



2015-16 Phytodiagnostics Services Catalogue





## ABOUT THE COMPANY

**Arsh Biotech Pvt Ltd** is a biotechnology company engaged in the development, manufacture and distribution of high quality diagnostic assays for detection of plant and animal diseases. We work in close collaboration with leading research institutes in India and have collaboration with the Indian Council of Agricultural Research (ICAR) for the finest indigenous technologies at most cost effective prices.

**Arsh Biotech** offers a wide portfolio of testing services/products in Plant Pathogen and GMO trait diagnostics including those for pathogens infecting field crops, fruits, vegetables and ornamental plants. Our first preference is Agdia Inc (which is ISO 17025 and ISO 9001 accredited) for all reagents and kits that are available with them, and the same is also reflected on our test reports.

All our tests are performed at New Delhi in a state-of-art facility accredited with ISO 9001, ISO 13485, ISO 14001 and OHSAS 18001. Further all the products made at our facility are CE marked. We keep a good quantity of testing kits available in our stocks and average turnaround time for all kinds of testing services is 5 business days. Customers receive an in-depth report of their test samples with complete raw and interpreted results. Our well trained staff maintains the highest quality of standards for all our services as well as kits.

Thank you for your attention. We hope that you would enjoy going through our latest catalogue and please do not hesitate to contact us for any queries. We would be delighted to serve you.

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**OHSAS 18001**

# Arsh Biotech Disease Diagnostic List

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## 1 Field Crops

### 1.1 Barley

#### 1.1.1 Fungi

Colletotrichum cereal (Cce) (Anthracnose)	AB5526
Fusarium spp. (Fus)	AB5541
Ascochyta spp. (Asco) Ascochyta leaf spot)	AB5506
Erysiphe graminis (Eg) (Powdery mildew)	AB5536
Pythium spp. (Pyth)	AB5329
Rhizoctonia solani (Rsol)	AB5341
Puccinia spp. (Puc) (Crown/leaf/stem rust)	AB5579
Ustilago tritici (Ut) (Loose smut)	AB5613
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

#### 1.1.2 Bacteria

Xanthomonas campestris (Xc)	AB5619
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#### 1.1.3 Barley Virus Screen

Barley Stripe Mosaic Virus (BSMV)	AB5028
Barley Yellow Dwarf Virus-Mav (BYDV-Mav)	AB5030
Barley Yellow Dwarf Virus-Pav (BYDV-Pav)	AB5031
Cereal Yellow Dwarf Virus-Rpv (CYDV-Rpv)	AB5106
Potyvirus Group Test (Poty)	AB5315
Soil-Borne Wheat Mosaic Virus (SBWMV)	AB5362

#### 1.1.4 Other Virus tests available for barley

Brome Mosaic Virus (BMV) ELISA	AB5077
Maize Chlorotic Mottle Virus (MCMV)	AB5229
Maize Streak Virus (MSV)	AB5232
Maize Stripe Virus (Mspv)	AB5233
Ribgrass Mosaic Virus (RMV)	AB5344
Strawberry Latent Ringspot Virus (SLRSV)	AB5377

## 1.2 Corn

### 1.2.1 Fungi

Aspergillus flavus (Af)	AB5509
Fusarium spp. (Fus)	AB5541
Penicillium spp. (Pen)	AB5557

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Pythium spp. (Pyth)	AB5329
Rhizoctonia solani (Rsol)	AB5341
Ustilago maydis (Um) (Common smut)	AB5612

## 1.2.2 Bacteria

Acidovorax avenae (Pseudomonas avenae) (Aa) (Bacterial leaf blight and stalk rot)	AB5494
Pantoea stewartii (Erwinia stewartii) (Pstew) (Stewart's bacterial wilt)	AB5249
Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Xanthomonas campestris (Xc)	AB5619

## 1.2.3 Corn Virus Screen

Barley Stripe Mosaic Virus (BSMV)	AB5028
Barley Yellow Dwarf Virus-Mav (BYDV-Mav)	AB5030
Barley Yellow Dwarf Virus-Pav (BYDV-Pav)	AB5031
Cereal Yellow Dwarf Virus-Rpv (CYDV-Rpv)	AB5106
Cucumber Mosaic Virus (CMV)	AB5147
Potyvirus Group Test (Poty)	AB5315
Wheat Spindle Streak Mosaic Virus (WSSMV)	AB5448
Wheat Streak Mosaic Virus (WSMV)	AB5449

## 1.2.4 Other Virus tests available for Corn

Brome Mosaic Virus (BMV)	AB5077
Carlavirus Group Test (Carla)	AB5518
High Plains Virus (HPV)	AB5549
Johnsongrass Mosaic Virus (JGMV)	AB5216
Luteovirus Group Test (Luteo)	AB5552
Maize Chlorotic Mottle Virus (MCMV)	AB5229
Maize Dwarf Mosaic Virus (MDMV)	AB5230
Maize Mosaic Virus (MMV)	AB5231
Maize Streak Virus (MSV)	AB5232
Maize Stripe Virus (Mspv)	AB5233
Maize White Line Mosaic Virus (MWLMV)	AB5234
Nepovirus Group Test (Nepo)	AB5554
Potexvirus Group Test (Potex)	AB5572
Sugarcane Mosaic Virus (SCMV)	AB5380
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tobamovirus Group Test (Tobamo)	AB5413

## 1.2.5 Phytoplasmas/Spiroplasmas

Corn stunt spiroplasma (Css)	AB5531
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Phytoplasmas (includes Maize Bushy Stunt) (Phyto)	AB5568
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## 1.3 Cotton

### 1.3.1 Cotton Virus Screen

Tobacco streak virus (TSV)	AB5410
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## 1.4 Ginseng

### 1.4.1 Fungi

Alternaria panax (Ap) (Alternaria Leaf and Stem Blight)	AB5501
Phytophthora cactorum (Pc)	AB5561
Cylindrocarpon destructans(Cd) (Cylindrocarpon Root Rot)	AB5532
Rhizoctonia solani (Rsol)	AB5341
Fusarium spp. (Fus)	AB5541
Pythium spp. (Pyth)	AB5329
Phytophthora spp. (Phyt)	AB5287

## 1.5 Mustard

### 1.5.1 Mustard Virus Screen

Cauliflower Mosaic Virus (Camv)	AB5103
Beet Western Yellows Virus (BWYV)	AB5054
Potyvirus Group Test (Poty)	AB5315
Turnip Mosaic Virus (TUMV)	AB5433

## 1.6 Oats

### 1.6.1 Oats Virus Screen

Barley Yellow Dwarf Virus-Mav (BYDV-Mav)	AB5030
Barley Yellow Dwarf Virus-Pav (BYDV-Pav)	AB5031
Cereal Yellow Dwarf Virus-Rpv (CYDV-Rpv)	AB5106
Potyvirus group test (Poty)	AB5315

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## 1.7 Potato

### 1.7.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum coccodes (Cc) (Black dot)	AB5527
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Macrophomina phaseoli	AB5628
Phytophthora infestans (Pi) (Late blight)	AB5566
Pythium spp. (Pyth)	AB5329
Pythium ultimum (Pu)	AB5594
Phytophthora erythroseptica (Pe) (Pink rot)	AB5565
Phytophthora spp. (Phyt)	AB5287
Rhizoctonia solani (Rsol)	AB5341
Sclerotium rolfsii (Srol)	AB5627
Synchytrium endobioticum	AB5629
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

### 1.7.2 Bacteria

Clavibacter michiganensis ssp. michiganensis	AB5119
Clavibacter michiganensis subsp. sepedonicus (Cms) (Bacterial ring rot)	AB5122
Erwinia amylovora (Ea) (Fire blight)	AB5174
Pectobacterium (Erwinia) atrosepticum (Patro) (Blackleg)	AB5266
Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Ralstonia (Pseudomonas) solanacearum (Rs) (Bacterial wilt)	AB5332
Streptomyces scabies (Ss) (Common scab)	AB5609
Streptomyces acidiscabies (Sa) (Common scab)	AB5606
Streptomyces turgidiscabies (St) (Common scab)	AB5607

### 1.7.3 Potato Extended Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Andean Potato Latent Virus (APLV)	AB5009
Andean Potato Mottle Virus (Apmov)	AB5010
Cucumber Mosaic Virus (CMV)	AB5147
Groundnut Bud Necrosis Virus (GBNV) And Watermelon Silver Mottle Virus (WSMoV)	AB5445
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potato Aucuba Mosaic Virus (PAMV)	AB5295
Potato Latent Virus (PotLV)	AB5302
Potato Leafroll Virus (PLRV)	AB5303
Potato Mop Top Virus (PMTV)	AB5304

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Potato Spindle Tuber Viroid (PSTVd)	AB5571
Potato Virus A (PVA)	AB5305
Potato Virus M (PVM)	AB5306
Potato Virus S (PVS)	AB5307
Potato Virus T (PVT)	AB5308
Potato Virus V (PVV)	AB5309
Potato Virus X (PVX)	AB5310
Potato Virus Y (PVY)	AB5312
Potato Virus Y-Necrotic Strain (N/Ntn) (Pvy <sup>n</sup> /Ntn)	AB5311
Potyvirus Group Test (Poty)	AB5315
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Necrosis Virus (A Or D) (TNV)	AB5400
Tobacco Rattle Virus (TRV)	AB5408
Tobacco Streak Virus (TSV)	AB5410
Tomato Black Ring Virus (TBRV)	AB5416
Tomato Mosaic Virus (ToMV)	AB5422
Tomato Leaf Curl New Delhi Virus (ToLCNDV)	AB5420
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 1.8 Sorghum

### 1.8.1 Bacteria

Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
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### 1.8.2 Sorghum Virus Screen

Potato spindle tuber viroid (PSTVd)	AB5571
Potato virus A (PVA)	AB5305
Potato virus M (PVM)	AB5306
Potato virus S (PVS)	AB5307
Potato virus T (PVT)	AB5308
Potato virus V (PVV)	AB5309

## 1.9 Soybean

### 1.9.1 Soybean Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Bean Pod Mottle Virus (BPMV)	AB5038
Cucumber Mosaic Virus (CMV)	AB5147
Potyvirus Group Test (Poty)	AB5315
Tobacco Mosaic Virus (TMV)	AB5393

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Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 1.9.2 Other virus tests available for bean

Cowpea Mosaic Virus (CPMV)	AB5138
Impatiens Necrotic Spot Virus (INSV)	AB5211
Peanut Stunt Virus (PSV)	AB5265
Southern Bean Mosaic Virus (SBMV)	AB5366
Soybean Dwarf Virus (SbDV)	AB5369
Soybean Mosaic Virus (SMV)	AB5370
Tobacco Mosaic Virus (TMV)	AB5393
Watermelon Mosaic Virus (WMV)	AB5444

## 1.10 Stevia

### 1.10.1 Fungi

Aflatoxin B1	AB5626
Alternaria alternata (Aa)	AB5496
Fusarium spp. (Fus)	AB5541
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600
Sclerotium rolfsii (Srol)	AB5627

### 1.10.2 Phytoplasmas

Phytoplasma (Phyto)	AB5567
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## 1.11 Sugarcane

### 1.11.1 Sugarcane Virus Screen

Maize Dwarf Mosaic Virus (MDMV)	AB5230
Potyvirus Group Test (Poty)	AB5315
Sugarcane Bacilliform Virus (SCBV)	AB5379
Sugarcane Mosaic Virus (SCMV)	AB5380
Sugarcane Yellow Leaf Virus (Scylv)	AB5381
Luteovirus Group Test (Luteo)	AB5552

# Arsh Biotech Disease Diagnostic List

## 1.12 Tobacco

### 1.12.1 Bacteria

Pectobacterium atrosepticum (Patro) (Black leg)	AB5266
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### 1.12.2 Tobacco Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Peanut Stunt Virus (PSV)	AB5265
Pepper Mild Mottle Virus (PMMoV)	AB5278
Potato Virus Y (PVY)	AB5312
Potyvirus Group Test (Poty)	AB5315
Tobacco Etch Virus (TEV)	AB5389
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Vein Mottling Virus (TVMV)	AB5412
Tobacco Streak Virus (TSV)	AB5410
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 1.13 Wheat

### 1.13.1 Fungi

Alternaria triticina (At) (Alternaria leaf blight)	AB5502
Ascochyto tritici (At) (Ascochyta leaf spot)	AB5507
Fusarium spp. (Fus)	AB5541
Fusarium graminearum (Fg)	AB5542
Puccinia striiformis (Stripe Rust)	AB5580
Puccinia triticina (Pt) (Leaf rust)	AB5581
Pythium spp. (Pyth)	AB5329
Puccinia graminis (Pg) (Stem rust)	AB5578
Rhizoctonia solani (Rsol)	AB5341
Ustilago tritici (Ut) (Loose smut)	AB5613

### 1.13.2 Bacteria

Clavibacter michiganensis pv tessellarius (Cmt) (Bacterial mosaic)	AB5123
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### 1.13.3 Wheat Virus Screen

Barley Stripe Mosaic Virus (BSMV)	AB5028
Barley Yellow Dwarf Virus-Mav (BYDV-mav)	AB5030

# Arsh Biotech Disease Diagnostic List

Barley Yellow Dwarf Virus-Pav (BYDV-Pav)	AB5031
Cereal Yellow Dwarf Virus-Rpv (CYDV-Rpv)	AB5106
Potyvirus Group Test (Poty)	AB5315
Soil-Borne Wheat Mosaic Virus (SBWMV)	AB5362
Wheat Spindle Streak Mosaic Virus (WSSMV)	AB5448
Wheat Streak Mosaic Virus (WSMV)	AB5449

## **1.13.4 Other virus tests available for wheat**

Brome Mosaic Virus (BMV)	AB5077
High Plains Virus (HPV)	AB5549
Tobacco Mosaic Virus (TMV)	AB5393

## 2 Fruits

### 2.1 Apple

#### 2.1.1 Fungi

Alternaria alternata (Aa)	AB5496
Alternaria mali (Am) (Alternaria blotch)	AB5498
Colletotrichum acutatum (Cacu)	AB5133
Botryosphaeria dothidea (Bd)	AB5513
Botryosphaeria obtusa (Bo)	AB5514
Botrytis cinerea (Bc) (Gray mold)	AB5067
Phomopsis mali (Pm) (Phomopsis canker)	AB5559
Phytophthora spp. (Phyt)	AB5287
Phytophthora cactorum (Pc)	AB5561
Penicillium spp. (Pen)	AB5557
Sclerotinia sclerotiorum(Sscl)	AB5600

#### 2.1.2 Bacteria

Erwinia amylovora (Ea) (Fire blight)	AB5174
Pseudomonas syringae pv. papulans (Blister spot)	AB5575

#### 2.1.3 Apple Virus Screen

Apple Chlorotic Leaf Spot Virus (ACLSV)	AB5013
Apple Mosaic Virus (APMV)	AB5014
Apple Proliferation Phytoplasmas (APP)	AB5639
Apple Scar Skin Viroid (ASSVD)	AB5638
Apple Stem Grooving Virus (ASGV)	AB5015
Apple Stem Pitting Virus (ASPV)	AB5504
Tomato Ringspot Virus (TORSV)	AB5423

