	Humans Affected	Animal Species Affected
R N A	E	Coronaviridae  80 – 160 nm SS linear			Avian infectious bronchitis virus	A	
					Bovine coronavirus	B	
					Canine coronavirus	C	
					Feline enteric coronaviruses	F	
					Feline infectious peritonitis virus	F	
					Human coronaviruses (colds)	H	
			Φ		Porcine epidemic diarrhea virus	P	
					Porcine hemagglutinating encephalomyelitis virus	P	
			Φ	Z	Severe acute respiratory syndrome (SARS) virus	H	F
					Transmissible gastroenteritis (TGE) virus	P	
		Turkey coronavirus (bluecomb disease)	A				
R N A	E	Filoviridae  790 – 970 X 80 nm SS linear	Φ	Z	Ebola virus	H	NHP
			Φ	Z	Marburg virus	H	NHP
R N A	E	Flaviviridae  45 – 60 nm SS linear			Border disease virus	O	
					Bovine viral diarrhea (BVD) viruses 1, 2	B	
			Φ		Classical swine fever virus (hog cholera)	P	
			Φ	Z	Dengue virus	H	NHP
					Hepatitis C virus	H	
			Φ	Z	Japanese encephalitis virus	H	A, P
			Φ	Z	Louping ill virus	H	A, B, C, Cp, Cv, Eq, O, P, R
			Φ	Z	Murray valley encephalitis virus	H	A, B, C, Eq
			Φ	Z	Omsk hemorrhagic fever virus	H	R
				Z	St. Louis encephalitis virus	H	A, Eq
			Φ	Z	Tick-borne encephalitis viruses (various subtypes)	H	B, C, Cp, O, R
			Φ	Z	Yellow fever virus	H	NHP
Φ	Z	Wesselsbron virus	H	B, Cp, O			
	Z	West Nile Virus (WNV) (West Nile fever)	H	A, Eq			
R N A	NE	Nodaviridae  30 nm SS linear			Viral encephalopathy and retinopathy (viral nervous necrosis)		Fish

Selected* Viral Families, Viruses and Species Affected

		Virus Family (relative size) SS = single stranded DS = double stranded	Foreign Animal Disease (for US)	Zoonotic (Z)	Virus (Disease)	Humans Affected	Animal Species Affected
RNA	E	 80 - 120 nm SS linear segments			Infectious salmon anemia		Fish
			Z		Influenza virus A:	H	A, Eq, F, Fr, P
					Avian influenza	H	A, Eq, P
					Equine influenza		Eq
			Z		Swine influenza	H	A, P
					Human influenza	H	Fr, P
			Z		Influenza virus B: (human influenza)	H	Fr
					Influenza virus C: (human influenza)	H	P
RNA	E	 150 - 300 nm SS linear	Φ	Z	Avian paramyxovirus type 1 (Newcastle disease)	H	A
					Avian paramyxoviruses 2-9		A
					Bovine respiratory syncytial virus (BRSV)		B, O
					Canine distemper virus		C, Fr
					Canine parainfluenza virus		C
			Φ	Z	Hendra virus	H	Bt, Eq, F
					Human parainfluenza viruses 1-4	H	
					Measles virus	H	NHP
					Mumps virus	H	
			Φ	Z	Nipah virus	H	Bt, C, Cp, Eq, F, O, P
					Parainfluenza 3 virus	H	B, O
					Peste de petitis ruminants virus		Cp, O
		Respiratory syncytial virus	H				
		Rinderpest virus		B, Cp, O, P			
RNA	NE	 28 - 30 nm SS linear			Avian enteroviruses (encephalomyelitis, hepatitis)		A
					Bovine enteroviruses		B
					Bovine rhinoviruses		B
				Z	Encephalomyelocarditis virus (encephalomyelocarditis)	H	NHP, P, R
					Equine rhinoviruses 1, 2		Eq
			Φ		Foot and mouth disease virus ^Y	H ^Y	B, Ca, Cp, Cv, O, P
				Z	Human hepatitis A virus	H	NHP
					Human rhinoviruses	H	
					Poliovirus	H	
			Φ		Porcine enteroviruses (porcine enteroviral encephalomyelitis/ Teschen-Talfan disease)		P
Φ	Z	Swine vesicular disease virus	H	P			
RNA	NE	 60 - 80 nm DS linear segments	Φ		African horse sickness viruses 1-10		Eq
					Avian orthoreoviruses		A
					Bluetongue viruses 1-24		B, Cp, Cv, O
				Z	Colorado tick fever virus	H	R
					Epizootic hemorrhagic disease viruses		B, Cv, O
					Rotaviruses, group A to F (rotaviral gastroenteritis)	H	B, Eq, L, O, P, R

Selected* Viral Families, Viruses and Species Affected

	E: Enveloped NE: Nonenveloped	Virus Family (relative size) SS = single stranded DS = double stranded	Foreign Animal Disease (for US)	Zoonotic (Z)	Virus (Disease)	Humans Affected	Animal Species Affected
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* Unconfirmed mild human cases have been reported.


