

Table S2: Characteristic Table and list of the included studies

n.Ref	Year	Sample size	Host	Specimen	Genome	Sequencing	Assembly	Virus	Viral Families	Provenance of the sample	WHO Regions	Extraction kits	Extraction methods	Enrichment methods
[1]	2021	195	animal	fecal samples	RNA	illumina	De novo	Aichivirus D	Picornaviridae,	China	South-East Asia region	NucleoSpin RNA Stool kit (Macherey-Nagel)	Silica membrane-based	
[2]	2015	6	environment	water	DNA	illumina	/	Several	Circoviridae, Unclassified	Arctic		Phenol-chloroform extraction method	Solvent-based	tangential flow filtration
[3]	2018	1	plant	plants	RNA	illumina	/	prunus geminivirus	Geminiviridae,	California	America region	/	ND	
[4]	2019	2	environment	water	DNA	illumina	De novo	Phycodnavirus	Phycodnaviridae,	Chile	America region	/	ND	pore filtration
[5]	2021	5	environment	water	DNA	illumina	/	Pp_CBA virus, PaV virus	Myoviridae, Phycodnaviridae	Southern Ocean		Formamide Procedure	Solvent-based	tangential flow filtration
[6]	2014	1	animal	blood	RNA	Roche_454	/	paramyxovirus	Paramyxoviridae,	Uganda	Africa region	/	ND	
[7]	2018	6	animal	tissue pools	DNA	illumina	De novo	amdoparvovirus	Parvoviridae,	Sacramento	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[8]	2020	17	animal	tissue pools	DNA	illumina	De novo	Circoviridae, Parvoviridae, Anelloviridae, Polyomaviridae, and Papillomaviridae	Parvoviridae, Anelloviridae, Circoviridae, Papillomaviridae, Polyomaviridae,	California	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[9]	2020	1	animal	mesenteric lymph node	DNA	illumina	De novo	parvovirus, polyomavirus, rotavirus, anellovirus	Parvoviridae, Anelloviridae, Reoviridae, Polyomaviridae	California	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[10]	2021	6	animal	lung swab	DNA and RNA	illumina	De novo	Parvoviruses and Picornavirus	Picornaviridae, Parvoviridae	California	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[11]	2019	ND	animal	gut	RNA	illumina	De novo	Cyprivirus	Picornaviridae,	North America, Europe, and Asia	America region, European region and	MagMAX Viral RNA Isolation kit	Magnetic beads-based	

												South-East Asia region					
[12]	2019	68	animal	plasma and cerobrospinal fluid	DNA	Roche_454	De novo	parvovirus	Parvoviridae,	/			MagMAX Viral RNA Isolation kit	Magnetic beads-based			
[13]	2019	57	animal	nasal swabs	DNA	illumina	De novo	taupapillomaviruses	Papillomaviridae,	/			MagMAX Viral RNA Isolation kit	Magnetic beads-based			
[14]	2017	ND	environment	compost sample	DNA	illumina	/	Pseudomonas phages	Siphoviridae,	Brazil	America region		PowerSoil Max kit (MO BIO)	Silica membrane-based		pore filtration	
[15]	2021	1	environment	sewage waters	DNA	illumina	De novo	Fadolivirus	Mimiviridae,	Algeria	Africa region		EZ1 Advanced XL device (Qiagen)	Magnetic beads-based			
[16]	2019	492	animal	serum, nasal and throat swabs, stools, cerebrospinal fluid	DNA and RNA	illumina	De novo	several	Adenoviridae, Coronaviridae, Nodaviridae, Picornaviridae, Picobirnaviridae, Parvoviridae, Papillomaviridae, Partitiviridae, Reoviridae, Rhabdoviridae, Totiviridae, Unclassified	Vietnam	South-East Asia region		QIAamp viral RNA kit (Qiagen)	Silica membrane-based			
[17]	2015	40	animal	swab samples	DNA	illumina	/	hpv	Papillomaviridae,	Sweden	European region		MagNA Pure LC - Total Nucleic Acid Kit (Roche)	Magnetic glass particles-based			
[18]	2014	Database	animal	muscle tissue	DNA	illumina and sanger	/	Herpesvirus	Herpesviridae,	Germany	European region		/	ND			
[19]	2017	Database	animal	fish	DNA	sanger	/	Herpesvirus	Herpesviridae,	Oxford	European region		DNeasy Blood & Tissue Kit (Qiagen)	Column-based			
[20]	2014	2	environment	wastewater	DNA	illumina	/	Cyclovirus	Cycloviridae,	Philippine	South-East Asia region		QIAamp MinElute Virus Spin Kit (Qiagen), RNeasy Plus Mini Kit (Qiagen)	Column-based, Column-based		PEG precipitation	
[21]	2014	27	animal	fecal samples	DNA and RNA	illumina	De novo	sapovirus, kobuvirus, PBV, PBoV-2 and PBoV-4	Caliciviridae, Picornaviridae	China	South-East Asia region		QIAamp viral RNA mini kit (Qiagen)	Other/multiple type			

[22]	2019	3	environment	sediments	DNA	illumina	De novo	pythoviruses, marseilleviruses, iridoviruses, klosneuviruses	Pithoviridae, Marseilleviridae, Iridoviridae, Mimiviridae	Atlantic Ocean		/	ND	ultracentrifugation
[23]	2015	2	plant	wood tissue	RNA	illumina	De novo	Luteovirus	Luteoviridae,	California	America region	/	ND	
[24]	2020	ND	animal	insects	RNA	illumina	/	flaviviruses	Flaviviridae,	Cambodia and Thailand	Western Pacific region	QIAamp viral RNA mini kit (Qiagen) GeneJet Viral DNA and RNA Purification Kit (Thermo Fisher)	Other/multiple type	
[25]	2017	10	animal	fecal samples	RNA	Ion Torrent	De novo	rotaviruses	Reoviridae,	Serbia	European region		Column-based	
[26]	2018	Database	animal	nasopharyngeal aspirates, serum, feces, and cerebrospinal fluid	DNA	illumina	/	Torque Teno virus (TTV)	Anelloviridae,	Sweden	European region	/	ND	
[27]	2020	3	environment	seawater	DNA	illumina	/	Pelagiphages	Podoviridae,	Hawaii	America region	Genomic-tip 20/G purification kit (Qiagen)	Column-based	tangential flow filtration
[28]	2019	12	environment	water	DNA	illumina	De novo	Mamiellales SAG-associated circular virus' (MACV)	Unclassified,	Indian Ocean		multiple displacement amplification (MDA)	Other/multiple type	tangential flow filtration
[29]	2020	91	plant	wood tissue	RNA	illumina	De novo	Potyviridae and Bunyavirales order	Peribunyaviridae, Potyviridae	Several european country	European region	Phenol- chloroform extraction method	Solvent-based	
[30]	2020	30	animal	insects	RNA	illumina	De novo	Bunyavirales	Peribunyaviridae,	Spain	European region	RNeasy Mini Kit (Qiagen)	Silica membrane-based	
[31]	2019	ND	environment	water	DNA	illumina	/	cobaviruses phage	Podoviridae,	North Sea	America region	ChargeSwitch gDNA Mini Bacteria Kit (ThermoFisher Scientific)	Magnetic beads-based	pore filtration
[32]	2010	3	animal	brain sample	RNA	Roche_454	/	astrovirus	Astroviridae,	Denmark	European region	QIAamp DNA Mini Kit (Qiagen) , RNeasy mini kit (Qiagen)	Silica membrane-based, Silica membrane-based	
[33]	2012	3	animal	serum	DNA	Roche_454	/	TTSuV1, TTSuV2, Porcine parvovirus 4	Anelloviridae, Anelloviridae, Parvoviridae,	Uganda	Africa region	QIAamp DNA Mini Kit (Qiagen) ,	Silica membrane-based, Silica	

												RNeasy mini kit (Qiagen)	membrane-based	
[34]	2016	8	animal	lymph nodes	RNA	Roche_454	De novo	circoviruses	Circoviridae,	Sweden	European region	QIAamp DNA Mini Kit (Qiagen) , RNeasy mini kit (Qiagen)	Silica membrane-based, Silica membrane-based	
[35]	2019	180	animal	insects	RNA	illumina	De novo	Nairoviridae family	Bunyaviridae,	Brazil	America region	Genjet RNA extraction kit (Thermo Fisher)	Column-based	
[36]	2016	ND	plant	leaves	RNA	illumina	De novo	Macluravirus	Potyviridae,	New Zealand	South-East Asia region	beads, termo fisher	Magnetic beads-based	
[37]	2015	ND	animal	swab samples	DNA	Roche_454	/	Gammaherpesvirus	Herpesviridae,	Netherlands	European region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube	
[38]	2020	98	animal	oral/anal swab	DNA	illumina	De novo	Gemykibivirus, Papillomavirus	Genomoviridae, Papillomaviridae	Argentina	America region	/	ND	
[39]	2012	7	environment	hot spring samples	RNA	Roche_454	/	Nodaviruses, Tetraviruses, Birnaviruses	Nodaviridae, Tetraviridae, Birnaviridae,	United States	America region	mirVana miRNA isolation kit	Column-based	pore filtration
[40]	2015	10	environment	hot spring samples	DNA	illumina	/	several	/,	United States	America region	DNA/RNA Viral Extraction Kit (Invitrogen)	Silica membrane-based	ultracentrifugation
[41]	2020	ND	environment	water	DNA	illumina	De novo	Yaravirus	Unclassified,	Brazil	America region	/	ND	ultracentrifugation
[42]	2020	111	animal	fecal samples	RNA	illumina	/	Sapelovirus (family Picornaviridae)	Picornaviridae,	Hungary	European region	TRI reagent (Sigma-Aldrich)	Solvent-based	
[43]	2017	717	plant	leaves	DNA	Roche_454	De novo	Mastrevirus	Geminiviridae,	Florida and Guadeloupe	America region	/	ND	
[44]	2014	25	animal	brain sample	RNA	illumina	De novo	Astrovirus	Astroviridae,	Switzerland	European region	Nucleon Bacc2 kit (GE Healthcare), TRIzol reagents	Solvent-based, Solvent-based	