### 2.2 Apricot

#### 2.2.1 Fungi

Alternaria alternate (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Phytophthora spp. (Phyt)	AB5287
Sclerotinia sclerotiorum (Sscl)	AB5600
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

# Arsh Biotech Disease Diagnostic List

## 2.2.2 Bacteria

Pseudomonas syringae pv. syringae (pss)	AB5324
Xanthomonas campestris pv. Campestris (Xcc)	AB5472

## 2.2.3 Apricot Virus Screen

Plum Pox Virus (PPV)	AB5290
Potyvirus Group Test (Poty)	AB5315
Prune Dwarf Virus (PDV)	AB5316
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tomato Ringspot Virus (Torsv)	AB5423

## 2.3 Banana

### 2.3.1 Bacteria

Ralstonia (Pseudomonas) solanacearum (Rs) (Bacterial wilt)	AB5332
Erwinia carotovora (Rhizome rot)	AB5176

### 2.3.2 Fungi

Phytophthora spp. (Phyt)	AB5287
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Fusarium solani (Fsol)	AB5540
Sclerotinia sclerotiorum (Sscl)	AB5600

### 2.3.3 Banana Virus Screen

Banana Bract Mosaic Virus (BBRMV)	AB5022
Banana Bunchy Top Mosaic Virus (BBTV)	AB5620
Cucumber Mosaic Virus (CMV)	AB5147
Potyvirus Group Test (Poty)	AB5315
Sugarcane Mosaic Virus (SCMV)	AB5380
Sugarcane Bacilliform Virus (SCBV)	AB5379
Banana Streak Virus (BSV)	AB5026

## 2.4 Berries (Rosaceae)

### 2.4.1 Berry Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Arabis Mosaic Virus (Armv)	AB5016

# Arsh Biotech Disease Diagnostic List



Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Raspberry Bushy Dwarf Virus (RBDV)	AB5333
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Strawberry Mild Yellow Edge Virus (SMYEV)	AB5378
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Ringspot Virus (TORSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424
Carlavirus Group Test (Carla)	AB5518
Closteroviridae Group Test(Clostero)	AB5525
Ilarvirus Group Test(Ilar)	AB5550

## 2.5 Blueberry and Cranberry

### 2.5.1 Fungi

Alternaria tenuissima(Ate) (Alternaria leaf spot and fruit rot)	AB5500
Botryosphaeria cortices (Bc)	AB5512
Botryosphaeria dothidea (Bd)	AB5513
Botrytis cinerea (Bc) (Gray mold)	AB5067
Cercospora spp. (Cer) (Stem blotch)	AB5519
Colletotrichum gloeosporioides (Cg) (Anthracnose fruit rot)	AB5529
Exobasidium vaccinii (Ev) (Red leaf)	AB5537
Fusicoccum putrefaciens(Fp) (Fusicoccum canker)	AB5545
Phomopsis vaccinii (Pv) (Twig blight/stem canker/stem blight)	AB5560
Phytophthora spp. (Phyt)	AB5287
Pucciniastrum vaccinii (Pv) (Leaf rust)	AB5583
Rosellinianecatrix(Rn) (White root rot)	AB5598

### 2.5.2 Bacteria

Pseudomonas syringae pv. syringae (pss)	AB5324
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### 2.5.3 Blueberry and Cranberry Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Apple Mosaic Virus (ApMV)	AB5014
Raspberry Bushy Dwarf Virus (RBDV)	AB5333
Cherry Leaf Roll Virus (CLRV)*	AB5107
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Peach Rosette Mosaic Virus (PRMV)	AB5261

# Arsh Biotech Disease Diagnostic List



Pelargonium Zonate Spot Virus (PZSV)	AB5274
Potyvirus Group Test (Poty)	AB5315
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Raspberry Bushy Dwarf Virus (RBDV)	AB5333
Raspberry Ringspot Virus (RpRSV)	AB5338
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Streak Virus (TSV)	AB5410
Tomato Aspermy Virus (TAV)	AB5415
Tomato Black Ring Virus (TBRV)	AB5416
Tomato Mosaic Virus (TOMV)	AB5422
Tomato Spotted Wilt Virus (TSWV)	AB5424
<b>2.5.4 Phytoplasmas</b>	
Phytoplasma (Phyto)	AB5567

## 2.6 Citrus

### 2.6.1 Fungi

Alternaria alternata (Aa)	AB5496
Aspergillus flavus (Af)	AB5509
Aspergillus niger (An)	AB5508
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Phytophthora spp. (Phyt)	AB5287
Pythium spp. (Pyth)	AB5329
Pythium aphanidermatum (Pa)	AB5586
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341

### 2.6.2 Bacteria

Candidatus liberibacter asiaticus (Citrus Greening (HLB))	AB5517
Pseudomonas syringae pv. syringae (pss)	AB5324
Spiroplasma citri (Sc)	AB5603
Xanthomonas campestris pv. citri (Xccit)	AB5474
Xanthomonas axonopodis pv. citri (Xac)	AB5618
Xylella fastidiosa (Xfas)	AB5484

### 2.6.3 Citrus Virus Screen

Citrus leaf rugose virus (CiLRV)	AB5115
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# Arsh Biotech Disease Diagnostic List

Indian Citrus Ringspot Virus (ICRSV)	AB5632
Citrus Tatter Leaf Virus (CTLV)	AB5634
Citrus Tristeza Virus (CTV)	AB5117
Citrus Variegation Virus (CVV)	AB5635
Citrus Yellow Mosaic Virus (CYMV)	AB5636
Citrus Exocortis Viroid (Pospiviroid Group Test) (Pospi)	AB5570
Satsuma Dwarf Virus (SDV)	AB5637

## 2.7 Cherry

### 2.7.1 Cherry Virus Screen

Cherry Leaf Roll Virus (CLRV)	AB5107
Plum Pox Virus (PPV)	AB5290
Prune Dwarf Virus (PDV)	AB5316
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Ringspot Virus (Torsv)	AB5423

## 2.8 Grape/Grapevine

### 2.8.1 Fungi

Alternaria alternate (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Phytophthora spp. (Phyt)	AB5287
Plasmopara viticola	AB5640
Uncinula necator (Powdery mildew)	AB5641
Verticillium dahlia (Vd) (Verticillium wilt)	AB5615
Xylella fastidiosa (Xfas)	AB5484
Xylophilus ampelinus (Xamp)	AB5486

### 2.8.2 Virus tests available for Grapevine

Arabis Mosaic Virus (ArMV)	AB5016
Closteroviridae group test (Grapevine leafroll associated viruses 1, 2, 3, 4, 5, 6, 9) (Clostero)	AB5524
Grapevine Leafroll-Assoc. Virus 1 (Glrv-1)	AB5199
Grapevine Leafroll-Assoc. Virus 2 (Glrv-2)	AB5197
Grapevine Leafroll-Assoc. Virus 3 (Glrv-3)	AB5198
Grapevine Leafroll Virus 1+3 (Glrv-1+3)	AB5196
Grapevine Leafroll-Assoc. Virus Generic 4 Strains	AB5548
Grapevine Leafroll-Assoc. Virus 4 Strain 6	AB5547
Grapevine Leafroll-Assoc. Virus 7 (Glrv-7)	AB5195
Grapevine Virus A (GVA)	AB5201
Grapevine Virus A (GVb)	AB5202

# Arsh Biotech Disease Diagnostic List



Grapevine Fleck Virus (GFKV)	AB5193
Peach Rosette Mosaic Virus (PRMV)	AB5261
Raspberry Ringspot Virus-Ch (RpRSV-Ch)	AB5334
Raspberry Ringspot Virus-G (RpRSV-G)	AB5335
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Black Ring Virus (TBRV)	AB5416
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Ringspot Virus-Ch (ToRSV-Ch)	AB5621

## 2.9 Papaya

### 2.9.1 Papaya Virus Screen

Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Papaya Mosaic Virus (PAPMV)	AB5251
Papaya Ringspot Virus (PRSV)	AB5252
Potyvirus Group Test (Poty)	AB5315
Tobacco Ringspot Virus (TRSV)	AB5409

## 2.10 Peach

### 2.10.1 Fungi

Phytophthora spp. (Phyt)	AB5287
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341

### 2.10.2 Bacteria

Xanthomonas campestris (Xc)	AB5619
Xylella fastidiosa (Xfas)	AB5484

### 2.10.3 Peach Virus Screen

Apple Mosaic Virus (Apmv)	AB5014
Cherry Leaf Roll Virus (CLRV)	AB5107
Peach Rosette Mosaic Virus (PRMV)	AB5261
Plum Pox Virus (PPV)	AB5290
Potyvirus Group Test (Poty)	AB5315
Prune Dwarf Virus (PDV)	AB5316
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Tomato Ringspot Virus (Torsv)	AB5423

# Arsh Biotech Disease Diagnostic List

## 2.11 Pomegranate

### 2.11.1 Fungi

Alternaria alternata (Aa)	AB5496
Fusarium oxysporum (Foxy)	AB5538
Phytophthora spp. (Phyt)	AB5287

### 2.11.2 Bacteria

Xanthomonas axonopodis pv. Punicae (Xapu)	AB5625
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## 2.12 Prunus

### 2.12.1 Prunus Virus Screen

American Plum Line Pattern Virus (APLPV)	AB5008
Arabis Mosaic Virus (ArMV)	AB5016
Cherry Leaf Roll Virus (CLRV)	AB5107
Peach Rosette Mosaic Virus (PRMV)	AB5261
Plum Pox Virus (PPV)	AB5290
Potyvirus Group Test (Poty)	AB5315
Prune Dwarf Virus (PDV)	AB5316
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tomato Ringspot Virus (ToRSV)	AB5423

## 2.13 Raspberry

### 2.13.1 Fungi

Botryosphaeria dothidea (Bd)	AB5513
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum gloeosporioides (Cg) (Anthracnose fruit rot)	AB5529
Pythium spp. (Pyth)	AB5329
Phytophthora spp. (Phyt)	AB5287
Pucciniastrum americanum (Pa) (Leaf rust)	AB5582

### 2.13.2 Bacteria

Erwinia amylovora (Ea) (Fire blight)	AB5174
Pseudomonas syringae pv. syringae (pss)	AB5324

### 2.13.3 Raspberry Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
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# Arsh Biotech Disease Diagnostic List



Arabis Mosaic Virus (Armv)	AB5016
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Raspberry Bushy Dwarf Virus (RBDV)	AB5333
Raspberry Ringspot Virus (RpRSV)	AB5338
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 2.13.4 Other virus tests available for blueberry

Apple Mosaic Virus (APMV)	AB5014
Blueberry Leaf Mottle Virus (BLMV)	AB5062
Blueberry Scorch Virus (BLSCV)	AB5064
Blueberry Shock Virus (BLSHV)	AB5511
Blueberry Shoestring Virus (BSSV)	AB5065
Cherry Leaf Roll Virus (CLRV)*	AB5107
Peach Rosette Mosaic Virus (PRMV)	AB5261
Pelargonium Zonate Spot Virus (PZSV)	AB5274
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tobacco Mosaic Virus (TMV)	AB5393
Tomato Aspermy Virus (TAV)	AB5415
Tomato Black Ring Virus (TBRV)	AB5416
Tomato Mosaic Virus (ToMV)	AB5422

## 2.14 Strawberry

### 2.14.1 Fungi

Aspergillus niger (An)	AB5508
Alternaria alternata (Aa)	AB5496
Alternaria tenuissima (Ate) (Alternaria leaf spot and fruit rot)	AB5500
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum acutatum (Cacu)	AB5133
Colletotrichum fragariae (Cfra) (Anthracnose)	AB5528
Fusarium oxysporum (Foxy)	AB5538
Penicillium spp. (Pen)	AB5557
Rhizoctonia solani (Rsol)	AB5341
Phytophthora spp. (Phyt)	AB5287
Phytophthora cactorum (Pc)	AB5561
Pythium spp. (Pyth)	AB5329
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341

# Arsh Biotech Disease Diagnostic List



Sclerotinia sclerotiorum (Sscl)	AB5600
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

## 2.14.2 Bacteria

Ralstonia (Pseudomonas) solanacearum (Rs) (Bacterial wilt)	AB5332
Xanthomonas fragariae (Xfra)	AB5481

## 2.14.3 Strawberry Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Arabis Mosaic Virus (ArMV)	AB5016
Cherry Leaf Roll Virus (CLRV)	AB5107
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Raspberry Bushy Dwarf Virus (RBDV)	AB5333
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Strawberry Mild Yellow Edge Virus (SMYEV)	AB5378
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Black Ring Virus (TBRV)	AB5416
Tomato Ringspot Virus (Torsv)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 3 Vegetables

### 3.1 Asparagus

#### 3.1.1 Fungi

Alternaria alternata (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Phytophthora spp. (Phyt)	AB5287
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

#### 3.1.2 Asparagus Virus Screen

Arabis Mosaic Virus (ArMV)	AB5016
Asparagus Virus 2 (AV2)	AB5020
Cucumber Mosaic Virus (CMV)	AB5147
Potyvirus Group Test (Poty)	AB5315
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tobacco Streak Virus (TSV)	AB5410

### 3.2 Bean

#### 3.2.1 Fungi

Alternaria alternata (Aa)	AB5496
Alternaria brassicae (Ab)	AB5497
Aphanomyces euteiches (Root rot)	AB5503
Ascochyta spp. (Asco) Ascochyta leaf spot)	AB5506
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium oxysporum (Foxy)	AB5538
Fusarium solani (Fsol)	AB5540
Pythium aphanidermatum (Pa)	AB5586
Pythium irregularare (Pi)	AB5588
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

# Arsh Biotech Disease Diagnostic List

## 3.2.2 Bacteria

Pseudomonas syringae pv. syringae (pss)	AB5324
Pseudomonas syringae pv. tabaci (Wildfire)	AB5576
Xanthomonas campestris (Xc)	AB5619

## 3.2.3 Bean Virus Screen

Alfalfa mosaic virus (AMV)	AB5006
Bean pod mottle virus (BPMV)	AB5038
Cowpea mosaic virus (CPMV)	AB5138
Cucumber mosaic virus (CMV)	AB5147
Impatiens necrotic spot virus (INSV)	AB5211
Peanut stunt virus (PSV)	AB5265
Potyvirus group test (Poty)	AB5315
Southern bean mosaic virus (SBMV)	AB5366
Soybean dwarf virus (SbDV)	AB5369
Soybean mosaic virus (SMV)	AB5370
Soybean vein necrosis virus (SVNV)	AB5371
Tobacco mosaic virus (TMV)	AB5393
Tobacco ringspot virus (TRSV)	AB5409
Tobacco streak virus (TSV)	AB5410
Tomato ringspot virus (ToRSV)	AB5423
Tomato spotted wilt virus (TSWV)	AB5424

## 3.2.4 Other virus tests available for bean

Cowpea Mosaic Virus (CPMV)	AB5138
Impatiens Necrotic Spot Virus (INSV)	AB5211
Peanut Stunt Virus (PSV)	AB5265
Southern Bean Mosaic Virus (SBMV)	AB5366
Soybean Dwarf Virus (Sbdv)	AB5369
Soybean Mosaic Virus (SMV)	AB5370
Tobacco Mosaic Virus (TMV)	AB5393
Watermelon Mosaic Virus (WMV)	AB5444