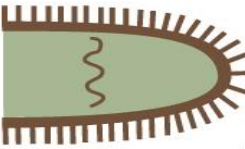

RNA	E	 <p>80 – 130 nm 2 copies SS linear</p>			Avian leukosis virus		A	
					Bovine immunodeficiency virus		B	
					Bovine leukemia virus (BLV)		B	
					Caprine arthritis-encephalitis virus		Cp, O	
					Equine infectious anemia virus (EIA)		Eq	
					Feline immunodeficiency virus (FIV)		F	
					Feline leukemia virus (FeLV)		F	
					Human immunodeficiency viruses (HIV-1, HIV-2) (acquired immunodeficiency syndrome - AIDS)		H	
					Human T-lymphotropic viruses 1, 2		H	
					Maedi-visna virus (ovine progressive pneumonia)		Cp, O	
					Ovine pulmonary adenocarcinoma virus (pulmonary adenomatosis)		Cp, O	
					Simian immunodeficiency virus		NHP	
					Simian leukemia viruses 1-3		NHP	
RNA	E	 <p>180 X 75 nm SS linear</p>	Φ		Bovine ephemeral fever virus		B	
					Infectious hematopoietic necrosis (IHN)		Fish	
				Z		Rabies	H	All mammals
						Spring viremia of carp		Fish
				Z		Vesicular stomatitis virus (Indiana 1 and New Jersey subtypes)	H	B, Cp, Eq, O, P
				Φ Z		Vesicular stomatitis virus (Indiana 2 and 3 subtypes)	H	B, Cp, Eq, O, P
			Viral hemorrhagic septicemia (Egtved disease)		Fish			
RNA	E	 <p>70 nm SS linear</p>		Z	Eastern equine encephalitis virus (EEE)	H	A, Bt, Eq, P, R	
					Rubella virus	H		
				Z		Venezuelan equine encephalitis virus (VEE)	H	A, Eq, R
						Spring viremia of carp		Fish
				Z		Western equine encephalitis virus (WEE)	H	A, Eq

Chart researched and compiled by Kristine Edwards, MA, DVM, MPH; Anna Rovid-Spickler, DVM, PhD and Glenda Dvorak, DVM, MS, MPH.

References:

Aiello SE, Mays A, editors. The Merck Veterinary Manual. 8th Edition. Whitehouse Station, NJ; Merck and Co: 1998.

All the Virology on the WWW. Available at <http://www.tulane.edu/~dmsander/ATVGlossary.html>

American Society for Virology. Available at <http://www.mcw.edu/asv/>

Big Picture Book of Viruses. Available at http://www.virology.net/Big_Virology.html

Flint SJ, Enquist LW, Racaniello VR, Skalka AM. Principles of Virology, Molecular Biology, Pathogenesis and Control of Animal Viruses. 2nd Edition. American Society of Microbiology, 2003. Princeton University, NJ.

Gelderblom HR. Structures and Classification of Viruses. 1996. Medical Microbiology. Baron S, editor. Available at <http://www.qsbs.utmb.edu/microbook/toc.htm>

International Committee on Taxonomy of Viruses [ICTV]. Universal Virus Database [onLine]. ICTV; 2002. Available at <http://www.ncbi.nlm.nih.gov/ICTVdb/ICTVdb/index.htm> Accessed May 2005.

MedBio World Virology. Available at <http://www.sciencekomm.at/both/assocdb/virology.html>

Murphy FA, Gibbs EPJ, Horzinek MC, Studdert MJ. Veterinary Virology, 3rd Edition. San Diego: Academic Press, Inc.; 1999.

The Journal of Virology. American Society of Microbiology. Available at <http://jvi.asm.org>

The Virology Journal. Available at <http://www.virologyj.com>

Virus family graphics adapted with permission from Medical Microbiology, 4th edition, Baron S., editor. 1996. Available at http://qsbs.utmb.edu/microbook/images/fig41_6.jpg

*This table was developed as a supplement for the CFSPH "Disinfection 101" document (<http://www.cfsph.iastate.edu/BRM/disinfectants.htm>) which provides an overview of important principles for the development of disinfection protocols, including how to choose an appropriate disinfectant. We expect this virus table to be useful for veterinarians, veterinary students and graduate students in virology. The mammalian, avian and fish viruses selected are those we perceive to be the ones veterinarians will most likely need to know about.