[45]	2016	7	animal	Trematomus pennellii	DNA	illumina	De novo	polyomavirus	Polyomaviridae,	Ross Sea		/	ND		
[46]	2020	27	animal	fecal samples, liver, and ectoparasite samples	RNA	illumina	De novo	picornavirus	Picornaviridae,	Australia	South-East Asia region	RNeasy Plus Mini Kit (Qiagen)	Column-based		
[47]	2013	ND	plant	tomato	RNA	Roche_454	/	Totiviridae and Partitiviridae	Partiviridae,	France	European region	/	ND		
[48]	2021	29	animal	spleen and lung	DNA	illumina	De novo	Anellovirus, Circovirus	Anelloviridae, Circoviridae	South American	America region	TRI reagent (Sigma-Aldrich)	Solvent-based		
[49]	2017	54	animal	organs and skin lesions	DNA	Ion Torrent	De novo	Orthopoxvirus	Poxviridae,	Italy	European region	/	ND		
[50]	2018	68	environment	water	DNA and RNA	illumina	/	Chuviridae, Yanvirus, Weivirus, Zhaovirus, Qinvirus, Yuevirus	Chuviridae, Unclassified, Unclassified, Qinviridae, Yueviridae			NucleoSpin RNA Midi kits (Macherey-Nagel)	Silica membrane-based		
[51]	2020	1	animal	tumor tissue	DNA	illumina	De novo	papillomavirus	Papillomaviridae,	Australia	South-East Asia region	DNeasy Blood & Tissue Kit (Qiagen)	Column-based		
[52]	2021	10	plant	leaves	RNA	illumina	De novo	Iflavirus	Iflaviridae,	United States	America region	RNeasy Plant Mini Kit (Qiagen)	Column-based		
[53]	2021	125	animal	nasopharyngeal swabs	RNA	illumina	/	Coronavirus	Coronaviridae,	/		QIAamp DNA Mini Kit (Qiagen), QIAamp viral RNA mini kit (Qiagen)	Silica membrane-based		
[54]	2019	2	environment	water	DNA	illumina	/	several	Siphoviridae, Podoviridae, Myoviridae, Adenoviridae, Herpesviridae, Phycodnaviridae, Poxviridae, Mimiviridae, Pandoraviridae,	Peru	America region	ZymoBIOMICS DNA kits (MoBio)	Other/multiple type	pore filtration	
[55]	2013	1	animal	fecal samples	DNA	sanger	/	circo-like virus	Circoviridae,	Brazil	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based		
[56]	2017	177	environment	sewage and reclaimed water samples	DNA	sanger	/	circo-like virus	Circoviridae,	Brazil	America region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube	pore filtration	

[57]	2021	120	animal	plasma	DNA	illumina	/	Anellovirus	Anelloviridae,	Spain	European region	QIAamp DNA Mini Kit (Qiagen)	Silica membrane-based
[58]	2015	ND	animal	insects	RNA	illumina	/	narnavirus	Narnaviridae,	California	America region	MasterPure Complete DNA and RNA Purification kit	Magnetic glass particles-based
[59]	2018	1359	animal	insects	RNA	Ion Torrent	De novo	Uxmal virus, Mayapan virus	Unclassified,	Mexico	America region	TRIzol reagents	Solvent-based
[60]	2013	6	animal	fecal samples	DNA	Roche_454	/	porcine stool-associated circular virus	Smacoviridae,	United States	America region	QIAamp MinEluteVirus Vacuum Kit (Qiagen)	Other/multiple type
[61]	2016	540	animal	insects	RNA	Ion Torrent	/	Cuacua virus	Flaviviridae,	Mozambique	Africa region	TRIzol reagents	Solvent-based
[62]	2019	54	animal	fecal samples	DNA and RNA	illumina	De novo	sapellovirus, astroviruses, rotaviruses, picobirnaviruses, parvoviruses, papillomaviruses, polyomaviruses, gammaherpesvirus	Picornaviridae, Astroviridae, Sedoreoviridae, Picobirnaviridae, Parvoviridae, Papillomaviridae, Polyomaviridae, Hepeviridae	Tasmania	South-East Asia region	RNeasy Plus Mini Kit (Qiagen)	Column-based
[63]	2020	24	animal	spleen, liver and bursa tissues	DNA	illumina	De novo	gyrovirus	Anelloviridae,	Brazil	America region	Phenol-chloroform extraction method	Solvent-based
[64]	2021	10	animal	meats	DNA	illumina	/	genomoviruses	Genomoviridae,	Brazil	America region	TRIzol reagents	Solvent-based
[65]	2019	144	plant	leaves	DNA	illumina	/	mastrevirus	Geminiviridae,	Reunion Island	European region	DNeasy Plant DNA extraction kit (Qiagen)	Silica membrane-based
[66]	2014	ND	animal	insects	RNA	illumina	De novo	rhabdovirus, bunyavirus	Rhabdoviridae, Bunyaviridae	Australia	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[67]	2017	18	animal	fecal samples	DNA and RNA	illumina	/	bocavirus	Parvoviridae,	Portugal	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[68]	2016	9	environment	corals	DNA	illumina	De novo	Herpesvirus	Herpesviridae,	Australia	South-East Asia region	Formamide Procedure	Solvent-based

[69]	2019	Database	environment	multiple ecosystems	DNA	Analyzes sequences obtained in other studies	De novo	several	Myoviridae, Podoviridae, Siphoviridae,	/	/	ND		
[70]	2018	37	animal	buccal swab	DNA	illumina	De novo	Anellovirus, Torqueto virus	Anelloviridae, Anelloviridae	Antartic		High Pure Viral Nucleic Acid kit (Roche)	Filter tube	
[71]	2021	5	plant	leaves	DNA	illumina	/	SiLCV	Geminiviridae,	China	South-East Asia region	/	ND	
[72]	2020	1	environment	water	DNA	illumina	De novo	PA-SR01	Myoviridae,	Singapore	Western Pacific region	QIAamp DNA Mini Kit (Qiagen)	Silica membrane-based	ultracentrifugation
[73]	2021	323	animal	salivary glands	RNA	illumina	De novo	several	Flaviviridae, Partitiviridae, Reoviridae, Phasmaviridae, Rhabdoviridae, Orthomyxoviridae, Picornaviridae,	Brazil	America region	High Pure Viral RNA Kit (Roche)	Filter tube	
[74]	2014	9	animal	lungs, liver and brain	DNA and RNA	illumina	De novo	nairovirus	Bunyaviridae, Orthomyxoviridae	France	European region	RNeasy kit (Qiagen)	Column-based	
[75]	2021	12	animal	blood	DNA	illumina	De novo	circovirus	Circoviridae,	China	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[76]	2021	4	animal	fecal samples	DNA	illumina	De novo	bocaparvovirus	Parvoviridae,	China	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[77]	2021	150	plant	plants	RNA	illumina	De novo	Umbravirus, closterovirus, tritimovirus	Tombusviridae, Closteroviridae, Potyviridae,	France	European region	NucleoSpin kit (Macherey-Nagel)	Silica membrane-based	
[78]	2012	4	plant	leaves	DNA	sanger	/	cassava associated circular DNA virus (CasCV)	Genomoviridae,	England	European region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube	
[79]	2014	nd	animal	larvae	DNA	illumina	/	CRESS-DNA virus	ND,	Ghana	Africa region	Extract-N-Amp (Sigma–Aldrich)	Solvent-based	
[80]	2020	107	plant	leaves	DNA	illumina	/	Begomovirus	Geminiviridae,	Brazil	America region	solvent	Solvent-based	
[81]	2019	93	animal	swab and cloacal samples	RNA	illumina	De novo	picornavirus	Picornaviridae,	Antartic		QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	

[82]	2019	Database	environment	sediments	DNA and RNA	illumina	/	Phages	Fiersviridae, Fiersviridae, Microviridae, Microviridae, Cystoviridae, Siphoviridae Siphoviridae, Myoviridae, Podoviridae, Inoviridae, Microviridae, Cystoviridae	United States	America region	/	ND	fluidic circuit
[83]	2020	102	animal	insects	DNA and RNA	illumina	De novo	several		/		RNA viral extraction kit (Qiagen)	Other/multiple type	
[84]	2017	17	animal	venous blood, spleen, thymus, and lung	DNA	illumina	De novo	polyomavirus	Polyomaviridae,	California	America region	DNeasy Blood & Tissue Kit (Qiagen), QIAamp DNA FFPE Tissue Kit (Qiagen)	Column-based, Column-based	
[85]	2014	1	environment	surface water	DNA	illumina	De novo	Podovirus, siphovirus	Podoviridae, Siphoviridae	California	America region	/	ND	pore filtration
[86]	2018	Database	animal	Database, ant tissue	DNA	sanger	/	circovirus	Circoviridae,	/		/	ND	
[87]	2016	ND	animal	gut	DNA and RNA	illumina	De novo	chicken megrovirus, sicinivirus 1	Picornaviridae, Picornaviridae	UK	European region	Ribopure RNA extraction kit (Life Technologies)	Other/multiple type	
[88]	2012	1	environment	pore water	DNA and RNA	Roche_454	/	BSL RDHV	Unclassified,	California	America region	Phenol-chloroform extraction method	Solvent-based	tangential flow filtration
[89]	2018	1	animal	skin	DNA	illumina	De novo	adomavirus	Adomaviridae,	/		QIAquick viral RNA column purification system	Column-based	
[90]	2018	1	animal	serum and liver	DNA	illumina	/	parvovirus	Parvoviridae,	Nebraska (USA)	America region	/	ND	
[91]	2015	ND	animal	intestinal content samples	RNA	illumina	De novo	coronavirus	Coronaviridae,	/		High Pure template preparation kit (Roche)	Filter tube	
[92]	2015	ND	animal	mucus samples	DNA and RNA	illumina	/	Porcine astrovirus, sapovirus, Po-Circo-like virus, parvovirus, Rotavirus	Astroviridae, Caliciviridae, Circoviridae, Parvoviridae, Reoviridae,	Europe	European region	Cador Qiagen Pathogen minikit (Hilden)	Column-based	