## 3.3 Beet

### 3.3.1 Fungi

Alternaria alternata (Aa)	AB5496
Alternaria brassicae (Ab)	AB5497
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium oxysporum (Foxy)	AB5538
Phytophthora spp. (Phyt)	AB5287

# Arsh Biotech Disease Diagnostic List

Pythium aphanidermatum (Pa)	AB5586
Pythium irregularare (Pi)	AB5588
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614

## 3.3.2 Bacteria

Pseudomonas syringae pv. aptata (psa)	AB5574
Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Phytoplasma (Phyto)	AB5567

## 3.3.3 Beet Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Beet Necrotic Yellow Vein Virus (BNYVV)	AB5052
Beet Western yellows Virus (BWYV)	AB5054
Cucumber Mosaic Virus (CMV)	AB5147
Potyvirus Group Test (POTY)	AB5315
Tobacco Rattle Virus (TRV)	AB5408

## 3.3.4 Other virus tests available for beet

Closteroviridae group test (Beet yellows virus, Lettuce chlorosis virus, others) (Clostero)	AB5523
Beet curly top virus (BCTV)	AB5047
Luteovirus group test (Luteo)	AB5552

## 3.4 Cabbage

### 3.4.1 Fungi

Alternaria brassicae (Ab)	AB5497
Fusarium oxysporum (Foxy)	AB5538
Plasmodiophora brassicae (Pb) (Clubroot)	AB5569
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

### 3.4.2 Bacteria

Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Pseudomonas syringae pv. syringae (pss)	AB5324
Xanthomonas campestris pv. campestris (Xcc)	AB5472

# Arsh Biotech Disease Diagnostic List



## 3.4.3 Cabbage Virus Screen

Cauliflower mosaic virus (CaMV)	AB5103
Bean western yellows virus (BWYV)	AB5510
Potyvirus group test (Poty)	AB5315
Ribgrass mosaic virus (RMV)	AB5344
Tobacco rattle virus (TRV)	AB5408
Tobacco ringspot virus (TRSV)	AB5409
Tobacco streak virus (TSV)	AB5410
Turnip mosaic virus (TuMV)	AB5433

## 3.5 Carrot

### 3.5.1 Fungi

Alternaria alternate (Aa)	AB5496
Fusarium spp. (Fus)	AB5541
Pythium spp. (Pyth)	AB5329
Pythium aphanidermatum (Pa)	AB5586
Pythium intermedium (Pin)	AB5587
Pythium irregularare (Pi)	AB5588
Pythium paroecandrum (Pp)	AB5589
Pythium sulcatum (Psu)	AB5590
Pythium sylvaticum (Psy)	AB5591
Pythium ultimum (Pu)	AB5594
Pythium violae (Pv)	AB5593
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

### 3.5.2 Bacteria

Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Streptomyces scabies (Scab)	
Xanthomonas campestris pv. carotae (Xcca)	AB5473

### 3.5.3 Carrot Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Cucumber Mosaic Virus (CMV)	AB5147
Beet Curly Top Virus (BCTV)	AB5047

# Arsh Biotech Disease Diagnostic List

## 3.6 Cauliflower

### 3.6.1 Fungi

Alternaria brassicae (Ab)	AB5497
Fusarium oxysporum (Foxy)	AB5538
Plasmodiophora brassicae (Pb) (Clubroot)	AB5569
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

### 3.6.2 Bacteria

Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Pseudomonas syringae pv. syringae (pss)	AB5324
Xanthomonas campestris pv. campestris (Xcc)	AB5472

### 3.6.3 Cauliflower Virus Screen

Arabis Mosaic Virus (ArMV)	AB5016
Beet Western Yellows Virus (BWYV)	AB5054
Cauliflower Mosaic Virus (CaMV)	AB5103
Potyvirus Group Test (Poty)	AB5315
Ribgrass Mosaic Virus (RMV)	AB5344
Strawberry Latent Ringspot Virus (SLRsV)	AB5377
Tomato Spotted Wilt Virus (TSWV)	AB5424
Turnip Mosaic Virus (TuMV)	AB5433

## 3.7 Celery

### 3.7.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Colletotrichum acutatum (Cacu)	AB5133
Fusarium oxysporum (Foxy)	AB5538
Fusarium solani (Fsol)	AB5540
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

### 3.7.2 Bacteria

Pseudomonas syringae pv. syringae (pss)	AB5324
Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175

# Arsh Biotech Disease Diagnostic List



3.7.3 Celery Virus Screen	
Alfalfa mosaic virus (AMV)	AB5006
Arabis mosaic virus (ArMV)	AB5016
Cherry leaf roll virus (CLRV)	AB5107
Cucumber mosaic virus (CMV)	AB5147
Peanut stunt virus (PSV)	AB5265
Potyvirus group test (Poty)	AB5315
Strawberry latent ringspot virus (SLRSV)	AB5377
Tobacco ringspot virus (TRSV)	AB5409
Tomato ringspot virus (ToRSV)	AB5423

## 3.8 Crucifers

3.8.1 Fungi	
Alternaria brassicae (Ab)	AB5497
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Leptosphaeria maculans (Blackleg)	AB5551
Pythium spp. (Pyth)	AB5329
Plasmodiophora brassicae (Pb) (Clubroot)	AB5569
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

3.8.2 Bacteria	
Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Pseudomonas syringae pv. syringae (pss)	AB5324
Xanthomonas campestris (Xc)	AB5619

3.8.3 Crucifer Virus Screen	
Cauliflower Mosaic Virus (CaMV)	AB5103
Bean Western Yellows Virus (BWYV)	AB5510
Potyvirus Group Test (Poty)	AB5315
Ribgrass Mosaic Virus (RMV)	AB5344
Tobacco Rattle Virus (TRV)	AB5408
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410

# Arsh Biotech Disease Diagnostic List



Turnip Mosaic Virus (TuMV)	AB5433
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## 3.9 Cucurbits (Cucumber, Melon, Squash)

### 3.9.1 Fungi

Alternaria alternata (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Didymella bryoniae (Bumby stem blight)	AB5533
Erysiphe cichoracearum (Powdery mildew)	AB5535
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Fusarium solani (Fsol)	AB5540
Penicillium spp. (Pen)	AB5557
Phytophthora spp. (Phyt)	AB5287
Phytophthora capsici (Pcap)	AB5562
Pythium spp. (Pyth)	AB5329
Pythium aphanidermatum (Pa)	AB5586
Rhizoctonia solani (Rsol)	AB5341
Serratia marcescens (Cucurbit yellow vine)	AB5601
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

### 3.9.2 Bacteria

Acidovorax avenae subsp. citrulli (Aac)	AB5001
Erwinia tracheiphila (Bacterial wilt)	AB5534
Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Xanthomonas campestris (Xc)	AB5619

### 3.9.3 Cucurbits Virus Screen

Cucumber Green Mottle Mosaic Virus (CGMMV)	AB5142
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Melon Necrotic Spot Virus (MNSV)	AB5236
Papaya Ringspot Virus (PRSV)	AB5252
Potyvirus Group Test (Poty)	AB5315
Squash Mosaic Virus (SqmV)	AB5375
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Mosaic Virus (ToMV)	AB5422
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

# Arsh Biotech Disease Diagnostic List



Zucchini Yellow Mosaic Virus (ZYMV)	AB5493
<b>3.9.4 Other virus tests available for cucurbits</b>	
Alfalfa Mosaic Virus (AMV)	AB5006
Arabis Mosaic Virus (Armv)	AB5016
Asparagus Virus 2 (AV2)	AB5020
Beet Curly Top Virus (BCTV)	AB5047
Beet Western Yellows Virus (BWYV)	AB5054
Carlavirus group test (CarLa)	AB5518
Kyuri Green Mottle Mosaic Virus (KGMMV)	AB5219
Luteovirus group test (Luteo)	AB5552
Nepovirus group test (Nepo)	AB5554
Peanut Stunt Virus (PSV)	AB5265
Pepino Mosaic Virus (PepMV)	AB5277
Pepper Mottle Virus (PepMOV)	AB5278
Potexvirus Group Test (Potex)	AB5572
Raspberry Ringspot Virus (RpRSV)	AB5338
Ribgrass Mosaic Virus (RMV)	AB5344
Tobacco Etch Virus (TEV)	AB5389
Tobacco Rattle Virus (TRV)	AB5408
Tobamovirus group test (Tobamo)	AB5413
Tomato Aspermy Virus (TAV)	AB5415
Tomato Bushy Stunt Virus (TBSV)	AB5417
Tomato Mosaic Virus (Tomv)	AB5422
Watermelon Mosaic Virus (WMV)	AB5444
Watermelon Silver Mottle Virus (WSMoV)	AB5445
Cucumber Green Mottle Mosaic Virus (CGMMV)	AB5142
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
<b>Phytoplasmas</b>	
Phytoplasma (Phyto)	AB5567

## 3.10 Eggplant

<b>3.10.1 Fungi</b>	
Colletotrichum coccodes (Cc) (Black dot)	AB5527
Phytophthora spp. (Phyt)	AB5287
Pythium spp. (Pyth)	AB5329
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

# Arsh Biotech Disease Diagnostic List



## 3.10.2 Bacteria

Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175

## 3.10.3 Eggplant Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Peanut Stunt Virus (PSV)	AB5265
Potato Virus M (PVM)	AB5306
Ribgrass Mosaic Virus (RMV)	AB5344
Tobacco Etch Virus (TEV)	AB5389
Tobacco Rattle Virus (TRV)	AB5408
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Bushy Stunt Virus (TBSV)	AB5417
Tomato Mosaic Virus (ToMV)	AB5422
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 3.11 Endive

### 3.11.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium spp. (Fus)	AB5541
Pytiun spp. (Damping-off/root/crown rot)	AB5329
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

### 3.11.2 Endive Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Carnation Ringspot Virus (CRSV)	AB5091
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Lettuce Mosaic Virus (LMV)	AB5221
Potyvirus Group Test (Poty)	AB5315
Ribgrass Mosaic Virus (RMV)	AB5344
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Spotted Wilt Virus (TSWV)	AB5424
Turnip Mosaic Virus (TuMV)	AB5433
Watermelon Mosaic Virus (WMV)	AB5444

# Arsh Biotech Disease Diagnostic List



## 3.12 Garlic

### 3.12.1 Garlic Virus Screen

Potyvirus Group Test (Poty)	AB5315
Iris Yellow Spot Virus (IYSV)	AB5214
Leek Yellow Stripe Virus (LYSV)	AB5220
Onion Yellow Dwarf Virus (OYDV)	AB5247
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Rattle Virus (TRV)	AB5408
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 3.13 Lettuce

### 3.13.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium oxysporum (Foxy)	AB5538
Rhizoctonia solani (Rsol)	AB5341
Pythium spp. (Pyth)	AB5329
Pythium sylvaticum (Psy)	AB5591
Pythium ultimum (Pu)	AB5594
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

### 3.13.2 Bacteria

Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Xanthomonas campestris (Xc)	AB5619

### 3.13.3 Lettuce Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Beet Western Yellows Virus (BWYV)	AB5054
Cauliflower Mosaic Virus (CaMV)	AB5103
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Lettuce Mosaic Virus (LMV)	AB5221
Potyvirus Group Test (Poty)	AB5315
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Spotted Wilt Virus (TSWV)	AB5424
Turnip Mosaic Virus (Tumv)	AB5433

# Arsh Biotech Disease Diagnostic List

## 3.14 Onion

### 3.14.1 Fungi

Alternaria porri (Ap) (Purple blotch)	AB5499
Aspergillus niger (An)	AB5508
Botrytis squamosa (Bs) (Leaf blight)	AB5515
Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Penicillium spp. (Pen)	AB5557
Peronospora destructor (Pd) (Downy mildew)	AB5558
Puccinia allii (Pa) (Rust)	AB5577
Pythium spp. (Pyth)	AB5329
Pythium irregulare (Pi)	AB5588
Pythium sylvaticum (Psy)	AB5591
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600
Stemphylium vesicarium (Sv) (Stemphylium leaf blight and stalk rot)	AB5605

### 3.14.2 Onion Virus Screen

Iris Yellow Spot Virus (IYSV)	AB5214
Leek Yellow Stripe Virus (LYSV)	AB5220
Onion Yellow Dwarf Virus (OYDV)	AB5247
Shallot Latent Virus (SLV)	AB5357
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Rattle Virus (TRV)	AB5408
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 3.15 Peas

### 3.15.1 Fungi

Alternaria alternata (Aa)	AB5496
Aphanomyces euteiches (Root rot)	AB5503
Ascochyta spp. (Asco) Ascochyta leaf spot)	AB5506
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium oxysporum (Foxy)	AB5538
Fusarium solani (Fsol)	AB5540
Pythium spp. (Pyth)	AB5329
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

# Arsh Biotech Disease Diagnostic List

## 3.15.2 Peas Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Arabis Mosaic Virus (ArMV)	AB5016
Bean Pod Mottle Virus (BPMV)	AB5038
Beet Western Yellows Virus (BWYV)	AB5054
Cucumber Mosaic Virus (CMV)	AB5147
Lettuce Mosaic Virus (LMV)	AB5221
Peanut Stunt Virus (PSV)	AB5265
Pea Seed-Borne Mosaic Virus (PSBMV)	AB5259
Potyvirus Group Test (Poty)	AB5315
Soybean Mosaic Virus (SMV)	AB5370
Squash Mosaic Virus (SqMV)	AB5375
Tobacco Rattle Virus (TRV)	AB5408
Tobacco Streak Virus (TSV)	AB5410
Tomato Spotted Wilt Virus (TSWV)	AB5424
Watermelon Mosaic Virus (WMV)	AB5444
Zucchini Yellow Mosaic Virus (ZYMV)	AB5493

## 3.16 Pepper

### 3.16.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Fusarium solani (Fsol)	AB5540
Oidiopsis sicula (Powdery mildew)	AB5555
Phytophthora spp. (Phyt)	AB5287
Phytophthora capsici (Pcap)	AB5562
Pythium spp. (Pyth)	AB5329
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

### 3.16.2 Bacteria

Clavibacter michiganensis subsp. michiganensis (Cmm) (Bacterial canker)	AB5118
Ralstonia (Pseudomonas) solanacearum (Rs) (Bacterial wilt)	AB5332
Pseudomonas syringae pv. syringae (pss)	AB5324
Xanthomonas campestris pv. vesicatoria (Xcv)	AB5480

# Arsh Biotech Disease Diagnostic List

## 3.16.3 Pepper Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Pepper Mild Mottle Virus (PMMoV)	AB5278
Pepper Mottle Virus (PepMoV)	AB5279
Potato Virus Y (PVY)	AB5312
Potyvirus Group Test (Poty)	AB5315
Tobacco Etch Virus (TEV)	AB5389
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 3.16.4 Other virus tests available for Pepper