[93]	2013	2	animal	marine invertebrate species	DNA	sanger	/	circo-like virus	Circoviridae,	Florida	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based
[94]	2018	35	animal	fecal samples	RNA	illumina	De novo	picobirnaviruses, partitivirus, Picornavirales	Picornaviridae, Picobirnaviridae, Partitiviridae,	Congo	Africa region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[95]	2014	Database	animal	fecal samples	DNA	Analyzes sequences obtained in other studies	De novo	CRESS-DNA virus	ND,	/		/	ND
[96]	2019	1	animal	Cerebrospinal fluid and plasma	RNA	illumina	/	orthobunyavirus	Peribunyaviridae,	Uganda	Africa region	Phenol-chloroform extraction method	Solvent-based
[97]	2019	190	animal	cerebrospinal fluid	DNA	illumina	/	betatorquevirus	Anelloviridae,	Ghana	Africa region	MagMAX Viral RNA Isolation kit	Magnetic beads-based
[98]	2018	12	animal	serum	RNA	illumina	De novo	Jingmen tick virus	Flaviviridae,	Kosovo	European region	QIAseq FX DNA Library Kit (Qiagen)	Magnetic beads-based
[99]	2013	ND	animal	bats tissues	DNA and RNA	illumina	/	adenovirus, bocavirus, picobirnavirus, parvovirus	Adenoviridae, Parvoviridae, Picobirnaviridae, Parvoviridae	China	South-East Asia region	/	ND
[100]	2019	9	animal	fecal samples	DNA	illumina	De novo	Chapparvovirus	Parvoviridae,	Colorado	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based
[101]	2020	781	animal	plasma	DNA	illumina	/	parvovirus and densovirus	Parvoviridae, Parvoviridae	Brazil	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based
[102]	2020	652	animal	insects	DNA and RNA	illumina	De novo	Flaviviridae, Rhabdoviridae, Totiviridae, and Iflaviridae families	Flaviviridae, Rhabdoviridae, Iflaviridae, Totiviridae	Japan	South-East Asia region	Isogen II (Nippon Gene)	Solvent-based
[103]	2016	464	animal	insects	RNA	illumina	/	flavivirus, BOAV, GAMV, AToV	Flaviviridae, Totiviridae	Senegal	Africa region	Mag-Bind Viral DNA/RNA kit (Omega)	Magnetic beads-based
[104]	2021	23	animal	fecal samples	DNA	Ion Torrent	De novo	CRESS-DNA virus	ND,	Hungary	European region	Direct-zol RNA Miniprep kit (Zymo Research)	Column-based
[105]	2021	ND	plant	plants	DNA	sanger	/	Genomovirus	Genomoviridae,	United States	America region	PureLink Microbiome DNA purification	Column-based

												kit (Invitrogen)		
[106]	2017	28	environment	leaves	RNA	illumina	De novo	Picornaviruses, hepeviruses	Picornaviridae, Hepeviridae	Spain	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multip le type	chemical flocculation
[107]	2019	406	animal	cloacal swabs	RNA	illumina	De novo	astrovirus	Astroviridae,	French Guiana	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[108]	2020	35	animal	liver, skin, gills	DNA and RNA	illumina	De novo	Betanodaviruses, hepadnaviruses, Rhinovirus A	Nodaviridae, Hepadnaviridae, Picornaviridae,	Portugal	European region	NZYol (NZYTech)	Solvent- based	
[109]	2015	ND	plant	plants	RNA	sanger	/	Potyvirus	Potyviridae,	France	European region	RNeasy Plant Mini Kit (Qiagen)	Column- based	
[110]	2018	214	plant	leaves	DNA and RNA	Roche_454	De novo	Chrysovirus and Umbravirus.	Chrysoviridae, Tombusviridae	Florida	America region	NucleoSpin 96 Virus Core Kit (Macherey- Nagel)	Silica membrane- based	
[111]	2021	36	animal	fecal samples	DNA	illumina	/	Siphoviridae, Myoviridae, Podoviridae, crAss- like viruses	Siphoviridae, Myoviridae, Podoviridae, /	Ireland	European region	/	ND	
[112]	2018	20	plant	leaves	DNA	illumina	De novo	mastrevirus	Geminiviridae,	Brazil	America region	ZR Viral DNA/RNA Kit (Zymo Research)	Other/multip le type	
[113]	2019	2	animal	fecal samples	DNA	illumina	De novo	cyclovirus	Circoviridae,	Brazil	America region	ZR Viral DNA/RNA Kit (Zymo Research)	Other/multip le type	
[114]	2021	13	environment	sediments	DNA	illumina	/	Haloviruses	Unclassified,	Spain	European region	/	ND	
[115]	2019	200	animal	insects	DNA	illumina	De novo	densovirus	Parvoviridae,	France, Greece, Netherlands, Belgium and Portugal	European region	NucleoSpin 96 Virus Core Kit (Macherey- Nagel)	Silica membrane- based	
[116]	2021	16	animal	insects	RNA	illumina	De novo	HpaAV, HpaAV1, HpaAV2	Alphaflexiviridae, Iflaviridae, Iflaviridae,	France	European region	Wizard DNA purification kit (Promega)	Solvent- based	
[117]	2016	378	animal	insects	RNA	illumina	De novo	several	Bunyaviridae, Orthomyxoviridae, Dicistroviridae,	United States	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multip le type	

[118]	2021	12	animal	oral, throat, and anal swab samples	RNA	illumina	/	Picornavirus	Picornaviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[119]	2017	1	animal	fecal samples	RNA	illumina	De novo	Camula virus	Unclassified,	/		/	ND	
[120]	2018	37	animal	insects	DNA and RNA	illumina	De novo	Dicistro-like virus, Seco-like virus, Noda-like virus, Tymo-like virus, ARV-1, Partiti-like virus, Circo-like virus	Dicistroviridae, Secoviridae, Nodaviridae, Tymoviridae, Rhabdoviridae, Partitiviridae, Circoviridae,	Several		MagMAX Viral Isolation Kit (Thermo-Fisher)	Magnetic beads-based	
[121]	2018	ND	plant	plants	DNA	sanger	De novo	nanoviruses	Nanoviridae,	France	European region	DNeasy Plant Mini Kit (Qiagen)	Column-based	
[122]	2013	4	environment	water	DNA	illumina	De novo	myoviruses	Myoviridae,	China	South-East Asia region	QIAamp viral RNA kit (Qiagen)	Silica membrane-based	ultracentrifugation, tangential flow filtration
[123]	2021	230	animal	Dead fish	DNA and RNA	illumina	De novo	several	Hantaviridae, Paramyxoviridae, Arenaviridae, Flaviviridae, Filoviridae, Hepadnaviridae, Rhabdoviridae, Matonaviridae, Picornaviridae, Reoviridae, Astroviridae,	Australia	South-East Asia region	RNeasy Plus Mini Kit (Qiagen)	Column-based	
[124]	2016	10	environment	surface water	DNA	illumina	/	DSLVs	Phycodnaviridae,	China	South-East Asia region	QIAamp Fast DNA Stool Mini Kit (Qiagen)	Silica membrane-based	pore filtration
[125]	2017	42	animal	serum	DNA	illumina	De novo	anellovirus	Anelloviridae,	Spain	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[126]	2018	3	environment	microbial mats	DNA	illumina	/	T7-related virus	Podoviridae,	Patagonia	America region	/	ND	tangential flow filtration
[127]	2020	1	environment	raw sewage	RNA	illumina	/	Picobirnaviridae	Picobirnaviridae,	Chile	America region	High Pure Viral RNA Kit (Roche)	Filter tube	ultrafiltration / ultracentrifugation
[128]	2020	Database	environment	wastewater	DNA	illumina	/	virophage	ND,	New York	America region	PowerSoil DNA Isolation kit (MO BIO)	Silica membrane-based	

[129]	2017	37	animal	fecal samples	DNA	illumina	De novo	Microviridae	Microviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[130]	2021	696	animal	blood and fecal samples	DNA	illumina	De novo	Anellovirus	Anelloviridae,	China	South-East Asia region	/	ND	
[131]	2015	5	animal	chicken proventriculus	RNA	illumina	/	picornavirus	Picornaviridae,	South Korea	South-East Asia region	Viral Gene-spin Viral DNA/RNA Extraction Kit (iNtRON Biotechnology)	Column-based	
[132]	2019	1795	animal	fecal samples, blood, oral secretion, nasal secretion, genital secretions, skin swab, water	DNA	illumina	De novo	Microviridie	Microviridae,	China	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[133]	2020	26	environment	wastewater	RNA	illumina	De novo	Epatitis E virus	Hepeviridae,	Sweden	European region	DNeasy Blood & Tissue Kit (Qiagen)	Column-based	chemical flocculation
[134]	2016	1	animal	pericardial fluid	DNA	Roche_454	/	gemycircularviruses	Genomoviridae,	France	European region	/	ND	
[135]	2014	4	animal	fecal samples	RNA	illumina	De novo	alphacoronavirus	Coronaviridae,	New Zealand	South-East Asia region	iPrep PureLink Virus Kit (Life Technologies)	Other/multiple type	
[136]	2020	91	animal	fecal samples	RNA	illumina	De novo	Picornavirales	Picornaviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[137]	2015	10	animal	fecal samples	DNA	illumina	/	papillomavirus, CRESS-DNA virus	Papillomaviridae,	Malaysia	South-East Asia region	QIAamp DNA Stool kit (Qiagen), QIAamp DNA Mini and Blood kit (Qiagen)	Silica membrane-based, Silica membrane-based	
[138]	2016	36	animal	fecal samples	DNA	illumina	De novo	parvovirus	Parvoviridae,	Hungary	European region	QIAamp spin-column (Qiagen)	Column-based	

[139]	2021	11	animal	fecal samples	DNA	illumina	De novo	Parvovirus	Parvoviridae,	Hungary	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[140]	2021	75	animal	fecal samples	RNA	illumina	/	Picornavirus	Picornaviridae,	Hungary	European region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[141]	2019	146	animal	insects	RNA	illumina	De novo	several	Chuviridae, Orthomyxoviridae, Picornaviridae, Flaviviridae, Narnaviridae, Luteoviridae, Virgaviridae, Reoviridae, Phenuiviridae, Partitiviridae	New South Wales	America region	RNeasy Plus Mini Kit (Qiagen)	Column-based	
[142]	2021	76	animal	fecal samples	RNA	Ion Torrent	De novo	Picornavirus	Picornaviridae,	Chile	America region	TRI reagent (Sigma-Aldrich)	Solvent-based	
[143]	2013	853	animal	thorax and abdomen	DNA and RNA	illumina	De novo	Mamastrovirus, Bocavirus, Circovirus, Iflavirus and Orthohepadnavirus	Astroviridae, Circoviridae, Parvoviridae, Flaviviridae, Iflaviridae,	China	South-East Asia region	TRIzol reagents	Solvent-based	
[144]	2013	78	animal	guts and lungs	RNA	illumina	/	rotavirus	Reoviridae,	China	South-East Asia region	RNeasy Mini Kit (Qiagen)	Silica membrane-based	
[145]	2018	39	plant	leaves	RNA	illumina	De novo	GRSPaV	Betaflexiviridae,	France	European region	RNeasy Plant Mini Kit (Qiagen)	Column-based	
[146]	2016	1	environment	hot spring samples	DNA	illumina	/	Acidianus tailed spindle virus (ATSV)	Bicaudaviridae,	Australia	South-East Asia region	PureLink Viral DNA and RNA extraction kit (Invitrogen)	Column-based	ultracentrifugation
[147]	2014	579	animal	fecal samples	DNA and RNA	Roche_454	/	adenoviridae and Picornaviridae	Adenoviridae, Picornaviridae	Australia	South-East Asia region	Ampliprep DNA extraction machine (Roche)	Magnetic beads-based	
[148]	2018	90	animal	fecal samples	DNA	illumina	De novo	adenovirus	Adenoviridae,	Bangladesh	Western Pacific region	/	ND	
[149]	2021	5	animal	plasma	DNA	illumina	/	Circovirus	Circoviridae,	Kentucky	America region	/	ND	

[150]	2020	1	animal	heart, liver, spleen, lung, and kidney	DNA	Not available	De novo	bocaparvovirus	Parvoviridae,	China	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[151]	2021	5	animal	blood	DNA	illumina	De novo	Anellovirus	Anelloviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[152]	2016	ND	animal	marine invertebrate species	DNA	illumina	/	CRESS-DNA virus	ND,	Several		/	ND	
[153]	2020	6	animal	pyloric caeca and body wall tissue	DNA	illumina	De novo	AfaDV	Parvoviridae,	Atlantic Ocean		Viral DNA kit (Zymo Research)	Column-based	
[154]	2019	6	plant	Mangrove soil samples	DNA	illumina	De novo	Caudovirales phage	Podoviridae,	China	South-East Asia region	/	ND	
[155]	2020	3	plant	fruits	RNA	illumina	De novo	Monilinia umbra-like virus 1 (MULV1)	Tombusviridae,	South Korea	South-East Asia region	DNeasy Plant Mini Kit (Qiagen), RNeasy Plant Mini Kit (Qiagen)	Column-based, Column-based	
[156]	2019	3	environment	Groundwater	DNA	illumina	/	Myoviridae and Siphoviridae	Siphoviridae, Myoviridae	Germany	European region	/	ND	ultrafiltration / ultracentrifugation
[157]	2015	87	animal	blood	RNA	illumina	De novo	Simian pegivirus, simian anelloviruses	Flaviviridae, Anelloviridae	Several		Maxwell 16 viral total nucleic acid purification kit (Promega)	Magnetic beads-based	
[158]	2019	48	animal	fecal samples	RNA	illumina	/	sapovirus	Caliciviridae,	Japan	South-East Asia region	TRIzol reagents	Solvent-based	
[159]	2019	164	animal	fecal samples	RNA	illumina	/	astrovirus	Astroviridae,	Switzerland	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[160]	2015	ND	animal	fecal samples	DNA	Ion Torrent	/	Parvovirus	Parvoviridae,	Hungary	European region	GeneJet Viral DNA and RNA Purification Kit (Thermo Fisher)	Silica membrane-based	
[161]	2017	105	plant	leaves	RNA	illumina	De novo	Ilarvirus-like	Bromoviridae,	Australia	South-East Asia region	RNeasy Plant Mini Kit (Qiagen)	Column-based	

[162]	2018	ND	animal	fecal samples	RNA	Roche_454	De novo	calicivirus	Caliciviridae,	United States	America region	/	ND
[163]	2021	ND	environment	water	DNA	illumina	De novo	several	Microviridae, Inoviridae	Tennessee	America region	/	ND
[164]	2017	1351	animal	blood	DNA	illumina	De novo	torquo teno virus	Anelloviridae,	/		QIAamp Circulating Nucleic Acid Kit (Qiagen) High Pure Viral Nucleic Acid kit (Roche)	Silica membrane-based
[165]	2019	40	animal	brain and hemolymph	DNA	illumina	De novo	genomoviruses and microvirus	Microviridae, Genomoviridae	Arizona	America region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube
[166]	2019	40	animal	insects	DNA	illumina	/	genomoviruses, microvirus, circovirus	Microviridae, Genomoviridae, Circoviridae,	New Zealand	South-East Asia region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube
[167]	2019	ND	animal	intestinal sample	DNA	illumina	De novo	bocaparvovirus	Parvoviridae,	United States	America region	/	ND
[168]	2010	5	animal	fecal samples	DNA and RNA	Roche_454	/	several	Circoviridae, Picornaviridae, Dicistroviridae,	California	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[169]	2013	32	animal	brain sample	RNA	illumina	De novo	BoAstV-NeuroS1	Astroviridae,	California	America region	Agencourt Formapure Kit	Magnetic beads-based
[170]	2015	34	animal	plasma, nasal swab, fecal samples	DNA and RNA	illumina	De novo	parvovirus, cyclovirus, kirkovirus	Parvoviridae, Circoviridae, Circoviridae,	United States	America region	QIAamp viral RNA mini kit (Qiagen), MagMAX Viral RNA Isolation kit	Other/multiple type, Magnetic beads-based
[171]	2011	18	animal	fecal samples	RNA	Roche_454	De novo	kobuvirus and sapovirus	Caliciviridae, Picornaviridae	California	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[172]	2011	10	animal	spleen, heart and lung tissues	DNA	sanger	/	amdovirus	Parvoviridae,	California	America region	/	ND
[173]	2017	368	animal	nasopharyngeal aspirates	RNA	illumina	/	HPIV 3	Paramyxoviridae,	China	South-East Asia region	NucliSens easyMAG system (bioMérieux)	Other/multiple type

[174]	2021	ND	animal	insects	RNA	illumina	De novo	Negevirus	Unclassified,	Kenya	Africa region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[175]	2013	7	animal	plasma	DNA	illumina	De novo	circovirus	Circoviridae,	Canada	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[176]	2021	7	animal	fecal samples	RNA	illumina	De novo	alphacoronavirus	Coronaviridae,	Denmark	European region	MagNA Pure 96 system (Roche)	Magnetic beads-based
[177]	2018	ND	animal	insects	DNA	illumina	De novo	NV11X, NG24X	ND,	/		QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based
[178]	2019	48	animal	insects	RNA	illumina	De novo	VOV1, VDV4	Orthomyxoviridae, Orthomyxoviridae	Thailand	Western Pacific region	TRI reagent (Sigma-Aldrich)	Solvent-based
[179]	2014	15	animal	intestinal content samples	RNA	illumina	/	coronavirus	Coronaviridae,	France	European region	/	ND
[180]	2019	70	animal	fecal samples	DNA	illumina	De novo	Calcivirus, cress-DNA virus	Caliciviridae, /	Brazil	America region	TRIzol reagents, phenol-chloroform extraction method	Solvent-based, Solvent-based
[181]	2019	80	animal	genital tract secretion	DNA	illumina	De novo	papillomavirus	Papillomaviridae,	China	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based
[182]	2016	88	animal	vaginal swab	DNA	illumina	/	papillomavirus	Papillomaviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[183]	2019	10	animal	fecal samples	DNA	illumina	De novo	Smacovirus	Smacoviridae,	Brazil	America region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube
[184]	2018	145	animal	fecal samples	DNA	Analyzes sequences obtained in other studies	/	CRESS-DNA virus	ND,	China	South-East Asia region	/	ND
[185]	2019	1200	plant	plants	RNA	illumina	De novo	Several	Endornaviridae,	France	European region	/	ND
[186]	2020	170	plant	leaves	RNA	illumina	De novo	Ilarvirus	Bromoviridae,	/		/	ND