Beet Curly Top Virus (BCTV)	AB5047
Beet Western Yellows Virus (BWYV)	AB5054
Broad Bean Wilt Virus-1,2 (BBWV-1,2)	AB5074
Carlavirus Group Test (Carla)	AB5518
Nepovirus Group Test (Nepo)	AB5554
Peanut Stunt Virus (PSV)	AB5265
Pepino Mosaic Virus (PepMV)	AB5277
Potato Aucuba Mosaic Virus (PAMV)	AB5295
Potato Virus Y (PVY)	AB5312
Ribgrass Mosaic Virus (RMV)	AB5344
Tobacco Etch Virus (TEV)	AB5389
Tobacco Rattle Virus (TRV)	AB5408
Tobamovirus Group Test (Tobamo)	AB5413
Tomato Bushy Stunt Virus (TBSV)	AB5417
Tomato Mosaic Virus (ToMV)	AB5422
Whitefly-Transmitted Geminiviruses (WTG)	AB5617

## 3.17 Potato

### 3.17.1 Fungi

Alternaria alternata (Aa)	AB5496
Alternaria solani (As)	AB5505
Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum coccodes (Cc) (Black dot)	AB5527
Fusarium spp. (Fus)	AB5541
Fusarium oxysporum (Foxy)	AB5538
Phytophthora infestans (Pi) (Late blight)	AB5566
Pythium ultimum (Pu)	AB5594

# Arsh Biotech Disease Diagnostic List



Phytophthora infestans (Pi) (Late blight)	AB5566
Phytophthora erythroseptica (Pe) (Pink rot)	AB5565
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600
Spongospora subterranean (Powdery scab)	AB5604
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

## 3.17.2 Bacteria

Clavibacter michiganensis subsp. sepedonicus (Cms) (Bacterial ring rot)	AB5122
Dickeya sp. (Potato blackleg/soft rot)	AB5165
Dickeya solani (Potato blackleg/soft rot)	AB5165
Pectobacterium (Erwinia) atrosepticum (Patro) (Blackleg)	AB5266
Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Ralstonia (Pseudomonas) solanacearum (Rs) (Bacterial wilt)	AB5332
Streptomyces scabies (Ss) (Common scab)	AB5609
Streptomyces acidiscabies (Sa) (Common scab)	AB5606
Streptomyces turgidiscabies (St) (Common scab)	AB5607

## 3.17.3 Potato Virus Screen

Potato Laten Virus (Potlv)	AB5302
Potato Leaf Roll Virus (PLRV)	AB5303
Potato Spindle Tuber Viroid (PSTVd)	AB5571
Potato Virus A (PVA)	AB5305
Potato Virus M (PVM)	AB5306
Potato Virus S (PVS)	AB5307
Potato Virus X (PVX)	AB5310
Potato Virus Y (PVY)	AB5312

## 3.17.4 Other virus tests available for Potato

Alfalfa Mosaic Virus (AMV)	AB5006
Andean Potato Laten Virus (APLV)	AB5009
Andean Potato Mottle Virus (APmOV)*	AB5010
Potato Aucuba Mosaic Virus (PAMV)	AB5295
Potato Mop Top Virus (PMTV)	AB5304
Potato Virus T (PVT)	AB5308
Potato Virus V (PVV)	AB5309
Tobacco Rattle Virus (TRV)	AB5408
Tomato Spotted Wilt Virus (TSWV)	AB5424

# Arsh Biotech Disease Diagnostic List



## 3.18 Spinach

### 3.18.1 Fungi

Alternaria spp. (Leaf spot)	AB5622
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium oxysporum (Foxy)	AB5538
Pythium aphanidermatum (Pa)	AB5586
Pythium irregularare (Pi)	AB5588
Pythium sylvaticum (Psy)	AB5591
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341

### 3.18.2 Bacteria

Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Pseudomonas syringae pv. syringae (pss)	AB5324

## 3.19 Sweet Potato

### 3.19.1 Fungi

Alternaria spp. (Leaf spot/stem blight/storage rot)	
Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium spp. (Fus)	AB5541
Fusarium solani (Fsol)	AB5540
Fusarium oxysporum (Foxy)	AB5538
Pythium spp. (Pyth)	AB5329
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Rhizopus spp. (Rhizopus soft rot)	AB5623

### 3.19.2 Sweet Potato Virus Screen

Cucumber mosaic virus (CMV)	AB5147
Potyvirus group test (Poty)	AB5315
Tobacco mosaic virus (TMV)	AB5393
Tobacco streak virus (TSV)	AB5410

# Arsh Biotech Disease Diagnostic List

## 3.20 Tomato

### 3.20.1 Fungi

Alternaria alternata (Aa)	AB5496
Alternaria solani (As)	AB5505
Colletotrichum spp. (Anthracnose)	AB5134
Colletotrichum coccodes (Cc) (Black dot)	AB5527
Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium oxysporum f.sp. lycopersici (Fol)	AB5539
Oidiopsis sicula (Powdery mildew)	AB5555
Phytophthora capsici (Pcap)	AB5562
Phytophthora infestans (Pi) (Late blight)	AB5566
Phytophthora spp. (Phyt)	AB5287
Pyrenopeziza lycopersici (Pl) (Tomato corky root rot/Vine decline)	AB5584
Pyrenopeziza terrestris (Pt) (Tomato corky root rot/Vine decline)	AB5585
Pythium spp. (Pyth)	AB5329
Pythium aphanidermatum (Pa)	AB5586
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rs)	AB5341
Rhizopus vaginans (Rv) (Tomato corky root rot/Vine decline)	AB5597
Sclerotinia sclerotiorum (Sscl)	AB5600
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614

### 3.20.2 Bacteria

Clavibacter michiganensis subsp. michiganensis (Cmm) (Bacterial canker)	AB5118
Pectobacterium (Erwinia) atrosepticum (Patro) (Blackleg)	AB5266
Pectobacterium (Erwinia) carotovorum (Pc) (Bacterial stem rot and fruit rot)	AB5556
Ralstonia (Pseudomonas) solanacearum (Rs) (Bacterial wilt)	AB5332
Pseudomonas syringae pv. syringae (pss)	AB5324
Pseudomonas syringae pv. tomato (pst)	AB5325
Xanthomonas campestris pv. vesicatoria	AB5480

### 3.20.3 Tomato Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Pepino Mosaic Virus (Pepmv)	AB5277
Potato Virus X (PVX)	AB5310
Potato Virus Y (PVY)	AB5312
Potyvirus Group Test (Poty)	AB5315
Tobacco Etch Virus (TEV)	AB5389

# Arsh Biotech Disease Diagnostic List



Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Aspermy Virus (TAV)	AB5415
Tomato Bushy Stunt Virus (TBSV)	AB5417
Tomato Mosaic Virus (ToMV)	AB5422
Tomato Ringspot Virus (TorSV)	AB5409
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 3.20.4 Other virus tests available for Tomatoes

Arabis Mosaic Virus (Armv)	AB5016
Beet Curly Top Virus (BCTV)	AB5047
Beet Western Yellows Virus (BWYV)	AB5054
Carlavirus Group Test (Carla)	AB5518
Luteovirus Group Test (Luteo)	AB5552
Nepovirus Group Test (Nepo)	AB5554
Peanut Stunt Virus (PSV)	AB5265
Pelargonium Zonate Spot Virus (PZSV)	AB5274
Pepper Mottle Virus (Pepmov)	AB5279
Potato Leaf Roll Virus (PLRV)	AB5303
Potato Spindle Tuber Viroid (PSTVd)	AB5571
Potexvirus Group Test (Potex)	AB5572
Raspberry Ringspot Virus (RPRSV)	AB5338
Ribgrass Mosaic Virus (RMV)	AB5344
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tobacco Etch Virus (TEV)	AB5389
Tobacco Rattle Virus (TRV)	AB5408
Tobacco Streak Virus (TSV)	AB5410
Tobamovirus Group Test (Tobamo)	AB5413
Tomato Aspermy Virus (TAV)	AB5415
Tomato Bushy Stunt Virus (TBSV)	AB5417
Tomato Chlorotic Spot Virus (TCSV)	AB5419

## 3.20.5 Phytoplasmas

Phytoplasma (Phyto)	AB5567
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## 3.21 Watercress

### 3.21.1 Watercress Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Beet Necrotic Yellow Vein Virus (BNYVV)	AB5052
Cauliflower Mosaic Virus (CaMV)	AB5103
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211



## Arsh Biotech Disease Diagnostic List

Potyvirus Group Test (Poty)	AB5315
Tomato Spotted Wilt Virus (TSWV)	AB5424
Turnip Mosaic Virus (TuMV)	AB5433

## 4 Turfgrass

### 4.1.1 Turfgrass Diseases

Colletotrichum graminicola (Cg) (Anthracnose)	AB5530
Erysiphe graminis (Eg) (Powdery mildew)	AB5536
Gaeumannomyces graminis (Gg) (Take-All Patch)	AB5546
Magnaporthe poae (Summer patch)	AB5553
Pythium aphanidermatum (Pa)	AB5586
Puccinia spp. (Puc) (Crown/leaf/stem rust)	AB5579
Rhizoctonia cerealis (Rc) (Yellow Patch)	AB5596
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia homoeocarpa (Sh) (Dollar Spot)	AB5599

### 4.1.2 Turfgrass virus screen

Arabis Mosaic Virus (ArMV)	AB5016
Barley Stripe Mosaic Virus (BSMV)	AB5028
Barley Yellow Dwarf Virus – Pav (BYDV-Pav)	AB5031
Brome Mosaic Virus (BMV)	AB5077
High Plains Virus (HPV)	AB5549
Johnsongrass Mosaic Virus (JGMV)	AB5216
Maize Chlorotic Mottle Virus (MCMV)	AB5229
Maize Dwarf Mosaic Virus (MDMV)	AB5230
Maize Streak Virus (MSV)	AB5232
Potyvirus Group Test (Poty)	AB5315
Soil-Borne Wheat Mosaic Virus (SBWMV)	AB5362
Sugarcane Mosaic Virus (SCMV)	AB5380
Wheat Spindle Streak Mosaic Virus (WSSMV)	AB5448
Wheat Streak Mosaic Virus (WSMV)	AB5449

### 4.1.3 Other Virus Tests Available for Turfgrass

Closteroviridae group test (Clostero)	AB5525
Luteovirus group test (Luteo)	AB5552
Potexvirus group test (Potex)	AB5572
Potyviridae (Oat mosaic, Cocksfoot streak, Pennisetum mosaic, Guinea grass mosaic viruses) (Poty)	AB5315

## 5 Ornamental Diseases

### 5.1 African Violet

#### 5.1.1 African Violet Virus Screen

Impatiens Necrotic Spot Virus (INSV)	AB5211
Tobacco Etch Virus (TEV)	AB5389
Tobacco Mosaic Virus (TMV)	AB5393
Tomato Aspermy Virus (TAV)	AB5415
Tomato Spotted Wilt Virus (TSWV)	AB5424
Potyvirus virus group test (Poty)	AB5315

#### 5.1.2 Other virus tests available for African Violet

Carnation ringspot virus (CRSV)	AB5091
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### 5.2 Aster

#### 5.2.1 Aster Virus Screen

Chrysanthemum Stunt Viroid (CSVd)	AB5521
Chrysanthemum Virus B (CVB)	AB5114
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Aspermy Virus (TAV)	AB5415
Tomato Spotted Wilt Virus (TSWV)	AB5424

### 5.3 Begonia

#### 5.3.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Pythium spp. (Pyth)	AB5329
Rhizoctonia solani (Rsol)	AB5341

#### 5.3.2 Bacteria

Xanthomonas campestris (Xc)	AB5619

# Arsh Biotech Disease Diagnostic List

### **5.3.3 Begonia Virus Screen**

Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Spotted Wilt Virus (TSWV)	AB5424
Zucchini Yellow Mosaic Virus (ZYMV)	AB5493

### **5.3.4 Other virus tests available for begonia**

Carnation Mottle Virus (Carmv)	AB5089
Carnation Ringspot Virus (CRSV)	AB5091
Carlavirus group test (CarLa)	AB5518
Nepovirus group test (Nepo)	AB5554
Tobamovirus group test (Tobamo)	AB5413

## **5.4 Carnation/Dianthus**

### **5.4.1 Fungi**

Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium graminearum (Fgra)	AB5542
Fusarium oxysporum (Foxy)	AB5538
Phytophthora spp. (Phyt)	AB5287
Pythium spp (Pyth)	AB5329
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600

### **5.4.2 Carnation/Dianthus Virus Screen**

Alfalfa Mosaic Virus (AMV)	AB5006
Carnation Etched Ring Virus (CERV)	AB5086
Carnation Latent Virus (CLV)	AB5088
Carnation Mottle Virus (CarMV)	AB5089
Carnation Necrotic Fleck Virus (CNFV)	AB5090
Carnation Ringspot Virus (CRSV)	AB5091
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Tomato Spotted Wilt Virus (TSWV)	AB5424

### **5.4.3 Other virus tests available for carnation/dianthus**

Arabis Mosaic Virus (ArMV)	AB5016
Carlavirus group test (CarLa)	AB5518
Chrysanthemum Chlorotic Mottle Viroid (CChMVD)	AB5520

# Arsh Biotech Disease Diagnostic List



Nepovirus group test (Nepo)	AB5554
Peanut stunt virus (PSV)	AB5265
Potato virus M (PVM)	AB5306
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tobamovirus group test (Tobamo)	AB5413
Tomato Bushy Stunt Virus (TBSV)	AB5417

## 5.5 Chrysanthemum

### 5.5.1 Fungi

Alternaria alternate (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium oxysporum (Foxy)	AB5538
Fusarium solani (Fsol)	AB5540
Pythium spp. (Pyth)	AB5329
Pythium ultimum (Pu)	AB5594
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600
Verticillium spp. (Vert) (Verticillium wilt)	AB5616
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

### 5.5.2 Chrysanthemum Virus Screen

Chrysanthemum Chlorotic Mottle Viroid (CChMVD)	AB5520
Chrysanthemum Stunt Viroid (CSVd)	AB5521
Chrysanthemum Virus B (CVB)	AB5114
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Tobacco Etch Virus (TEV)	AB5389
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Aspermy Virus (TAV)	AB5415
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

### 5.5.3 Other virus tests available for chrysanthemum

Carlavirus Group Test (Carla)	AB5518
Nepovirus Group Test (Nepo)	AB5554
Pelargonium Zonate Spot Virus (PZSV)	AB5474
Potyvirus Group Test (Poty)	AB5315
Tobamovirus Group Test (Tobamo)	AB5413

# Arsh Biotech Disease Diagnostic List

## 5.5.4 Phytoplasmas

Phytoplasmas (Phyto)	AB5567
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## 5.6 Dahlia

### 5.6.1 Fungi

Alternaria alternata (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl)	AB5600
Fusarium oxysporum (Foxy)	AB5538
Verticillium albo-atrum (Vaa) (Vascular wilt)	AB5614

### 5.6.2 Dahlia Virus Screen

Cucumber Mosaic Virus (CMV)	AB5147
Chrysanthemum Stunt Viroid (CSVd)	AB5521
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Potato Virus Y (PVY)	AB5312
Tobacco Streak Virus (TSV)	AB5410
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 5.7 Geranium