[187]	2019	20	animal	fecal samples	RNA	illumina	/	cardiovirus	Picornaviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[188]	2019	1657	animal	salivary glands	RNA	illumina	De novo	Pirizal iflavirus, Furrundu phlebovirus, Pixé Guampa vesiculovirus, Chacororé flavivirus, Rasqueado orbivirus, Uru chuvirus, Bororo circovirus	Iflaviridae, Flaviviridae, Phenuiviridae, Rhabdoviridae, Chuviridae, Reoviridae, Circoviridae,	Brazil	America region	High Pure Viral RNA Kit (Roche)	Filter tube	
[189]	2014	5	animal	fecal samples	RNA	illumina	De novo	rotavirus	Reoviridae,	Japan	South-East Asia region	ISGEN LS (NipponGene)	Solvent-based	
[190]	2018	107	animal	fecal samples	RNA	illumina	/	picornavirus	Picornaviridae,	Japan	South-East Asia region	/	ND	
[191]	2015	63	animal	fecal samples	RNA	Ion Torrent	De novo	rotavirus	Reoviridae,	Hungary	European region	/	ND	
[192]	2013	1	animal	fecal samples	DNA	illumina	/	microviridae	Microviridae,	Pennsylvania	America region	QIAamp DNA Stool kit (Qiagen)	Silica membrane-based	
[193]	2016	6	environment	seawater	RNA	Roche_454	/	picornavirus	Picornaviridae,	Antartic		MasterPure Complete DNA and RNA Purification kit	Solvent-based	tangential flow filtration
[194]	2021	10	animal	bronchoalveolar lavage	RNA	illumina	/	Rhinovirus	Picornaviridae,	Australia	South-East Asia region	/	ND	
[195]	2013	1	environment	Mediterranean deep chlorophyll maximum	DNA	illumina	De novo	Phages	Podoviridae,	Spain	European region	Phenol-chloroform extraction method QIAprep Spin Miniprep kit (Qiagen)	Solvent-based	pore filtration
[196]	2016	12	environment	seawater	DNA	illumina	De novo	UvDeep viruses	Phycodnaviridae, Iridoviridae	Mediterranean Sea	European region		Column-based	pore filtration
[197]	2017	1	animal	cutaneous malignant melanoma	DNA	illumina	De novo	cutavirus	Parvoviridae,	Brazil	American region	/	ND	

[198]	2020	3	environment	soil and water	DNA	illumina	/	Methanosarcina virus MV (MetMV)	Unclassified,	Hungary	European region	PowerSoil Max kit (MO BIO)	Silica membrane-based	
[199]	2016	2236	animal	insects	RNA	illumina	De novo	Nairovirus and Phlebovirus	Bunyaviridae, Bunyaviridae	France	European region	Nucleospin RNA II kit (Macherey-Nagel)	Silica membrane-based	
[200]	2014	153	environment	planktonic organisms	DNA	Roche_454	/	mimiviridae	Mimiviridae,	/		/	ND	pore filtration
[201]	2019	6	animal	fecal samples	DNA	illumina	De novo	crane-associated adenovirus 1 (CrAdV-1)	Adenoviridae,	Japan	South-East Asia region	QIAamp DNA Stool kit (Qiagen)	Silica membrane-based	
[202]	2016	Database	plant	non-angiosperm green plant	RNA	Analyzes sequences obtained in other studies	/	alphapartitivirus	Partitiviridae,	/		/	ND	
[203]	2015	50	animal	fecal samples	RNA	illumina	De novo	picornavirus	Picornaviridae,	Japan	South-East Asia region	TRIzol reagents	Solvent-based	
[204]	2016	1	animal	fecal samples	RNA	illumina	De novo	picornavirus	Picornaviridae,	Japan	South-East Asia region	TRIzol reagents	Solvent-based	
[205]	2021	4265	animal	insects	DNA and RNA	illumina	/	several	Rhabdoviridae, Totiviridae, Iflaviviridae, Circoviridae, Sobemoviridae,	France	European region	High pure viral nucleic acid large volume kit (Roche)	Column-based	
[206]	2018	33	plant	leaves	RNA	illumina	De novo	alfalfa virus F	Tymoviridae,	France	European region	TRIzol reagents	Solvent-based	
[207]	2020	60	plant	leaves	RNA	illumina	De novo	HDaV1, HDaV2	Picornaviridae,	Brazil	America region	TRIzol reagents	Solvent-based	
[208]	2017	9	environment	water	DNA	illumina	De novo	Haloviruses, T4-like myoviruses, podoviruses, siphovirus, dwarf myoviruse, Synechococcus phage S-EIV1, Prochlorococcus phage P-RSP2	Unclassified, Myoviridae, Podoviridae, Siphoviridae, Myoviridae, Unclassified, Autographiviridae,	Japan	South-East Asia region	/	ND	FeCl3 precipitation
[209]	2015	ND	animal	insects	DNA	illumina	De novo	Diaphorina citri densovirus	Parvoviridae,	Florida	America region	TRIzol reagents	Solvent-based	

[210]	2018	222	animal	fecal samples	RNA	illumina	De novo	Teschovirus A-related virus	Picornaviridae,	Japan	South-East Asia region	NEBNext Ultra RNA Library Prep Kit for Illumina (NEB)	Magnetic beads-based	
[211]	2016	13	environment	surface water	DNA	Roche_454 and Sanger	/	phycodnaviruses	Phycodnaviridae,	Tibet	South-East Asia region	/	ND	pore filtration
[212]	2019	953	animal	insects	RNA	Ion Torrent	De novo	several	Iflaviridae, Nodaviridae, Orthomyxoviridae, Partitviridae, Peribunyaviridae, Phasmaviridae, Reoviridae, Rhabdoviridae, Solemoviridae, Tombusviridae	Sweden	European region	TRIzol reagents	Solvent-based	
[213]	2018	76	animal	insects	RNA	illumina	De novo	flavivirus	Flaviviridae,	Several		Tungsten carbide beads (Qiagen)	Magnetic beads-based	
[214]	2020	40	animal	fecal samples	DNA	illumina	De novo	genomoviruses and microvirus	Microviridae, Genomoviridae	Arizona	America region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube	
[215]	2021	2	environment	seafloor	DNA	illumina	/	Caudovirales	ND,	Pacific Ocean		PowerSoil DNA Isolation kit (MO BIO)	Silica membrane-based	
[216]	2016	406	plant	leaves	RNA	Roche_454	De novo	polverovirus-like, tombusvirus-like	Luteoviridae, Tombusviridae	Burkina Faso	Africa region	NucleoSpin 96 Virus Core Kit (Macherey-Nagel)	Silica membrane-based	
[217]	2018	311	animal	serum	DNA	illumina	De novo	torquo teno mini virus	Anelloviridae,	China	South-East Asia region	QIAamp viral RNA kit (Qiagen)	Silica membrane-based	
[218]	2015	19	animal	fecal samples	RNA	Roche_454	/	astrovirus	Astroviridae,	Hungary	European region	/	ND	
[219]	2018	1	animal	cloacal and tissue samples	RNA	illumina	De novo	passerivirus	Picornaviridae,	Hungary	European region	QIAamp spin-column (Qiagen)	Column-based	
[220]	2016	1	environment	sewage waters	DNA	illumina	De novo	several	Circoviridae, Geminiviridae, Microviridae,	Florida	America region	Phenol-chloroform extraction method	Solvent-based	ultrafiltration

[221]	2021	7447	animal	insects	RNA	illumina	/	Jingchuvirales and Bunyavirales	Peribunyaviridae,	Korea	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[222]	2019	4100	animal	insects	RNA	illumina	/	Uukuniemi virus and phlebovirus	Phenuiviridae, Phenuiviridae	Zealand	European region	MagNA Pure Large Volume kit (Roche)	Magnetic glass particles-based
[223]	2017	1	animal	brain, spinal cord and spleen material	RNA	Ion Torrent	De novo	astrovirus	Astroviridae,	UK	European region	RNeasy kit (Qiagen), TRIzol reagents	Column-based, Solvent-based
[224]	2017	ND	environment	soil	DNA	illumina	De novo	phage NCTB	Myoviridae,	New Caledonia	South-East Asia region	/	ND
[225]	2018	88	animal	serum	RNA	illumina	De novo	partitivirus, dicistrovirus	Dicistroviridae, Partiviridae	Peru	America region	Maxwell 16 automated extractor (Promega)	Solvent-based
[226]	2016	58	animal	fecal samples	DNA	illumina	/	pecoviruses	Unclassified,	Peru	America region	Maxwell 16 automated extractor (Promega)	Magnetic beads-based
[227]	2016	5	animal	fecal samples	DNA	illumina	De novo	protoparvovirus	Parvoviridae,	Bhutan	Western Pacific region	Maxwell 16 automated extractor (Promega)	Magnetic beads-based
[228]	2016	3	animal	heart and lung tissues homogenate	DNA	illumina	De novo	PCV3	Circoviridae,	United States	America region	MagMAX-96 Viral RNA Isolation Kit (Ambion)	Magnetic beads-based
[229]	2014	120	animal	nasopharyngeal aspirates	DNA	illumina	/	cyclovirus	Circoviridae,	Chile	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based
[230]	2014	48	animal	fecal samples	RNA	illumina	/	astrovirus	Astroviridae,	Burkina Faso	Africa region	/	ND
[231]	2020	Database	animal	fecal samples and tissues	RNA	illumina	/	picorna-like virus, noroviruses, toti-like virus, Alongshan virus	Picornaviridae, Caliciviridae, Totiviridae, Flaviviridae	Finland	European region	QIAamp viral RNA kit (Qiagen)	Silica membrane-based
[232]	2013	10	animal	blood	DNA	Roche_454	/	marseillevirus-like	Marseilleviridae,	France	European region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube
[233]	2020	5	animal	Brain, heart, tic, liver	RNA	illumina	/	Hepacivirus, Pegivirus	Flaviviridae, Flaviviridae	Australia	South-East Asia region	RNeasy Plus Mini Kit (Qiagen)	Column-based

[234]	2021	6674	animal	insects	RNA	illumina	De novo	flavivirus and orthomyxovirus	Flaviviridae,	Australia	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[235]	2020	85	animal	fecal samples	DNA	illumina	De novo	several	Smacoviridae, Unclassified	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[236]	2017	1	animal	nasal swabs and fecal samples	DNA	illumina	De novo	polyomavirus	Polyomaviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[237]	2017	625	animal	shrimps	DNA	illumina	De novo	SHIV	Iridoviridae,	China	South-East Asia region	QIAamp viral DNA kit (Qiagen)	Column-based	
[238]	2015	12	environment	peat soil water samples	DNA	Roche_454	De novo	microviridae	Microviridae,	France	European region	Nucleospin Extract II kit (Macherey–Nagel)	Silica membrane-based	PEG precipitation
[239]	2016	12	environment	peat soil water samples	DNA	Roche_454	De novo	crucivirus	Cruciviridae,	France	European region	/	ND	PEG precipitation
[240]	2020	ND	animal	mosquito excreta samples	RNA	illumina	De novo	Smithfield permutotetra-like virus, Redbank virus, Old Port virus, Perrin Park virus, Warroolaba Creek virus 1, Warroolaba Creek virus 2, Warroolaba Creek virus 3	Unclassified, Unclassified, Unclassified, Iflaviridae, Dicistroviridae, Dicistroviridae, Dicistroviridae,	Australia	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[241]	2021	24	animal	insects	RNA	illumina	De novo	rhabdovirus	Rhabdoviridae,	Mexico	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[242]	2018	3	environment	air	DNA	illumina	/	Caulimoviridae	Caulimoviridae,	Spain	European region	PowerSoil DNA Isolation kit (MO BIO)	Silica membrane-based	
[243]	2017	ND	animal	thorax and abdomen	RNA	illumina	De novo	ADV, ARV, ABV, ANV, AFV	Rhabdoviridae, Bunyaviridae, Flaviviridae, Iflaviviridae, Unclassified,	Several		TRIzol reagents	Solvent-based	
[244]	2013	2	animal	intestinal content samples	RNA	Roche_454	/	seadornavirus	Reoviridae,	Hungary	European region	TRIzol reagents	Solvent-based	
[245]	2014	1	animal	fecal samples	RNA	Roche_454	/	dicistrovirus	Dicistroviridae,	Hungary	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	

[246]	2018	39	animal	fecal samples	RNA	illumina	De novo	hepevirus	Hepeviridae,	Hungary	European region	QIAamp spin-column (Qiagen)	Column-based	
[247]	2020	98	animal	fecal samples	RNA	illumina	De novo	hepevirus	Hepeviridae,	Hungary	European region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[248]	2015	24	animal	fecal samples	RNA	illumina	De novo	picornavirus	Picornaviridae,	Hungary	European region	/	ND	
[249]	2015	1	animal	intestinal content samples	RNA	Roche_454	/	posavirus	Smacoviridae,	Hungary	European region	/	ND	
[250]	2020	58	animal	mussels	DNA	illumina	De novo	densovirus	Parvoviridae,	United States	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[251]	2019	ND	plant	plants	DNA	sanger	De novo	CRESS-DNA virus	Unclassified,	New Zealand	South-East Asia region	/	ND	
[252]	2020	1	animal	cerebral biopsy	RNA	illumina	De novo	cristoli virus	peribunyaviridae,	France	European region	QIAasympfony (Qiagen)	Other/multiple type	
[253]	2018	Database	animal	kidney	DNA	illumina	De novo	parvovirus	Parvoviridae,	Australia	South-East Asia region	RNeasy Mini Kit (Qiagen)	Silica membrane-based	
[254]	2010	384	plant	plants	RNA	Roche_454	/	several	Bromoviridae, Caulimoviridae, Chrysoviridae, Closteroviridae, Endornaviridae, Luteoviridae, Narnaviridae, Partitiviridae, Potyviridae, Totiviridae, Tymoviridae, Unclassified	Costa Rica	America region	Phenol-chloroform extraction method	Solvent-based	
[255]	2009	Database	environment	reclaimed and sea water	DNA	Analyzes sequences obtained in other studies	/	circovirus	Circoviridae,	Several		/	ND	tangential flow filtration
[256]	2011	ND	animal	insects	DNA	Not available	/	cyclovirus	Circoviridae,	New Zealand	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[257]	2013	6	animal	insects	DNA	Not available	/	mastrevirus	Geminiviridae,	United States	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	

[258]	2015	21	animal	marine invertebrate species	DNA	Roche_454	/	CRESS-DNA virus	ND,	/			QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[259]	2015	ND	animal	insects	DNA	Roche_454	/	Begomovirus	Geminiviridae,	Several			QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[260]	2012	Database	environment	water	DNA	Roche_454	/	Chlamydiae phage	Microviridae,	France	European region		QIAamp DNA Mini Kit (Qiagen)	Silica membrane-based	tangential flow filtration, PEG precipitation
[261]	2014	127	environment	water	DNA	illumina	/	microviridae and caudovirales	Microviridae, Podoviridae	Canada	America region		Wizard Prep kit (Promega)	Column-based	pore filtration
[262]	2017	2	environment	freshwater	DNA	illumina	De novo	several	Mimiviridae,	Wisconsin	America region		FastDNA Kit (MP Biomedicals)	Silica membrane-based	pore filtration
[263]	2021	384	plant	fungus	DNA	illumina	De novo	narnavirus	Narnaviridae,	Italy and Spain	European region		Spectrum Plant Total RNA kit instructions (Sigma-Aldrich)	Column-based	
[264]	2020	1	animal	C6/36 cells (Aedes albopictus)	RNA	Ion Torrent	De novo	arbovirus	Flaviviridae,	Brazil	America region		QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[265]	2012	10	animal	plasma	DNA	illumina	/	HERV	Retroviridae,	China	South-East Asia region		QIAamp DNA blood mini kit (Qiagen)	Silica membrane-based	
[266]	2016	40	animal	fecal samples	DNA	illumina	De novo	Chapparvovirus	Parvoviridae,	China	South-East Asia region		MiniBEST Universal Genomic DNA Extraction Kit (TaKaRa)	Magnetic beads-based	
[267]	2016	40	animal	intestinal content samples	DNA	illumina	/	RatBuV	Parvoviridae,	China	South-East Asia region		MiniBEST Universal Genomic DNA Extraction Kit (TaKaRa)	Column-based	
[268]	2016	20	animal	fecal samples	DNA	illumina	De novo	bocavirus	Parvoviridae,	China	South-East Asia region		MiniBEST Universal Genomic DNA Extraction Kit (TaKaRa)	Column-based	

[269]	2021	120	plant	fruits	RNA	illumina	De novo	tepovirus	Betaflexiviridae,	Florida	America region	/	ND
[270]	2018	12290	animal	insects	DNA and RNA	illumina	De novo	several	Luteoviridae, Tombusviridae, Tymoviridae, Virgaviridae, Astroviridae, Mesoniviridae, Nodaviridae, Unclassified, Hytrosaviridae, Anelloviridae, Bidnaviridae, Circoviridae, Parvoviridae,	California	America region	MagMAX Express-96 Deep Well Magnetic Particle Processor	Magnetic beads-based
[271]	2017	4	animal	serum	DNA	illumina	/	parvovirus	Parvoviridae,	United States	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based
[272]	2017	ND	animal	insects	RNA	illumina	De novo	Tetravirus, reoviruses, orbivirus,	Alphatetraviridae, Reoviridae, Reoviridae,	Texas	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based
[273]	2019	6368	animal	insects	RNA	illumina	De novo	YBV1, YPLV3, YSLV1	Bunyaviridae, Picornaviridae, Unclassified,	Oklahoma	America region	QIAamp 96 Virus QIAcube HT kit (Qiagen)	Silica membrane-based
[274]	2016	155	animal	fecal samples	RNA	illumina	De novo	Posavirus	Picornaviridae,	Japan	South-East Asia region	TRIzol reagents	Solvent-based
[275]	2021	140	animal	cell culture	RNA	illumina	/	Hedwig virus	Peribunyaviridae,	Germany	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[276]	2015	72	animal	lung, liver, spleen, kidney and intestinal contents	RNA	Ion Torrent	/	cyclovirus	Circoviridae,	Zambia	Africa region	High Pure Viral Nucleic Acid kit (Roche)	Filter tube
[277]	2013	9	plant	plants	RNA	Roche_454	/	panicovirus	Tombusviridae,	Oklahoma	America region	/	ND
[278]	2016	1	animal	brain sample	RNA	illumina	/	astrovirus	Astroviridae,	Germany	European region	TRIzol reagents, RNeasy Mini Kit (Qiagen)	Solvent-based, Silica membrane-based
[279]	2016	ND	animal	insects	RNA	Ion Torrent	De novo	SRBV, GABV	Aliusviridae, Peribunyaviridae	Belgium	European region	RNeasy Lipid Tissue Mini kit (Qiagen)	Column-based