### 5.7.1 Fungi

Alternaria alternate (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium spp. (Fus)	AB5541
Phytophthora spp. (Phyt)	AB5287
Pythium spp. (Pyth)	AB5329
Rhizoctonia solani (Rsol)	AB5341
Sclerotinia sclerotiorum (Sscl) (Stem rot)	AB5600
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

### 5.7.2 Bacteria

Acidovorax avenae subsp. citrulli (Aac)	AB5001
Pseudomonas syringae pv. syringae (pss)	AB5324
Ralstonia (Pseudomonas) solanacearum (Rs) (Bacterial wilt)	AB5332
Xanthomonas campestris (Xc)	AB5619
Xanthomonas hortorum pv. pelargonii (Xhp)(Bacterial blight)	AB5482

# Arsh Biotech Disease Diagnostic List



5.7.3 Geranium Virus Screen	
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Pelargonium Flower Break Virus (PFBV)	AB5270
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

  

5.7.4 Other virus tests available for geranium	
Carlavirus group test (CarLa)	AB5518
Impatiens Necrotic Spot Virus (INSV)	AB5211
Nepovirus Group Test (Nepo)	AB5554
Pelargonium Leaf Curl Virus (PLCV)	AB5271
Pelargonium Zonate Spot Virus (PZSV)	AB5274
Potyvirus Group Test (Poty)	AB5315
Tobamovirus Group Test (Tobamo)	AB5413
Tomato Spotted Wilt Virus (TSMV)	AB5424

5.8 Gladiolus	
<b>5.8.1 Fungi</b>	
Fusarium oxysporum (Foxy)	AB5538
<b>5.8.2 Gladiolus Virus Screen</b>	
Arabis Mosaic Virus (ArMV)	AB5016
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

5.9 Hosta	
<b>5.9.1 Fungi</b>	
Alternaria alternata (Aa)	AB5496
Colletotrichum spp. (Anthracnose)	AB5134

# Arsh Biotech Disease Diagnostic List

Fusarium spp. (Fus)	AB5541
Phytophthora spp. (Phyt)	AB5287

## 5.9.2 Hosta Virus Screen

Arabis Mosaic Virus (ArMV)	AB5016
Cucumber Mosaic Virus (CMV)	AB5147
Hosta Virus X (HVX)	AB5209
Impatiens Necrotic Spot Virus (INSV)	AB5211
Tobacco Streak Virus (TSV)	AB5410
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424
Tobacco Rattle Virus (TRV)	AB5408

## 5.9.3 Other virus tests available for hosta

Bromoviridae group test (Bromo)	AB5624
Carlavirus group test (CarLa)	AB5518
Nepovirus group test (Nepo)	AB5554
Potexvirus group test (Potex)	AB5572
Potyvirus group test (Poty)	AB5315
Tobamovirus group test (Tobamo)	AB5413
Tobacco Rattle Virus (TRV)	AB5408

## 5.10 Impatiens

### 5.10.1 Fungi

Alternaria alternate (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Pythium spp (Pyth)	AB5329
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

### 5.10.2 Impatiens Virus Screen

Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Aspermy Virus (TAV)	AB5415
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

### 5.10.3 Other virus tests available for impatiens

Alfalfa Mosaic Virus (AMV)	AB5006
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# Arsh Biotech Disease Diagnostic List



Carnation Mottle Virus (CarMV)	AB5089
Carlavirus group test (CarLa)	AB5518
Nepovirus group test (Nepo)	AB5554
Potyvirus group test (Poty)	AB5315
Tobamovirus group test (Tobamo)	AB5413

## 5.11 Kalanchoe

### 5.11.1 Kalanchoe Virus Screen

Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Kalanchoe Latent Virus (KLV)	AB5217
Tobacco Mosaic Virus (TMV)	AB5393
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 5.12 Lily

### 5.12.1 Lily Virus Screen

Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Lily Symptomless Virus (LSV)	AB5225
Potyvirus Group Test (Poty)	AB5315
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Aspermy Virus (TAV)	AB5415
Tomato Spotted Wilt Virus (TSWV)	AB5424

### 5.12.2 Other virus tests available for Lily

Potyvirus group test (Poty)	AB5315
Carlavirus group test (CarLa)	AB5518
Nepovirus group test (Nepo)	AB5554
Tobamovirus group test (Tobamo)	AB5414

## 5.13 Marigold

### 5.13.1 Fungi

Alternaria alternate (Aa)	AB5496
Botrytis cinerea (Bc) (Gray mold)	AB5067
Fusarium oxysporum (Foxy)	AB5538
Phytophthora spp. (Phyt)	AB5287

# Arsh Biotech Disease Diagnostic List

Pythium spp. (Pyth)	AB5329
<b>5.13.2 Marigold Virus Screen</b>	
Alternanthera Mosaic Virus/Papaya Mosaic Virus (AlTMV/PapMV)	AB5495
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Papaya Ringspot Virus (PRSV)	AB5252
Potyvirus Group Test (POTY)	AB5315
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 5.14 Orchid

### 5.14.1 Fungi

Colletotrichum spp. (Anthracnose)	AB5134
Fusarium oxysporum (Foxy)	AB5538
Phytophthora spp. (Phyt)	AB5287
Pythium spp. (Pyth)	AB5329

### 5.14.2 Orchid Virus Screen

Carnation Mottle Virus (Carmv)	AB5089
Cucumber Mosaic Virus (CMV)	AB5147
Cymbidium Mosaic Virus (CymMV)	AB5157
Cymbidium Ringspot Virus (CymRSV)	AB5159
Impatiens Necrotic Spot Virus (INSV)	AB5211
Odontoglossum Ringspot Virus (ORSV)	AB5244
Potyvirus Group Test (Poty)	AB5315
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

### 5.14.3 Other virus tests available for Orchid

Carlavirus group test (CarLa)	AB5518
Nepovirus group test (Nepo)	AB5554
Tobamovirus group test (Tobamo)	AB5413
Potyvirus group test (Poty)	AB5315

## 5.15 Ornamental (Herbaceous Annual & Perennial)

### 5.15.1 Fungi

Phytophthora spp. (Phyt)	AB5287
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# Arsh Biotech Disease Diagnostic List

Verticillium dahliae (Vd) (Verticillium wilt)	AB5615
<b>5.15.2 Bacteria</b>	
Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Ralstonia (Pseudomonas) solanacearum (Rs) (Bacterial wilt)	AB5332
Xanthomonas campestris (Xc)	AB5619
<b>5.15.3 Ornamental Virus Screen</b>	
Alfalfa Mosaic Virus (AMV)	AB5006
Alternanthera Mosaic Virus/Papaya Mosaic Virus (AltMV/PapMV)	AB5495
Arabis Mosaic Virus (ArMV)	AB5016
Broad Bean Wilt Virus -1,2 (BBWV-1,2)	AB5074
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Ribgrass Mosaic Virus (RMV)	AB5344
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Aspermy Virus (TAV)	AB5415
Tomato Mosaic Virus (ToMV)	AB5422
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424
<b>5.15.4 Other virus tests available for Ornamentals</b>	
Alstromeria Mosaic Virus (AlMV)	
Angelonia Flower Break Virus (AnFBV)	AB5011
Calibrachoa Mottle Virus (CbMV)	AB5083
Chrysanthemum Virus B (CVB)	AB5114
Carlavirus Group Test (Carla)	AB5518
Luteovirus Group Test (Luteo)	AB5552
Nandina Mosaic Virus (NaMV)	AB5239
Nemesia Ring Necrosis Virus (NeRVN)	AB5241
Nepovirus Group Test (Nepo)	AB5554
Potexvirus Group Test (Potex)	AB5572
Tobamovirus Group Test (Tobamo)	AB5413
Tobacco Rattle Virus (TRV)	AB5408
<b>5.15.5 Phytoplasmas</b>	
Phytoplasmas (Phyto)	AB5567

# Arsh Biotech Disease Diagnostic List

## 5.16 Petunia

### 5.16.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Phytophthora spp. (Phyt)	AB5287

### 5.16.2 Petunia Virus Screen

Alfalfa Mosaic Virus (AMV)	AB5006
Apple Mosaic Virus (ApMV)	AB5014
Arabis Mosaic Virus (ArMV)	AB5016
Calibrachoa Mottle Virus (CbMV)	AB5083
Chrysanthemum Virus B (CVB)	AB5114
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Potyvirus Group Test (Poty)	AB5315
Prunus Necrotic Ringspot Virus (PNRSV)	AB5317
Tobacco Etch Virus (TEV)	AB5389
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Aspermy Virus (TAV)	AB5415
Tomato Mosaic Virus (ToMV)	AB5422
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

### 5.16.3 Other virus tests available for Petunia

Alstroemeria Mosaic Virus (AIMV)	AB5007
American Plum Line Pattern Virus (APLPV)	AB5008
Beet Curly Top Virus (BCTV)	AB5047
Beet Western Yellows Virus (BWYV)	AB5054
Broad Bean Wilt Virus-1,2 (BBWV-1,2)	AB5074
Carlavirus Group Test (Carla)	AB5518
Kyuri Green Mottle Mosaic Virus (KGMMV)	AB5219
Luteovirus Group Test (Luteo)	AB5552
Nepovirus Group Test (Nepo)	AB5554
Peanut Stunt Virus (PSV)	AB5265
Potato Aucuba Mosaic Virus (PAMV)	AB5295
Potato Leafroll Virus (PLRV)	AB5303
Potato Virus A (PVA)	AB5305
Potato Virus X (PVX)	AB5310
Potato Virus Y (PVY)	AB5312
Potato Spindle Tuber Viroid (PSTVd)	AB5571
Potexvirus group test (Potex)	AB5572

# Arsh Biotech Disease Diagnostic List



Raspberry Ringspot Virus (RpRsV)	AB5338
Soybean Mosaic Virus (SMV)	AB5370
Tobacco Rattle Virus (TRV)	AB5408
Tobamovirus Group Test (Tobamo)	AB5413
Tomato Mosaic Virus (TMV)	AB5422
Tomato Bushy Stunt Virus (TBSV)	AB5417
Turnip Mosaic Virus (Tumv)	AB5433
Whitefly-Transmitted Geminivirues (WTG)	AB5617

## 5.16.4 Phytoplasmas

Phytoplasmas (Phyto)	AB5567
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## 5.17 Poinsettia

### 5.17.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium oxysporum (Foxy)	AB5538
Fusarium solani (Fsol)	AB5540
Pythium spp. (Phyt)	AB5329
Pythium aphanidermatum (Pa)	AB5586
Pythium ultimum (Pu)	AB5594
Sclerotinia sclerotiorum (Sscl)	AB5600

### 5.17.2 Bacteria

Pectobacterium carotovorum (Erwinia carotovora) (Pc) (Bacterial soft rot)	AB5175
Pseudomonas syringae pv. syringae (pss)	AB5324
Xanthomonas campestris (Xc)	AB5619

### 5.17.3 Poinsettia Virus Screen

Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211
Poinsettia Mosaic Virus (PMV)	AB5293
Potyvirus Group Test (Poty)	AB5315
Tomato spotted wilt virus (TSWV)	AB5424

## 5.18 Rose

### 5.18.1 Fungi

Alternaria alternata (Aa)	AB5496
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# Arsh Biotech Disease Diagnostic List

Alternaria brassicae (Ab)	AB5497
Botrytis cinerea (Bc) (Gray mold)	AB5067
Botryosphaeria dothidea (Bd)	AB5513
Verticillium albo-atrum (Vaa) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615

## 5.18.2 Rose Virus Screen

Apple Mosaic Virus (ApMV)	AB5014
Arabis Mosaic Virus (ArMV)	AB5016
Impatiens Necrotic Spot Virus (INSV)	AB5211
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Strawberry Latent Ringspot Virus (SLRSV)	AB5377
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tomato Ringspot Virus (Torsv)	AB5423
Tomato Spotted Wilt Virus (TSWV)	AB5424

## 5.18.3 Other virus tests available for Rose

Arabis Mosaic Virus (ArMV)	AB5016
Carlavirus group test (CarLa)	AB5518
Luteovirus group test (Luteo)	AB5552
Nepovirus group test (Nepo)	AB5554
Potexvirus group test (Potex)	AB5572
Potyvirus group test (Poty)	AB5315
Tobamovirus group test (Tobamo)	AB5413

## 5.18.4 Phytoplasmas

Phytoplasma (Phyto)	AB5567
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## 5.19 Statice

### 5.19.1 Fungi

Botrytis cinerea (Bc) (Gray mold)	AB5067
Colletotrichum spp. (Anthracnose)	AB5134
Fusarium spp. (Fus)	AB5541
Rhizoctonia solani (Rsol)	AB5341

### 5.19.2 Statice Virus Screen

Broad Bean Wilt Virus -1,2 (BBWV-1,2)	AB5074
Cucumber Mosaic Virus (CMV)	AB5147
Impatiens Necrotic Spot Virus (INSV)	AB5211

# Arsh Biotech Disease Diagnostic List



Potyvirus Group Test (Poty)	AB5315
Tobacco Rattle Virus (TRV)	AB5408
Tomato Bushy Stunt Virus (TBSV)	AB5417
Tomato Spotted Wilt Virus (TSWV)	AB5424
Turnip Mosaic Virus (TuMV)	AB5433

## 5.20 Tulip

### 5.20.1 Tulip Virus Screen

Arabis Mosaic Virus (ArMV)	AB5016
Cucumber Mosaic Virus (CMV)	AB5147
Lily Symptomless Virus (LSV)	AB5225
Potato Virus X (PVX)	AB5310
Potyvirus Group Test (Poty)	AB5315
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Rattle Virus (TRV)	AB5408
Tomato Black Ring Virus (TBRV)	AB5416
Tomato Bushy Stunt Virus (TBSV)	AB5417

## 5.21 Glossary-List of All Plant Pathogens

### Virus

Name of Pathogen	Catalog No.
African Cassava Mosaic Virus (ACMV)	AB5002
Agropyron Mosaic Virus (AGMV)	AB5003
Alfalfa Latent Virus (ALV)	AB5004
Alfalfa Mosaic Virus (AMV)	AB5006
Alstroemeria Mosaic Virus (AIMV)	AB5007
Alternanthera Mosaic Virus/Papaya Mosaic Virus (AltMV/PapMV)	AB5495
American Plum Line Pattern Virus (APLPV)	AB5008
Andean Potato Latent Virus (APLV)	AB5009
Andean Potato Mottle Virus (APMoV)	AB5010
Angelonia Flower Break Virus (AFBV)	AB5011
Apium Virus Y (ApVY)	AB5012
Apple Chlorotic Leaf Spot Virus (ACLSV)	AB5013
Apple Mosaic Virus (ApMV)	AB5014
Apple Scar Skin Viroid (ASSVd)	AB5638
Apple Stem Grooving Virus (ASGV)	AB5015
Apple Stem Pitting Virus (ASPV)	AB5504
Arabis Mosaic Virus (ArMV)	AB5016
Arracacha Virus B (AVB)	AB5017
Arracacha Virus B-OCA strain (AVBO)	AB5018
Arracacha Virus B-OCA strain (AVBO)	AB5018
Asparagus Virus - 1 (AV-1)	AB5019
Asparagus Virus - 2 (AV-2)	AB5020
Banana Bract Mosaic Virus (BBrMV)	AB5022
Banana Bunchy Top Mosaic Virus (BBTV)	AB5620
Banana Infectious Chlorosis Virus	AB5023
Banana streak Mysore virus (BSMysV)	AB5024
Banana streak OL virus (BSOLV)	AB5025
Banana Streak Virus (BSV)	AB5026
Barley Mild Mosaic Virus (BaMMV)	AB5027
Barley Stripe Mosaic Virus (BSMV)	AB5028
Barley Yellow Dwarf Virus - mav (BYDV-mav)	AB5030
Barley Yellow Dwarf Virus - pav (BYDV-pav)	AB5031
Barley Yellow Dwarf Virus - rpv (BYDV-rpv)	AB5032
Barley Yellow Mosaic Virus (BaYMV)	AB5033
Bean Common Mosaic Necrosis Virus (BCMNv)	AB5643
Bean Common Mosaic Virus (BCMV)	AB5034
Bean Golden Mosaic Virus (BGMV)	AB5035