[280]	2018	28	environment	soil	DNA and RNA	illumina	/	mimiviridae	Mimiviridae,	Massachusetts	America region	PowerSoil DNA Isolation kit (MO BIO), PowerSoil RNA Isolation kit (MO BIO)	Silica membrane-based, Column-based	syringe filtratione
[281]	2014	39	animal	swab samples	RNA	Roche_454	De novo	parvovirus, polyomavirus	Parvoviridae, Polyomaviridae	Arctic		/	ND	
[282]	2017	261521	animal	insects	RNA	illumina	De novo	rhabdovirus	Rhabdoviridae,	Germany	European region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[283]	2011	12	animal	fecal samples	RNA	Roche_454	/	astroviruses and bocaviruses	Astroviridae, Parvoviridae	North Carolina	America region	QIAamp viral RNA kit (Qiagen)	Silica membrane-based	
[284]	2017	1	animal	fecal samples	RNA	illumina	De novo	Enterovirus	Picornaviridae,	California	America region	SV Total Viral RNA mini kit (Qiagen)	Column-based	
[285]	2019	95	animal	insects	RNA	illumina	De novo	several	Luteoviridae, Phenuiviridae, Totiviridae, Unclassified, Orthomyxoviridae, Rhabdoviridae, Tymoviridae,	Guadeloupe	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[286]	2019	ND	animal	fecal samples	DNA	illumina	De novo	circo-like virus	Circoviridae,	Croatia	European region	iPrep virus kit (Invitrogen)	Other/multiple type	
[287]	2020	15	animal	guano, feces and saliva	DNA	illumina	De novo	Adeno-associated virus, densovirus and iflavirus	Adenoviridae, Iflaviridae, Parvoviridae,	Croatia	European region	iPrep virus kit (Invitrogen)	Other/multiple type	
[288]	2021	2142	animal	fecal samples	RNA	illumina	De novo	Rotavirus	Reoviridae,	Ghana, Gabon, Bulgaria, Romania, Germany, and Costa Rica	Multiple (Africa, Europe and America)	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[289]	2017	69	animal	tissue pools	DNA	illumina	De novo	Parvovirus, polyomavirus, adenovirus	Parvoviridae, Polyomaviridae, Adenoviridae,	California	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[290]	2014	13	animal	fecal samples	DNA	Roche_454	/	circular DNA viruses	Circoviridae,	Netherlands	European region	/	ND	

[291]	2013	39	animal	fecal samples	DNA and RNA	sanger	/	Picornavirus, papillomavirus, anellovirus	Picornaviridae, Papillomaviridae, Anelloviridae,	Netherlands	European region	/	ND	
[292]	2013	58	animal	Serum and CSF	DNA	Roche_454	De novo	cyclovirus	Circoviridae,	Malawi	Africa region	MagNA Pure LC - Total Nucleic Acid Kit (Roche)	Magnetic glass particles-based	
[293]	2021	107	animal	nasopharyngeal swabs	RNA	illumina	/	orthopneumovirus	Pneumoviridae,	China	South-East Asia region	/	ND	
[294]	2018	36	animal	ticks, bovine serum	RNA	illumina	De novo	tymovirus	Tymoviridae,	Brazil	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[295]	2021	10	environment	water	DNA	illumina	De novo	several	Siphoviridae, Myoviridae, Phycodnaviridae,	Atlantic Ocean		Phenol-chloroform extraction method	Solvent-based	FeCl3 precipitation
[296]	2017	12	plant	leaves	DNA	illumina	De novo	capulavirus	Geminiviridae,	Finland	European region	TRIzol reagents	Solvent-based	
[297]	2019	254	plant	leaves	RNA	illumina	De novo	Caulimovirus, Betapartitivirus, Enamovirus, Closterovirus	Caulimoviridae, Partitiviridae, Solemoviridae, Closteroviridae	Finland	European region	E.Z.N.A. Plant Kit (Omega Biotek)	Magnetic beads-based	
[298]	2019	12	animal	fecal samples	DNA	illumina	De novo	CRESS-DNA virus	ND,	Japan	South-East Asia region	AMPure beads (PacBio)	Magnetic beads-based	
[299]	2011	13	animal	lung samples	DNA	sanger	/	anellovirus	Anelloviridae,	California	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[300]	2017	20	animal	brain tumor samples	DNA	illumina	De novo	betatorquevirus	Anelloviridae,	/		QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[301]	2009	62	animal	external swabs	DNA	sanger	/	tornovirus 1 (STTV1)	Circoviridae,	Florida	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[302]	2012	ND	environment	sewage waters	DNA and RNA	Roche_454	/	kobuvirus, salivirus, sapovirus, astrovirus	Picornaviridae, Picornaviridae, Caliciviridae, Astroviridae	Several		QIAamp spin columns (Qiagen)	Column-based	tangential flow filtration
[303]	2014	55	animal	fecal samples	RNA	illumina	De novo	Sakobuvirus, feline bocavirus 2	Picornaviridae, Parvoviridae	Portugal	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	

[304]	2015	50	animal	sea otters	DNA	illumina	/	papillomavirus	Papillomaviridae,	California	America region	/	ND	
[305]	2013	12	animal	Hepatopancreas tissue	DNA	sanger	/	nodavirus	Nodaviridae,	Florida	America region	DNeasy Blood & Tissue Kit (Qiagen)	Column-based	
[306]	2011	480	animal	insects	DNA	Roche_454	De novo	densovirus	Parvoviridae,	California	America region	Formamide Procedure	Solvent-based	
[307]	2013	ND	animal	fecal samples and tissues	RNA	Roche_454	/	astrovirus	Astroviridae,	Japan	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[308]	2011	2	plant	insects	DNA	sanger	/	Begomovirus	Geminiviridae,	Florida	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[309]	2019	70	animal	blood	RNA	illumina	De novo	Zaire Ebola virus (EBOV)	Filoviridae,	Several		QIAamp viral RNA kit (Qiagen)	Silica membrane-based	
[310]	2020	573	animal	insects	RNA	illumina	De novo	Chuviridae, Phenuiviridae	Chuviridae, Phenuiviridae	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[311]	2020	251	animal	fecal samples	DNA	illumina	De novo	Adenovirus C	Adenoviridae,	Brazil	America region	ZR Viral DNA/RNA Kit (Zymo Research)	Other/multiple type	
[312]	2012	1	environment	plants	DNA	Roche_454	/	Bordetella phages bpp1	Podoviridae,	Singapore	Western Pacific region	Formamide Procedure	Solvent-based	tangential flow filtration
[313]	2019	ND	animal	insects	RNA	Ion Torrent	/	orbivirus	Reoviridae,	United States	America region	TRIzol reagents	Solvent-based	
[314]	2016	315	animal	insects	RNA	illumina	/	Thogotovirus, Rhabdovirus	Rhabdoviridae,	Senegal	Africa region	TRIzol reagents	Solvent-based	
[315]	2021	27	animal	insects	RNA	illumina	De novo	zika virus	Flaviviridae,	Barbados	America region	QIAamp UCP Micro Kit (Qiagen)	Column-based	
[316]	2016	1	animal	fecal samples	RNA	illumina	De novo	Rotavirus astrovirus enterovirus	Astroviridae, Reoviridae, Picornaviridae,	Belgium	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[317]	2020	91	animal	nasal-throat swabs	DNA and RNA	illumina	De novo	Cyclovirus, gemycircularvirus, and statovirus	Circoviridae,	California	America region	QIAamp 96 Virus	Silica membrane-based	

													QIAcube HT Kit (Qiagen)		
[318]	2020	70	animal	swabs and tissue specimens	DNA	illumina	De novo	Papillomavirus	Papillomaviridae,	/			RNeasy Lipid Tissue Mini kit (Qiagen)	Column-based	
[319]	2019	50	animal	cloacal, oral, and blood samples	DNA	illumina	De novo	Gyrovirus	Anelloviridae,	French Guiana	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based		
[320]	2020	406	animal	fecal samples	RNA	illumina	De novo	Picornaviridae, Reoviridae Hepeviridae.	Picornaviridae, Hepeviridae, Reoviridae,	French Guiana	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based		
[321]	2012	156	animal	Rectal swabs	DNA	Roche_454	De novo	Papillomavirus	Papillomaviridae,	Hong Kong	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type		
[322]	2017	23	animal	fecal samples	RNA	illumina	De novo	Enterovirus	Picornaviridae,	Japan	South-East Asia region	TRIzol reagents	Solvent-based		
[323]	2018	222	animal	fecal samples	RNA	illumina	De novo	bovine enterovirus	Picornaviridae,	Japan	South-East Asia region	TRIzol reagents	Solvent-based		
[324]	2021	1000	animal	fecal samples	RNA	illumina	De novo	Picobirnavirus	Picobirnaviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type		
[325]	2018	4	environment	water	RNA	illumina	De novo	Several	Megabirnaviridae, Hypoviridae	North Pacific Ocean		Phenol-chloroform extraction method	Solvent-based	FeCl3 precipitation	
[326]	2009	59	animal	crop, poison sac, midgut, hindgut, Malpighian tubules, fat body (queens only), ovaries (queens only), and the remaining tissues of the abdominal carcass.	RNA	sanger	/	Solenopsis invicta virus 3	Solinviviridae,	/		TRIzol reagents	Solvent-based		
[327]	2019	3189	animal	insects	RNA	illumina	De novo	several	Dicistroviridae, Dicistroviridae, Dicistroviridae, Polycipiviridae,	Argentina	America region	TRIzol reagents	Solvent-based		

									Iflaviridae, Totiviridae, Unclassified, Unclassified,				
[328]	2012	609	animal	insects	RNA	Roche_454	De novo	Polydnavirus	Polyomaviridae,	Florida	America region	TRIZol reagents	Solvent- based
[329]	2018	2730	animal	insects	RNA	illumina	De novo	SINV-5	Unclassified,	Argentina	America region	TRIZol reagents	Solvent- based
[330]	2017	151	animal	intestinal content samples	DNA	Roche_454	De novo	Adenovirus	Adenoviridae,	North Sea	America region	Nucleospin RNA XS Kit (Machery- Nagel)	Silica membrane- based
[331]	2020	978	animal	serum	RNA	illumina	De novo	Flavivirus	Flaviviridae,	Pennsylvania	America region	QIAamp viral RNA mini kit (Qiagen)	Other/multip le type
[332]	2021	767	animal	insects	RNA	illumina	/	coltiviruses, reoviruses	Reoviridae, Reoviridae	Belgium	European region	QIAamp viral RNA mini kit (Qiagen)	Other/multip le type
[333]	2020	ND	animal	fecal samples	DNA and RNA	Ion Torrent	/	Aviadenovirus, gyrovirus	Adenoviridae, Anelloviridae	Australia	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multip le type
[334]	2020	ND	animal	fecal samples	DNA and RNA	Ion Torrent	/	Parvoviruses, Picornaviruses	Picornaviridae, Parvoviridae	Australia	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multip le type
[335]	2008	5	animal	insect pools, skunk brain, human feces and sewer effluent	RNA	Not available	/	Orthoreovirus, orbivirus	Reoviridae,	Montana	America region	QIamp Viral RNA isolation kit (Qiagen)	Column- based
[336]	2018	5	environment	water	DNA	illumina	De novo	Holosalivirus	Siphoviridae,	Spain	European region	/	ND
[337]	2021	253	animal	fecal samples	RNA	illumina	/	SqMV	Secoviridae,	Brazil	America region	/	ND
[338]	2016	14	environment	cyanobacterial mat samples	DNA	illumina	De novo	PhV1	Herpesviridae,	Lake Huron	America region	/	ND
[339]	2016	22	animal	blood and fecal samples	DNA	sanger	De novo	FelineAV621	Anelloviridae,	China	South-East Asia region	/	ND