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Bean Leafroll Virus (BLRV)	AB5036
Bean Mild Mosaic Virus (BMMV)	AB5037
Bean Pod Mottle Virus (BPMV)	AB5038
Bean Rugose Mosaic Virus (BRMV)	AB5039
Bean Western Yellows Virus (BWYV)	AB5510
Bean Yellow Mosaic Virus - Strain 204 (BYMV-204)	AB5041
Bean Yellow Mosaic Virus - Strain B25 (BYMV-B25)	AB5042
Bean Yellow Mosaic Virus - White Lupin Mosaic Strain	AB5043
Bean Yellow Mosaic Virus (BYMV)	AB5040
Bean yellow mosaic virus (BYMV)	AB5044
Bean Yellow Mosaic Virus-Strains 204 & B25 (BYMV-204&B25)	AB5045
Beet Black Scorch Virus (BBSV)	AB5046
Beet Curly Top Virus (BCTV)	AB5047
Beet Mild Yellowing Virus (BMYV)	AB5048
Beet Mosaic Virus (BtMV)	AB5050
Beet Necrotic Yellow Vein Virus (BNYVV)	AB5052
Beet Soil-Borne Virus (BSBV)	AB5053
Beet Western Yellows Virus (BWYV)	AB5054
Beet Yellow Stunt Virus (BYSV)	AB5055
Beet Yellows Virus (BYV)	AB5057
Bell Pepper Mottle Virus (BPeMV)	AB5058
Belladonna Mottle Virus (BeMV)	AB5059
Blackeye Cowpea Mosaic Virus (BlCMV)	AB5060
Blackgram Mottle Virus (BMoV)	AB5061
Blueberry Leaf Mottle Virus (BLMV)	AB5062
Blueberry Necrotic Shock Virus (BlShV)	AB5063
Blueberry Scorch Virus (BLSV)	AB5064
Blueberry Shock Virus (BlShV)	AB5511
Blueberry Shoestring Virus (BSSV)	AB5065
Broad Bean Mottle Virus (BBMV)	AB5069
Broad Bean Stain Virus (BBSV)	AB5070
Broad Bean True Mosaic Virus (BBTMV)	AB5071
Broad Bean Wilt Fabavirus. BBWV I	AB5072
Broad Bean Wilt Virus - 1 (BBWV-1)	AB5073
Broad Bean Wilt Virus - 1,2 (BBWV-1,2)	AB5074
Broad Bean Wilt Virus - 2 (BBWV-2)	AB5075
Broccoli Necrotic Yellow Virus (BNYV)	AB5076
Brome Mosaic Virus (BMV)	AB5077
Brome Streak Mosaic Tritimovirus (BSTV)	AB5078
Brome Streak Mosaic Virus (BrSMV)	AB5079
Bromoviridae Group Test (Bromo)	AB5624
Cactus X Virus (CVX)	AB5082

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Calibrachoa Mottle Virus (CbMV)	AB5083
Capsicum Chlorosis Virus (CaCV)	AB5084
Carlavirus Group Test (Carla)	AB5518
Carnation Cryptic Virus (CCV)	AB5085
Carnation Etched Ring Virus (CERV)	AB5086
Carnation Italian Ringspot Virus (CIRV)	AB5087
Carnation Latent Virus (CLV)	AB5088
Carnation Mottle Virus (CarMV)	AB5089
Carnation Necrotic Fleck Virus (CNFV)	AB5090
Carnation Ringspot Virus (CRSV)	AB5091
Carnation Vein Mottle Potyvirus (CVMV)	AB5092
Carnation Vein Mottle Virus (CVMoV)	AB5093
Carnation Yellow Stripe Virus (CYSV)	AB5094
Carrot Necrotic Dieback Virus (CNDV)	AB5095
Carrot Thin Leaf Virus (CTLV)	AB5096
Carrot Virus Y (CtVY)	AB5097
Cassava Brown Streak Virus (CBSV)	AB5098
Cassava Common Mosaic Virus (CsCMV)	AB5099
Cassava Congo Sequivirus	AB5100
Cassava Mosaic Geminiviruses	AB5101
Cauliflower Mosaic Caulimovirus (CaMV)	AB5102
Cauliflower Mosaic Virus (CaMV)	AB5103
Celery Mosaic Potyvirus (CeMV)	AB5104
Cereal Chlorotic Mottle Virus (CerCMV)	AB5105
Cereal Yellow Dwarf Virus-rpv (CYDV-rpv)	AB5106
Cherry Leaf Roll Virus (CLRV)	AB5107
Cherry Leafroll Nepovirus b (birch isolate) (CLRV b)	AB5108
Cherry Rasp Leaf Virus (CRLV)	AB5109
Chilli Mottle Potyvirus see Pepper Mottle Potyvirus	AB5110
Chilli Veinal Mottle Potyvirus (ChiVMV)	AB5111
Chilli Veinal Mottle Virus (ChiVMV)	AB5112
Chrysanthemum Chlorotic Mottle Viroid (CChMVD)	AB5520
Chrysanthemum Stem Nerosis Virus (CSNV)	AB5113
Chrysanthemum Stunt Viroid (CSVd)	AB5521
Chrysanthemum Virus B (CVB)	AB5114
Citrus Exocortis Viroid (Pospiviroid Group Test) (pospi)	AB5570
Citrus Leaf Rugose Virus (CiLRV)	AB5115
Citrus Psorosis Virus (CPsV)	AB5633
Citrus Tatter Leaf Virus (CTLV)	AB5634
Citrus Tristeza Virus (CTV)	AB5117
Citrus Variegation Virus (CVV)	AB5635
Citrus Yellow Mosaic Virus (CYMV)	AB5636

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Closteroviridae Group Test (Beet yellows virus, Lettuce chlorosis virus, others) (Clostero)	AB5523
Closteroviridae Group Test (Clostero)	AB5525
Closteroviridae Group Test (Grapevine Leafroll Associated Viruses 1, 2, 3, 4, 5, 6, 9) (Clostero)	AB5524
Clover Wound Tumor Virus (WTV)	AB5124
Clover Yellow Mosaic Virus (CIYMV)	AB5125
Clover Yellow Vein Virus - Strain C81 (CIYVV-C81)	AB5126
Clover Yellow Vein Virus - Strain Pratt (CIYVV-Pratt)	AB5127
Clover Yellow Vein Virus (CIYVV)	AB5128
Clover Yellow Vein Virus-Strains C81 & Pratt (CIYVV-C81&Pratt)	AB5129
Cocksfoot mild mosaic virus (CMMV)	AB5130
Cocksfoot Mottle Virus (CoMV)	AB5131
Cocksfoot Streak Virus (CSV)	AB5132
Cowpea Aphid-Borne Mosaic Virus (CABMV)	AB5135
Cowpea Chlorotic Mottle Virus (CCMV)	AB5136
Cowpea Mild Mottle Virus (CPMMV)	AB5137
Cowpea Mosaic Virus (CPMV)	AB5138
Cowpea Mottle Virus (CPMoV)	AB5139
Cowpea Severe Mosaic Virus (CPSMV)	AB5140
Cowpea Yellow Mosaic Virus (CPYMV)	AB5141
Crinkly Leaf Ilarvirus (CLIV)	AB5631
Cucumber Green Mottle Mosaic Tobamovirus (CGMMV)	AB5143
Cucumber Green Mottle Mosaic Virus (CGMMV)	AB5142
Cucumber Leaf Spot Virus (CLSV)	AB5144
Cucumber Mosaic Cucumovirus DTL/ToRS. CMV DTL/ToRS	AB5145
Cucumber Mosaic Cucumovirus ToRS (CMV ToRS)	AB5146
Cucumber Mosaic Virus (CMV)	AB5147
Cucumber Necrosis Virus (CNV)	AB5148
Cucumber Vein Yellowing Virus (CVYV)	AB5149
Cucumber Yellow Stunting Disorder Virus (CYSDV)	AB5150
Cucurbit Aphid Borne Yellows Virus (CABYV)	AB5151
Cucurbit Chlorotic Yellows Virus (CCYV)	AB5152
Cucurbit Yellow Stunting Disorder Crinivirus. CYSDV	AB5153
Cymbidium Mosaic Potexvirus ( CymMV)	AB5156
Cymbidium Mosaic Virus (CymMV)	AB5157
Cymbidium Ringspot Tombusvirus (CymRSV)	AB5158
Cymbidium Ringspot Virus (CymRSV)	AB5159
Cynosurus Mottle Virus (CnMoV)	AB5160
Dandelion Carlavirus (DaCV)	AB5161
Dasheen Mosaic Virus (DsMV)	AB5162
Desmodium Yellow Mottle Virus (DYMV)	AB5164

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Dioscorea Latent Virus (DLV)	AB5166
Dogwood Mosaic Virus (DMV)	AB5167
East African Cassava Mosaic Virus (EACMV)	AB5168
Eggplant Green Mosaic Virus (EGMV)	AB5169
Eggplant Mosaic Virus (EMV)	AB5170
Eggplant Mottled Dwarf Virus (EMDV)	AB5171
Elderberry Latent Virus (ELV)	AB5172
Endive Necrotic Mosaic Virus (ENMV)	AB5173
Faba Bean Necrotic Yellows Virus (FBNYV)	AB5179
Frangipanic Mosaic Virus (FrMV)	AB5181
Furcraea Necrotic Streak Virus (FNSV)	AB5182
Galinsoga Mosaic Virus (GaMV)	AB5183
Garlic Common Latent Virus (GCLV)	AB5184
Garlic virus B (GarV-B)	AB5185
Garlic virus C (GarV-C)	AB5186
Ginger Chlorotic Fleck Virus (GCFV)	AB5187
Glycine Mosaic Virus (GMV)	AB5189
Grapevine Algerian latent virus (GALV)	AB5190
Grapevine Fanleaf Virus (GFLV)	AB5192
Grapevine Fleck Virus (GFkV)	AB5193
Grapevine Leaf roll Virus 5 (GLRaV-5)	AB5194
Grapevine Leaf roll Virus 7 (GLRaV-7)	AB5195
Grapevine Leafroll Virus 1+3 (GLRaV-1+3)	AB5196
Grapevine Leafroll-Assoc. Virus 4 Strain 6	AB5547
Grapevine Leafroll-Assoc. Virus Generic 4 Strains	AB5548
Grapevine Leafroll-associated Virus - 2 (GLRaV-2)	AB5197
Grapevine leafroll-associated virus - 3 (GLRaV-3)	AB5198
Grapevine Leafroll-associated Virus -1 (GLRaV-1)	AB5199
Grapevine Rupestris Stem Pitting-associated Virus (GRSPaV)	AB5200
Grapevine Virus A (GVA)	AB5201
Grapevine Virus B (GVB)	AB5202
Groundnut Ringspot Tospovirus. GRSV	AB5203
Groundnut Ringspot Virus (GRSV)	AB5204
Helenium Virus S (HVS)	AB5205
Hibiscus Chlorotic Ringspot Virus (HCRSV)	AB5206
High Plains Virus (HPV)	AB5549
Hop American Latent Virus (AHLV)	AB5207
Hop Mosaic Carlavirus (HpMV)	AB5208
Hosta Virus X (HVX)	AB5209
Hydrangea Ringspot Potexvirus (HRSV)	AB5210
Ilarvirus Group Test(Ilar)	AB5550
Impatiens Necrotic Spot Virus (INSV)	AB5211

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Indian Citrus Ringspot Virus (ICRSV)	AB5632
Iris Fulva Mosaic Virus (IFMV)	AB5212
Iris Severe Mosaic Virus (ISMV)	AB5213
Iris Yellow Spot Virus (IYSV)	AB5214
Johnsongrass Chlorotic Stripe Mosaic Virus	AB5215
Johnsongrass Mosaic Virus (JgMV)	AB5216
Kalanchoe Latent Virus (KLV)	AB5217
Kennedy Yellow Mosaic Virus (KYMV)	AB5218
Kyuri Green Mottle mosaic Virus (KGMMV)	AB5219
Leek Yellow Stripe Virus (LYSV)	AB5220
Lettuce Mosaic Virus (LMV)	AB5221
Lettuce Necrotic Stunt Tombusvirus (LNSV)	AB5222
Lettuce Ring Necrosis Virus (LRNV)	AB5223
Lettuce Virus X (LeVX)	AB5224
Lily Symptomless Virus (LSV)	AB5225
Lily Virus X (LVX)	AB5226
Lucerne Tansient Streak Virus (LTSV)	AB5227
Luteovirus Group Test (Luteo)	AB5552
Maize Chlorotic Dwarf Virus (MCDV)	AB5228
Maize Chlorotic Mottle Virus (MCMV)	AB5229
Maize Dwarf Mosaic Virus (MDMV)	AB5230
Maize Mosaic Virus (MMV)	AB5231
Maize Streak Virus (MSV)	AB5232
Maize Stripe Virus (MSpV)	AB5233
Maize White Line Mosaic Virus (MWLMV)	AB5234
Marajuca Mosaic Virus (MarMV)	AB5235
Melon Necrotic Spot Virus (MNSV)	AB5236
Mirafiori Lettuce Big- Vein Virus (MLBVV)	AB5237
Moroccan Watermelon Mosaic Virus (MWMV)	AB5238
Nandina Mosaic Virus (NaMV)	AB5239
Neckar River Virus (NRV)	AB5240
Nemesia Ring Necrosis Virus (NeRNV)	AB5241
Nepovirus Group Test (Nepo)	AB5554
Oat Golden Stripe Virus (OGSV)	AB5242
Oat Mosaic Virus (OMV)	AB5243
Odontoglossum Ringspot Virus (ORSV)	AB5244
Okra Mosaic Virus (OkMV)	AB5245
Olive Latent Necrovirus-1 (OLV-1)	AB5246
Onion Yellow Dwarf Virus (OYDV)	AB5247
Panicum Mosaic Virus (PMV)	AB5248
Papaya Mosaic Virus - AP strain (PapMV-AP strain)	AB5250
Papaya Mosaic Virus (PapMV)	AB5251