[340]	2017	46	animal	fecal samples, blood, nasopharyngeal secretion, heart, liver, spleen, lung, and kidney tissues	DNA and RNA	illumina	De novo	several	Papillomaviridae, Picornaviridae, Unclassified, Anelloviridae, Genomoviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[341]	2021	ND	environment	water	DNA	illumina	De novo	vB_OliS_GJ44	Siphoviridae,	Yellow Sea	South-East Asia region	/	ND	tangential flow filtration
[342]	2014	22	animal	meats	DNA	illumina	De novo	BPYV2-SF, GyV7-SF	Polyomaviridae,	United States	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[343]	2014	25	animal	fecal samples	DNA and RNA	illumina	De novo	astroviruses, bocaviruses, cyclovirus	Astroviridae, Circoviridae, Parvoviridae,	California	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based	
[344]	2017	18	plant	maize samples	RNA	illumina	De novo	BSRV)-like dicistrovirus	Dicistroviridae,	Kenya	Africa region	MagNA Pure LC - DNA Kit (Roche)	Magnetic glass particles-based	
[345]	2018	520	animal	serum	DNA	illumina	De novo	Parvovirus anellovirus	Parvoviridae, Anelloviridae	Brazil	America region	TRIzol reagents, phenol-chloroform extraction method	Solvent-based, Solvent-based	
[346]	2016	1600	animal	insects	RNA	illumina	De novo	Iflaviruses, Rhabdoviruses, Nodaviruses, Reoviruses, Negeviruses, Sobemoviruses, Pleroviruses, Flaviviridae, Tombusviridae Jogalong virus, Parry's Creek negev-like virus 1, Broome virga-like virus 1, Fitzroy Crossing iflaviridae, Broome luteo-like virus 1, Broome phasivirus 1, Parry's Creek phasivirus 1, Fitzroy Crossing tenui-like virus 1, Fitzroy Crossing qinvirus 1, Broome reo-like virus 1, Fitzroy Crossing toti-	Iflaviridae, Rhabdoviridae, Nodaviridae, Reoviridae, Unclassified, Solemoviridae, Solemoviridae, Flaviviridae, Tombusviridae,	UK	European region	TRIzol reagents	Solvent-based	
[347]	2020	300	animal	insects	DNA and RNA	illumina	/		Flaviviridae, Unclassified, Unclassified, Iflaviridae, Unclassified, Phenuiviridae, Phenuiviridae, Phenuiviridae, Unclassified, Reoviridae, Unclassified, Unclassified, Chrysovriidae, Unclassified, Parvoviridae	Australia	South-East Asia region	MagMAX Express-96 Deep Well Magnetic Particle Processor	Magnetic beads-based	

									like virus 1, Fitzroy Crossing toti-like virus 2, Parry’s Creek toti-like virus 1, Broome chryso-like virus 1, Broome partiti-like virus 1, Broome densovirus 1						ultracentrifugation, tangential flow filtration
[348]	2020	13	environment	water	DNA	Roche_454	De novo	Several	Podoviridae, Siphoviridae, Myoviridae,	China	South-East Asia region	DNeasy Blood & Tissue Kit (Qiagen)	Column-based		
[349]	2016	16	animal	brain sample	RNA	illumina	De novo	BoRV-CH15.	Retroviridae,	Switzerland	European region	TRIzol reagents	Solvent-based		
[350]	2020	24	animal	bone marrow	DNA	illumina	De novo	Anellovirus	Anelloviridae,	China	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based		
[351]	2015	20	animal	gut	RNA	illumina	De novo	astrovirus	Astroviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type		
[352]	2020	10	animal	liver, heart, intestine and stomach	DNA	illumina	/	parvovirus	Parvoviridae,	China	South-East Asia region	QIAamp Viral RNA Mini Elute Kit (Qiagen)	Column-based		
[353]	2020	215	animal	fecal samples	RNA	illumina	De novo	astrovirus	Astroviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type		
[354]	2016	69	animal	fecal samples	RNA	illumina	/	Enterovirus	Picornaviridae,	China	South-East Asia region	QIAamp viral RNA/DNA Extraction Kit (TaKaRa)	Column-based		
[355]	2018	2222	animal	insects	RNA	illumina	De novo	several	Unclassified, Phenuiviridae, Rhabdoviridae, Unclassified, Picornaviridae, Rhabdoviridae, Unclassified, Unclassified	China	South-East Asia region	QIAamp viral RNA kit (Qiagen)	Silica membrane-based		
[356]	2015	5	environment	ballast water	DNA	illumina	De novo	Cyprinid herpesvirus 3	Alloherpesviridae,	Minnesota	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based		
[357]	2021	14	animal	fecal samples	DNA and RNA	illumina	De novo	astrovirus, chaphamaparvovirus , nodavirus, densoviruses, CRESS-DNA viruses	Astroviridae, Parvoviridae, Nodaviridae, Parvoviridae, ND,	California	America region	QIAamp virus minikit (Qiagen)	Column-based		

[358]	2021	12	animal	fecal samples	RNA	illumina	De novo	astrovirus	Astroviridae,	Canada	America region	MagMAX Viral RNA Isolation kit	Magnetic beads-based
[359]	2020	43	animal	fecal samples	DNA	illumina	De novo	bocavirus	Parvoviridae,	Canada	America region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based
[360]	2020	ND	animal	liver, spleen and brain	RNA	Ion Torrent	/	picornavirus	Picornaviridae,	China	South-East Asia region	/	ND
[361]	2018	40	animal	fecal samples	RNA	illumina	/	Picornavirus, parvovirus	Picornaviridae, Parvoviridae	China	South-East Asia region	/	ND
[362]	2019	93	animal	fecal samples	DNA and RNA	illumina	De novo	Cardiovirus	Picornaviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[363]	2017	1	animal	fecal samples	RNA	Ion Torrent	/	Parainfluenza virus	Paramyxoviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[364]	2016	48	animal	infected gingival epithelium samples periodontal pockets	DNA	illumina	De novo	TTMV-222	Anelloviridae,	China	South-East Asia region	QIAamp viral RNA kit (Qiagen)	Silica membrane-based
[365]	2017	48	animal	gingival epithelium and connective tissue facing the sulcus periodontal pockets	DNA	illumina	De novo	TTMV-204	Anelloviridae,	China	South-East Asia region	/	ND
[366]	2019	48	animal	gingival epithelium and connective tissue facing the sulcus	DNA	illumina	De novo	Siphoviridae_29632	Siphoviridae,	China	South-East Asia region	QIAamp viral RNA kit (Qiagen)	Silica membrane-based
[367]	2016	87	animal	fecal samples	RNA	illumina	De novo	Rotaviruses	Sedoreoviridae,	Cameroon	Africa region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type
[368]	2018	87	animal	fecal samples	DNA and RNA	illumina	De novo	Picorna virus	Picornaviridae,	Cameroon	Africa region	/	ND

[369]	2017	87	animal	fecal samples	RNA	illumina	De novo	sapovirus	Caliciviridae,	Cameroon	Africa region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[370]	2017	87	animal	fecal samples	RNA	illumina	De novo	Sapovirus	Caliciviridae,	Cameroon	Africa region	/	ND	
[371]	2015	1	animal	gut	DNA	Analyzes sequences obtained in other studies	/	bacteriophage	Mimiviridae,	Wyoming	America region	/	ND	
[372]	2021	300	animal	insects	DNA	illumina	De novo	Hepe-like virus	Hepeviridae,	China	South-East Asia region	QIAamp viral RNA mini kit (Qiagen)	Other/multiple type	
[373]	2021	200	animal	nasopharyngeal swabs	RNA	illumina	De novo	Coltivirus	Reoviridae,	Saudi Arabia	Eastern Mediterranean region	/	ND	
[374]	2020	Database	environment	water	DNA	Analyzes sequences obtained in other studies	/	SAR11 phage	Myoviridae,	/		/	ND	
[375]	2016	1	environment	water	DNA	illumina	De novo	DSS3Φ8	Siphoviridae,	Meryland	America region	Phenol-chloroform extraction method	Solvent-based	pore filtration
[376]	2015	9	animal	fecal samples	RNA	sanger	/	Sicinivirus	Picornaviridae,	China	South-East Asia region	QIAamp MinElute Virus Spin Kit (Qiagen)	Column-based	
[377]	2018	30	animal	fecal samples	DNA	illumina	De novo	TM7x	ND,	United States	America region	Chemagic MSM I (Perkin Elmer)	Magnetic beads-based	
[378]	2011	42	animal	enteric samples	DNA	sanger	De novo	Microviridae (batteriofago)	Microviridae,	California	America region	/	ND	
[379]	2015	ND	Not available	Intestinal bacteriophage	DNA	illumina	De novo	Proteus phage cluster (Siphoviridae)	Siphoviridae,	Georgia	European region	Phage DNA isolation kit (NorgenBiote k)	Column-based	

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