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Papaya Ringspot Virus (PRSV) (Watermelon Mosaic Virus I)	AB5252
Paprika Mild Mottle Virus (PaMMV)	AB5253
Passiflora Chlorotic Mottle Virus (PaCMV)	AB5254
Passiflora Latent Virus (PLV)	AB5255
Pea Early-browning Virus (PEBV)	AB5256
Pea Enation Mosaic Enamovirus (PEMV)	AB5257
Pea Mosaic Virus (PeMV)	AB5258
Pea Seed-Born Mosaic Virus (PSbMV)	AB5259
Pea Streak Virus (PeSV)	AB5260
Peach Rosette Mosaic Virus (PRMV)	AB5261
Peanut Green Mosaic Virus (PGMV)	AB5262
Peanut Mottle Virus (PeMoV)	AB5263
Peanut Stunt Virus - Western Strain (PSV-WS)	AB5264
Peanut Stunt Virus (PSV)	AB5265
Pelargonium Chlorotic Ring Pattern Virus (PeCRPV)	AB5268
Pelargonium Flower Break Carmovirus (PFBV)	AB5269
Pelargonium Flower Break Virus (PFBV)	AB5270
Pelargonium Leaf Curl Virus (PLCV)	AB5271
Pelargonium Line Pattern Virus (PLPV)	AB5272
Pelargonium necrotic spot virus (PNSV)	AB5273
Pelargonium Zonate Spot Virus (PZSV)	AB5274
Pepino Latent Carlavirus see Potato Carlavirus S	AB5275
Pepino Mosaic Potexvirus (PepMV)	AB5276
Pepino Mosaic Virus (PepMV)	AB5277
Pepper Mild Mottle Virus (PMMoV)	AB5278
Pepper Mottle Virus (PepMoV)	AB5279
Pepper Venial Mottle Virus (PVMV)	AB5280
Pepper Yellow Mosaic Virus (PepYMV)	AB5281
Peronospora Destructor (Pd) (Downy mildew)	AB5558
Peru Tomato Mosaic Virus (PTV)	AB5282
Petunia Asteroid Mosaic Virus (PetAMV)	AB5283
Plantago Mottle Virus (PlMoV)	AB5288
Plum Pox Virus (PPV)	AB5290
Plum Pox Virus D (PPV D)	AB5289
Poinsettia Latent Virus (PnLV)	AB5292
Poinsettia Mosaic Virus (PnMV)	AB5293
Poplar Mosaic Virus (PopMV)	AB5294
Potato Andean Latent Virus (APLV)	AB5296
Potato Andean Mottle Virus (APMoV)	AB5297
Potato Aucuba Mosaic Virus (PAMV)	AB5295
Potato Black Ringspot Virus (PBRSV)	AB5299
Potato Carlavirus M (PVM)	AB5300

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Potato Carlavirus S (PVS) (Pepino Latent Virus)	AB5301
Potato Latent Virus (PotLV)	AB5302
Potato Leafroll Virus (PLRV)	AB5303
Potato Mop Top Virus (PMTV)	AB5304
Potato Spindle Tuber Viroid (PSTVd)	AB5571
Potato Virus A (PVA)	AB5305
Potato Virus M (PVM)	AB5306
Potato Virus S (PVS)	AB5307
Potato Virus T (PVT)	AB5308
Potato Virus V (PVV)	AB5309
Potato Virus X (PVX)	AB5310
Potato Virus Y (PVY)	AB5312
Potato Virus Y-necrotic strain (n/ntn) (PVY <sup>n</sup> /ntn)	AB5311
Potato Yellow Dwarf Virus (PYDV)	AB5313
Potato Yellowing Virus (PYV)	AB5314
Potexvirus Group Test (Potex)	AB5572
Potyvirus Group (POTY)	AB5315
Prune Dwarf Virus (PDV)	AB5316
Prunus Necrotic Ringspot Ilarvirus (PNRV)	AB5317
Prunus Necrotic Ringspot Virus (PNRSV)	AB5318
Radish Mosaic Comovirus (RaMV)	AB5330
Radish Mosaic Virus (RaMV)	AB5331
Raspberry Bushy Dwarf Virus (RBDV)	AB5333
Raspberry Ringspot Nepovirus (cherry isolate) (RpRSV ch)	AB5334
Raspberry Ringspot Nepovirus (grapevine isolate) (RpRSV g)	AB5335
Raspberry Ringspot Nepovirus (raspberry isolate) (RpRSV r)	AB5336
Raspberry Ringspot Nepovirus Broad Range (RpRSV)	AB5337
Raspberry Ringspot Virus (RpRSV)	AB5338
Red Clover Mottle Comovirus (RCMV)	AB5339
Red Clover Vein Mosaic Virus (RCVMV)	AB5340
Ribgrass Mosaic Virus (RMV)	AB5344
Rice Hoja Blanca Virus (RHBV)	AB5346
Rice Ragged Stunt Virus (RRSV)	AB5347
Rice Stripe Virus (RSV)	AB5348
Rice Yellow Mottle Virus (RYMV)	AB5349
Rubus Chlorotic Mottle Virus (RuCMV)	AB5350
Ryegrass Mosaic Virus (RGMV)	AB5351
Saguaro Cactus Virus (SgCV)	AB5352
Satsuma Dwarf Virus (SDV)	AB5637
Schlumbergera Virus X (SVX)	AB5353
Scrophularia Mottle Virus (ScrMV)	AB5354

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Shallot Latent Virus (SLV)	AB5357
Shallot Virus X (ShVX)	AB5358
Shallot Yellow Stripe Virus (SYSV)	AB5359
Soil-borne Cereal Mosaic Furovirus (SbCMV) polyclonal/ monoclonal	AB5360
Soilborne Cereal Mosaic Virus (SBCMV)	AB5361
Soil-Borne Wheat Mosaic Virus (SBWMV)	AB5362
Solanum Nodiflorum Mottle Virus (SNMV)	AB5363
Sonchus Yellow Net Virus (SYNV)	AB5364
Sorghum Mosaic Virus (SrMV)	AB5365
Southern Bean Mosaic Virus (SBMV)	AB5366
Southern Cowpea Mosaic Virus (SCPMV)	AB5367
Sowbane Mosaic Virus (SoMV)	AB5368
Soybean Dwarf Virus (SbDV)	AB5369
Soybean Mosaic Virus (SMV)	AB5370
Soybean Vein Necrosis Virus (SVNV)	AB5371
Spartina Mottle Virus (SpMV)	AB5372
Spring Beauty Latent Virus (SBLV)	AB5373
Squash Leaf Curl Virus (SLCV)	AB5374
Squash Mosaic Virus (SqMV)	AB5375
Sri Lankan Cassava Mosaic Virus (SLCMV)	AB5376
Strawberry Mild Yellow Edge Virus (SMYEV)	AB5378
Sugarcane Bacilliform Virus (SCBV)	AB5379
Sugarcane Mosaic Virus (SCMV)	AB5380
Sugarcane Yellow Leaf Virus (SCYLV)	AB5381
Sunn-Hemp Mosaic Virus (SHMV)	AB5382
Sweet Potato Chlorotic Fleck Virus (SPCFV)	AB5383
Sweet Potato Chlorotic Stunt Virus (SPCSV)	AB5384
Sweet Potato Feathery Mottle Virus (SPFMV)	AB5385
Sweet Potato Mild Mottle Virus (SPMMV)	AB5386
Sweet Potato Virus 2 (SPV2)	AB5387
Tobacco Etch Virus (TEV)	AB5389
Tobacco Mild Green Mosaic Virus (TMGMV)	AB5390
Tobacco Mild Green Mottle Tobamovirus (TMV strain U2) (TMGMV)	AB5391
Tobacco Mosaic Tobamovirus (TMV strain U1) (TMV)	AB5392
Tobacco Mosaic Virus (TMV)	AB5393
Tobacco Necrosis Necrovirus (cherry isolate) (TNV ch)	AB5394
Tobacco Necrosis Necrovirus A (TNV A)	AB5395
Tobacco Necrosis Necrovirus Broad Range (artificial mixture) (TNV)	AB5396
Tobacco Necrosis Necrovirus E (TNV E)	AB5397
Tobacco Necrosis Virus - Serotype A (TNV-A)	AB5398

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Tobacco Necrosis Virus - Serotype D (TNV-D)	AB5399
Tobacco Necrosis Virus (A or D) (TNV)	AB5400
Tobacco Necrosis Virus A (TNV-A)	AB5401
Tobacco Necrosis Virus D (TNV-D)	AB5402
Tobacco Necrotic Dwarf Virus (TNDV)	AB5403
Tobacco Rattle Tobravirus (Jeffersonia Isolate)( TRV J)	AB5404
Tobacco Rattle Tobravirus BroadRange (TRV)	AB5405
Tobacco Rattle Tobravirus K (TRV K)	AB5406
Tobacco Rattle Tobravirus M (TRV M)	AB5407
Tobacco Rattle Virus (TRV)	AB5408
Tobacco Ringspot Virus (TRSV)	AB5409
Tobacco Streak Virus (TSV)	AB5410
Tobacco Vein Banding Mosaic Virus (TVBMV)	AB5411
Tobacco Vein Mottling Virus (TVMV)	AB5412
Tobamovirus Group Test (Tobamo)	AB5611
Tobamovirus Group Test (Tobamo) Tobamoscreen® I detecting PMMoV, TMV and ToMV	AB5413
Tomato Aspermy Cucumovirus (TAV) ( Chrysanthemum Aspermy Virus)	AB5414
Tomato Aspermy Virus (TAV)	AB5415
Tomato Black Ring Virus (TBRV)	AB5416
Tomato Bushy Stunt Virus (TBSV)	AB5417
Tomato Chlorosis Virus (ToCV)	AB5418
Tomato Chlorotic Spot Virus (TCSV)	AB5419
Tomato Leaf Curl New Delhi Virus (ToLCNDV)	AB5420
Tomato Mosaic Tobamovirus (Dahlemense strain) (ToMV)	AB5421
Tomato Mosaic Virus (ToMV)	AB5422
Tomato Ringspot Virus (ToRSV)	AB5423
Tomato Ringspot Virus-Ch (ToRSV-Ch)	AB5621
Tomato Spotted Wilt Virus (TSWV)	AB5424
Tomato Yellow (Fruit) Ring Virus (TYRV)	AB5425
Tomato Yellow Leaf Curl Bigeminivirus polyclonal/monoclonal (TYLCV)	AB5429
Tomato Yellow Leaf Curl Sardinia Virus (TYLCSV)	AB5426
Tomato Yellow Leaf Curl Thailand Virus (TYLCTHV)	AB5427
Tomato Yellow Leaf Curl Virus (TYLCV)	AB5428
Tomato Yellow Ring Virus (TYRV)	AB5430
TospoScreen detects TWSV, INSV, TCSV, GRSV, and CSNV	AB5431
Turnip Crinkle Virus (TCV)	AB5432
Turnip Mosaic Virus (TuMV)	AB5433
Turnip Rosette Virus (TRoV)	AB5434
Turnip Vein Clearing Virus (TVCV)	AB5435

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Turnip Yellow Mosaic Virus (TYMV)	AB5436
Turnip Yellows Polerovirus (TYV)	AB5437
Ugandan Cassava Brown Streak Virus (UCBSV)	AB5438
Velvet Tobacco Mottle Virus (VTMoV)	AB5439
Viola Mottle Virus (VMoV)	AB5440
Watermelon Chlorotic Stunt Virus (WmCSV)	AB5441
Watermelon Mosaic Potyvirus II (WMV II)	AB5442
Watermelon Mosaic Virus - 2 (WMV-2)	AB5443
Watermelon Mosaic Virus (WMV)	AB5444
Watermelon Silver Mottle Virus (WSMoV)	AB5445
Wheat Dwarf Virus (WDV)	AB5446
Wheat Soil-Borne Mosaic Virus (SBWMV)	AB5447
Wheat Spindle Streak Mosaic Virus (WSSMV)	AB5448
Wheat Streak Mosaic Virus (WSMV)	AB5449
Wheat Yellow Mosaic Virus (WYMV)	AB5450
White Clover Mosaic Virus (WCIMV)	AB5451
White Lupine Mosaic Virus (WLMV)	AB5452
Whitefly-Transmitted Geminiviruses (WTG)	AB5617
Wild Potato Mosaic Virus (WPMV)	AB5453
Yam Mild Mosaic Virus (YMMV)	AB5487
Yam Mosaic Virus (YMV)	AB5488
Yam spherical virus (YSV)	AB5489
Zantedeschia Mosaic Virus (ZaMV)	AB5490
Zucchini Green Mottle Mosaic Virus (ZGMMV)	AB5491
Zucchini Yellow Fleck Virus (ZYFV)	AB5492
Zucchini Yellow Mosaic Virus (ZYMV)	AB5493

## Bacteria

Acidovorax avenae subsp. cattleyae (Aacat)	AB5642
Acidovorax citrulli (ex Acidovorax avenae subsp.citrulli) Ac (ex Aac)	AB5001
Acidovorax avenae (Pseudomonas avenae) (Aa)(Bacterial leaf blight and stalk rot)	AB5494
Apple proliferation phytoplasmas (ApP)	AB5639
Burkholderia andropogonis	AB5080
Burkholderia gladioli pv. alliicola	AB5081
Candidatus Liberibacter asiaticus (Citrus Greening (HLB))	AB5517
Clavibacter michiganensis pv. michiganensis (Cmm)	AB5118
Clavibacter michiganensis ssp. Michiganensis (Cmm)	AB5119
Clavibacter michiganensis subsp. insidiosum (Cmi)	AB5120

# Arsh Biotech Disease Diagnostic List

<i>Clavibacter michiganensis</i> subsp. <i>nebraskensis</i> (Cmn)	AB5121
<i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i> (Cms)	AB5122
<i>Clavibacter michiganensis</i> subsp. <i>tessellarius</i> (Cmt)	AB5123
<i>Colletotrichum acutatum</i> (Cacu)	AB5133
<i>Corn stunt spiroplasma</i> (Css)	AB5531
<i>Curtobacterium flaccumfaciens</i> subsp. <i>flaccumfaciens</i> (Cff)	AB5154
<i>Curtobacterium flaccumfaciens</i> pv <i>flaccumfaciens</i>	AB5155
<i>Cylindrocarpon destructans</i> (Cd) ( <i>Cylindrocarpon</i> Root Rot)	AB5532
<i>Dickeya</i> ( <i>Erwinia-</i> , <i>Pectobacterium-</i> ) <i>chrysanthemi</i> <i>Saintpaulia</i> Isolate	AB5165
<i>Dickeya solani</i> (Potato blackleg/soft rot)	
<i>Erwinia amylovora</i> (Ea) (Fire blight)	AB5174
<i>Erwinia chrysanthemi</i> (Echr)	AB5177
<i>Erwinia stewartii</i> (Este) (See <i>Pantoea stewartii</i> )	AB5178
<i>Erwinia tracheiphila</i> (Bacterial wilt)Et	AB5534
<i>Flavescence doree</i>	AB5180
<i>Pantoea stewartii</i> (Pst)	AB5249
<i>Pectobacterium</i> ( <i>Erwinia</i> ) <i>carotovorum</i> (Pc) (Bacterial stem rot and fruit rot)	AB5556
<i>Pectobacterium atrosepticum</i> (Patro)	AB5266
<i>Pectobacterium chrysanthemi</i> see <i>Dickeya chrysanthemi</i>	AB5267
<i>Pectobacterium carotovorum</i> ( <i>Erwinia carotovora</i> ) (Pc) (Bacterial soft rot)	AB5175
<i>Phytoplasma</i> (Phyto)	AB5567
<i>Phytoplasmas</i> (includes Maize Bushy Stunt) (Phyto)	AB5568
<i>Pseudomonas savastanoi</i> pv <i>phaseolicola</i> (Psp)	AB5319
<i>Pseudomonas syringae</i> pv. <i>aptata</i> (psa)	AB5574
<i>Pseudomonas syringae</i> pv. <i>glycinea</i> (Psg)	AB5320
<i>Pseudomonas syringae</i> pv. <i>lachrymans</i> (Psl)	AB5321
<i>Pseudomonas syringae</i> pv. <i>papulans</i> (Blister spot)	AB5575
<i>Pseudomonas syringae</i> pv. <i>phaseolicola</i> (Psph)	AB5322
<i>Pseudomonas syringae</i> pv. <i>pisi</i> (Psp)	AB5323
<i>Pseudomonas syringae</i> pv. <i>syringae</i> (Pss)	AB5324
<i>Pseudomonas syringae</i> pv. <i>tabaci</i> (Wildfire)	AB5576
<i>Pseudomonas syringae</i> pv. <i>tomato</i> (Pst)	AB5325
<i>Ralstonia</i> ( <i>Pseudomonas</i> ) <i>solanacearum</i> (Rs) (Bacterial wilt)	AB5332
<i>Rhodococcus fascians</i>	AB5343
<i>Serratia marcescens</i> (Cucurbit yellow vine)	AB5601
<i>Spiroplasma citri</i> (Sc)	AB5603
<i>Streptomyces acidiscabies</i> (Sa) (Common scab)	AB5606
<i>Streptomyces turgidiscabies</i> (St) (Common scab)	AB5607
<i>Streptomyces scabies</i> (Ss) (Common scab)	AB5609

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<i>Streptomyces turgidiscabies</i> (St) (Common scab)	AB5610
<i>Xanthomonas albilineans</i> (Xalb)	AB5455
<i>Xanthomonas arboricola</i> pv. <i>Corylina</i>	AB5456
<i>Xanthomonas axonopodis</i> pv. <i>begoniae</i> (Xab)	AB5457
<i>Xanthomonas axonopodis</i> pv. <i>dieffenbachiae</i> (Xad)	AB5458
<i>Xanthomonas axonopodis</i> pv. <i>phaseoli</i> (Xaph)	AB5459
<i>Xanthomonas campestris</i> <i>Lobelia</i> isolate	AB5461
<i>Xanthomonas campestris</i> pv <i>begonia</i>	AB5462
<i>Xanthomonas campestris</i> pv <i>dieffenbachiae</i>	AB5465
<i>Xanthomonas campestris</i> pv. <i>armoraciae</i> (Xcarm)	AB5471
<i>Xanthomonas campestris</i> pv. <i>campestris</i> (Xcc)	AB5472
<i>Xanthomonas campestris</i> pv. <i>carotae</i> (Xcca)	AB5473
<i>Xanthomonas campestris</i> pv. <i>citri</i> (Xccit)	AB5474
<i>Xanthomonas campestris</i> pv. <i>musacearum</i> (Xcmu)	AB5475
<i>Xanthomonas campestris</i> pv. <i>oryzacola</i> (Xcoa)	AB5476
<i>Xanthomonas campestris</i> pv. <i>oryzae</i> (Xcor)	AB5460
<i>Xanthomonas campestris</i> pv. <i>pelargonii</i> (Xcp)	AB5477
<i>Xanthomonas campestris</i> pv. <i>phaseoli</i> (Xcph)	AB5478
<i>Xanthomonas campestris</i> pv. <i>pruni</i> (Xcpr)	AB5479
<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> (Xcv)	AB5480
<i>Xanthomonas fragariae</i> (Xfra)	AB5481
<i>Xanthomonas hortorum</i> pv. <i>pelargonii</i> (Xhp)	AB5482
<i>Xanthomonas oryzae</i> pv. <i>Oryzae</i>	AB5483
<i>Xanthomonas axonopodis</i> pv. <i>citri</i> (Xac)	AB5618
<i>Xanthomonas axonopodis</i> pv. <i>Punicae</i> (Xapu)	AB5625
<i>Xanthomonas campestris</i> (Xc)	AB5619
<i>Xylella fastidiosa</i> (Xfas)	AB5484
<i>Xylophilus ampelinus</i> (Xamp)	AB5486

## Fungi

Aflatoxin B1	AB5626
<i>Alternaria alternata</i> (Aa)	AB5496
<i>Alternaria brassicae</i> (Abe)	AB5497
<i>Alternaria mali</i> (Am) ( <i>Alternaria</i> blotch)	AB5498
<i>Alternaria porri</i> (Ap) (Purple blotch)	AB5499
<i>Alternaria solani</i> (As)	AB5505
<i>Alternaria</i> spp. (Leaf spot)	AB5622
<i>Alternaria tenuissima</i> (Ate) ( <i>Alternaria</i> leaf spot and fruit rot)	AB5500
<i>Alternaria panax</i> (Ap)( <i>Alternaria</i> Leaf and Stem Blight)	AB5501

# Arsh Biotech Disease Diagnostic List

Alternaria triticina (At) (Alternaria leaf blight)	AB5502
Aphanomyces euteiches(Ae) (Root rot)	AB5503
Ascochyta spp. (Asco) Ascochyta leaf spot)	AB5506
Ascochyto tritici (At) (Ascochyta leaf spot)	AB5507
Aspergillus niger (An)	AB5508
Aspergillus flavus (Af)	AB5509
Botryosphaeria cortices (Bc)	AB5512
Botryosphaeria dothidea (Bd)	AB5513
Botryosphaeria obtusa (Bo)	AB5514
Botrytis alli (Ba)	AB5066
Botrytis cinerea grapevine isolate (Cocktail ELISA)	AB5068
Botrytis squamosa (Bs) (Leaf blight)	AB5515
Botrytis cinerea (Bc) (Gray mold)	AB5067
Cercospora spp. (Cer) (Stem blotch)	AB5519
Colletotrichum coccodes (Cc) (Black dot)	AB5527
Colletotrichum fragariae (Cfra) (Anthracnose)	AB5528
Colletotrichum gloeosporioides (Cg) (Anthracnose fruit rot)	AB5529
Colletotrichum graminicola (Cg) (Anthracnose)	AB5530
Colletotrichum spp. (Anthracnose)	AB5134
Colletotrichum cereal (Cce) (Anthracnose)	AB5526
Didymella bryoniae (Bummy stem blight)	AB5533
Erysiphe cichoracearum (Powdery mildew)	AB5535
Erysiphe graminis (Eg) (Powdery mildew)	AB5536
Exobasidium vaccinii (Ev) (Red leaf)	AB5537
Fusarium oxysporum (Foxy)	AB5538
Fusarium oxysporum f.sp. lycopersici (Fol)	AB5539
Fusarium solani (Fs)	AB5540
Fusarium spp. (Fus)	AB5541
Fusarium graminearum (Fg)	AB5542
Fusicoccum putrefaciens(Fp) (Fusicoccum canker)	AB5545
Gaeumannomyces graminis (Gg) (Take-All Patch)	AB5546
Leptosphaeria maculans (Blackleg)	AB5551
Macrophomina phaseoli	AB5628
Magnaporthe poae (Summer patch)	AB5553
Oidiopsis sicula (Powdery mildew)	AB5555
Penicillium spp. (Pen)	AB5557
Phakopsora (Phak)	AB5284
Phakospsoara pachyrhizi (Ppac)	AB5285
Phomopsis mali (Pm) (Phomopsis canker)	AB5559



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Phomopsis vaccinii (Pv) (Twig blight/stem canker/stem blight)	AB5560
Phomopsis viticola	AB5630
Phytophthora cactorum (Pc)	AB5561
Phytophthora capsici (Pcap)	AB5562
Phytophthora spp. (Phyt)	AB5287
Phytophthora erythroseptica (Pe) (Pink rot)	AB5565
Plasmodiophora brassicae (Pb) (Clubroot)	AB5569
Plasmopara viticola	AB5640
Puccinia allii (Pa) (Rust)	AB5577
Puccinia graminis (Pg) (Stem rust)	AB5578
Puccinia spp. (Puc) (Crown/leaf/stem rust)	AB5579
Puccinia striiformis (Stripe Rust)	AB5580
Puccinia triticina (Pt) (Leaf rust)	AB5581
Pucciniastrum americanum (Pa) (Leaf rust)	AB5582
Pucciniastrum vaccinii (Pv) (Leaf rust)	AB5583
Pyrenopeziza lycopersici (Pl) (Tomato corky root rot/Vine decline)	AB5584
Pyrenopeziza terrestris (Pt) (Tomato corky root rot/Vine decline)	AB5585
Pythium aphanidermatum (Pa)	AB5586
Pythium intermedium (Pin)	AB5587
Pythium irregularare (Pi)	AB5588
Pythium paroecandrum (Pp)	AB5589
Pythium spp. (Pyth)	AB5329
Pythium sulcatum (Psu)	AB5590
Pythium sylvaticum (Psy)	AB5591
Pythium violae (Pv)	AB5593
Pythium ultimum (Pu)	AB5594
Rhizoctonia cerealis (Rc) (Yellow Patch)	AB5596
Rhizoctonia solani (Rs)	AB5341
Rhizoctonia spp.(Rhiz)	AB5342
Rhizopus spp. (Rhizopus soft rot)	AB5623
Rhizopecnis vagum (Rv) (Tomato corky root rot/Vine decline)	AB5597
Rosellinia necatrix(Rn) (White root rot)	AB5598
Sclerotinia homoeocarpa (Sh) (Dollar Spot)	AB5599
Sclerotinia rolfsii (Srol)	AB5627
Sclerotinia sclerotiorum (Ss)	AB5600
Sclerotium rolfsii (Srol)	AB5627
Septoria nodorum/ Septoria tritici (Snod/ Stri)	AB5355
Septoria tritici (Stri)	AB5356
Spongospora subterranean (Powdery scab)	AB5604



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Stemphylium vesicarium (Sv) (Stemphylium leaf blight and stalk rot)	AB5605
Synchytrium endobioticum	AB5629
Tapesia spp.	AB5388
Uncinula necator (Powdery mildew)	AB5641
Ustilago maydis (Um) (Common smut)	AB5612
Ustilago tritici (Ut) (Loose smut)	AB5613
Verticillium albo-atrum (Va) (Verticillium wilt)	AB5614
Verticillium dahliae (Vd) (Verticillium wilt)	AB5615
Verticillium spp. (Vert) (Verticillium wilt)	AB5616

# Guidelines Related to Sending Samples for Testing

A) Each sample should be packaged in re-sealable zip-locked plastic bags, and then placed inside a second plastic bag and assigned a clear unique ID. We will use your sample ID# when we report test results to you.

B) If possible, choose about 5 good-sized leaves or stems showing symptoms. If there are no symptoms present, choose the newest fully unfolded leaves on the plant. When making a composite sample from various plants, do not composite more than 10 leaves into a single sample. If you are sending a tissue culture, it should be at least 2 inches high.

C) Please collect samples as close as possible to the time you will be sending them. If you need to take samples before the day you send them, store the samples in the refrigerator. Do not freeze samples or allow them to get wet.

D) Please pack the bagged samples in a cardboard box. Do not pack samples with ice or wet paper towels. Ice packs can crush samples in shipment. Wet paper towels stimulate tissue decay, impairing recovery of some pathogens. Do not include soil, insects, or other materials.

II. When sending tissue culture tubes or vessels, please place each tube/vessel in a separate plastic bag.

III. Please include the following information along with your samples:

- ✓ Your full name, address, and telephone/fax numbers
- ✓ Type of sample
- ✓ Tests or screens ordered
- ✓ Whether you would like us to email the results or you need a printed hard copy of results.
- ✓ Your e-mail address if you would like to receive results by e-mail

IV. If you wish, you can also email us pictures of all the samples with sample ID #. The best is to use any smartphone which can send email easily.

V. It is very important that you include all of this information with your samples or any other specific information you want to provide. If we receive your samples without adequate information, your testing will be delayed.

VI. If you have any questions about the shipping, packaging, or sample collection procedures, please contact us at telephone: 1800-3000-8822 or email at: [info@arshbiotech.com](mailto:info@arshbiotech.com) during 9.30 AM to 6.30 PM on all working days.

## Terms and Conditions

1. Plant samples submitted to Arsh Biotech will be analyzed for the presence of pathogens using diagnostic technologies stated in Proforma Invoice.
2. Client understands that the sample source and condition can affect the outcome of these analyses. Client agrees to submit a sample that is representative of its original source and was collected according to the sample collection guidelines appropriate for the given disease or diseases the sample is to be tested for. Condition and correct labeling of the sample is the sole responsibility of the client.
3. Client acknowledges that plant pathogens can be unevenly distributed in a given plant and therefore a negative test result does not guarantee that the plant is free of that disease agent.
4. Client shall pay Arsh Biotech within agreed payment term otherwise Late fee charges may be applied to invoices past after agreed date.
5. Client agrees to the Terms and Conditions set forth above. Client acknowledges that Arsh Biotech does not express any warranty for the testing services other than stated above and that Arsh Biotech is not liable by reason of its performance under this agreement for any loss of profits, claims, or damages occurred to the client, other person, or a third party. Client agrees that the liability of Arsh Biotech does not exceed the total amount paid for the analysis.
6. All customer relations including communications, plant materials and reports are strictly confidential and will not be released to third party unless stated so by the client or required by the law.
7. Client agrees that Arsh Biotech has right to use submitted samples for research and development purposes.

## Payment information

Payments can be made online at [www.arshbiotech.com](http://www.arshbiotech.com) or directly to our bank account or through a cheque. The details can be obtained from the finance department by contacting at [finance@arshbiotech.com](mailto:finance@arshbiotech.com) or calling at 1800-3000-8822 Toll Free.

## Ordering Information

*To place an order or for any technical query or product information, please feel free to contact us by phone, mail, e-mail or fax:*

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Road No.44, Pitampura,  
Delhi-110034, India**

**Toll Free: 1800-3000-8822  
Mobile: +91-98105-21400  
Web: [www.arshbiotech.com](http://www.arshbiotech.com)  
Email: [info@arshbiotech.com](mailto:info@arshbiotech.com)**

### Please specify:

1. Catalogue number, description and quantity.
2. Delivery address for the report and clear shipping address information.
3. Contact name, title, organisation, phone number, fax and email.
4. Please let us know in advance for any special requirements or custom testing services.

Sample pick up service is available.



CE Certified



ISO 9001



ISO 13485



ISO 14001



OHSAS 18001

# International Accreditations





CE Certified



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ISO 13485



ISO 14001



OHSAS 18001