



# Products and Services

## 2023







BIOREBA AG was the **first** company in the world to produce and commercialise ELISA reagents for plant virus diagnostics in 1980. It is an independent company that was founded in close collaboration with Agroscope, the Swiss Centre of Competence for Agricultural and Food Research. Since then, BIOREBA has established collaborations with numerous other research institutes and universities in many countries. Since its foundation almost four decades ago, the company has grown steadily and established a reputation for **high quality diagnostics**. Today, the research community and diagnostic laboratories around the world rely on our products to potatoes, vines, fruit trees, small fruits, vegetables, ornamentals and field crops.

Our philosophy is to provide our customers with high quality products and services for their specific diagnostic needs. Customers **benefit** from our expertise and many years of experience in the development and introduction of complete assays for the detection of plant pathogens. BIOREBA has well-equipped facilities for R&D activities and production of these test systems, as well as an **accredited** testing laboratory to provide customers with serological and molecular analyses of plant pathogens. The company also provides specialised equipment and disposables for plant sample preparation and liquid handling.

BIOREBA products are available **throughout the world**. The sales and marketing department and an extensive network of distributors ensure a rapid response to customer enquiries and prompt delivery of products. Our well trained staff are committed to maintaining high quality standards.

BIOREBA has been **awarded** the internationally recognized **ISO 9001** Quality Management System certificate. In addition, our testing services laboratory is accredited according to **ISO/IEC 17025** for the analysis of plant pathogens. Both certificates are an incentive for us to continue serving you with the best quality products and to help you grow healthy crops and yields.



**i**  
Please feel free to contact us. We will be happy to help you. We will usually get back to you within 24 hours:

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# Extraction Bags



Our homogenization system includes **four different extraction bags** in different sizes, with or without a synthetic intermediate layer. All extraction bags are ideal for tissue extraction for use in ELISA and PCR.

## The characteristics of our extraction bags are:

- Optimal sampling and sample preparation (samples can be labeled and stored)
- Optimal homogenization
- Optimal filtration of the plant extracts (bags with synthetic intermediate layer)
- Optimal recovery of the plant sap
- No cross-contamination between test samples
- Optimal for homogenizing with our HOMEX 7, HOMEX XS or Homogenizer hand model
- Suitable for homogenizing leaves, sprouts, roots, seeds, woody samples, sieved soil

## Ordering information for BIOREBA Extraction bags:

Each unit contains **100 bags**. For 1000 bags (one full box) you need to order the extraction bag item 10 times.

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Art. No.	Product	Quantity
430100	<b>Extraction bags Universal 12 x 15 cm</b> for our standard rack <ul style="list-style-type: none"> <li>• with synthetic intermediate layer for optimal filtration, heavy duty plastic for testing all kind of samples</li> <li>• max. filling volume for use with HOMEX 7: 10 ml</li> </ul>	100
440100	<b>Extraction bags Universal-U-form 12 x 15 cm</b> for our standard rack <ul style="list-style-type: none"> <li>• heavy duty plastic with U-formed compartment with synthetic intermediate layer for testing seeds</li> <li>• max. filling volume for use with HOMEX 7: 4 ml</li> </ul>	100
470100	<b>Extraction bags Universal-Long 15 x 28 cm</b> for our rack 4/25 <ul style="list-style-type: none"> <li>• heavy duty plastic with 15 mm wide sealing borders on bottom and sides with synthetic intermediate layer</li> <li>• max. filling volume for use with HOMEX 7: 50 ml</li> </ul>	100
420100	<b>Extraction bags Long 15 x 40 cm</b> <ul style="list-style-type: none"> <li>• heavy duty plastic without intermediate layer for testing long leaves</li> <li>• max. filling volume for use with HOMEX 7: 200 ml</li> </ul>	100

# Extraction Devices



Our **homogenizers** are ideal for tissue extraction of samples for use in ELISA and PCR. Samples remain in extraction bags throughout sample processing, eliminating cross-contamination and the need for washing between samples.

## HOMEX 7 incl. Standard Rack – *The best-selling homogenizer*

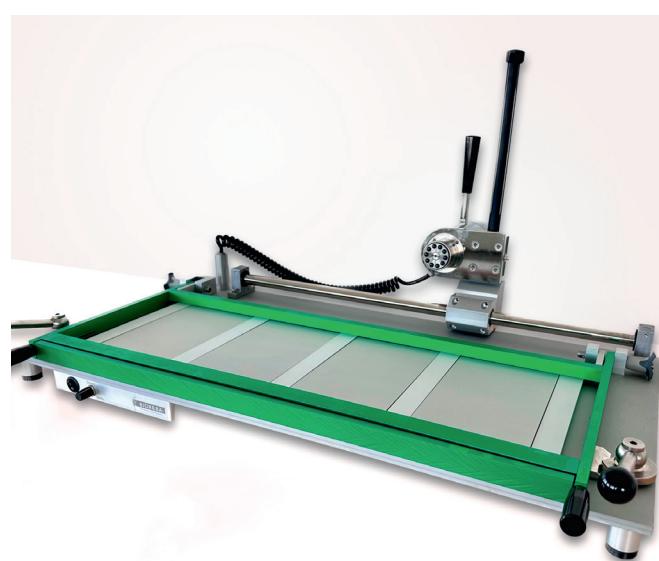
- Semi-automated homogenizer
- Ergonomic and easy handling
- Tissue samples of different thickness may be homogenized
- High throughput (ca. 250 samples/h can be processed)
- Can be equipped with two different racks (see Rack 4/25) to hold different sizes of BIOREBA extraction bags
- Changing the rack is fast and easy
- 27% lighter than the previous model
- 100% Made in Switzerland

### HOMEX 7 incl. Rack 4/25

- Semi-automated HOMEX 7 with a optional longer rack
- Holds 1-4 BIOREBA extraction bags Universal-Long
- High throughput (ca. 250 samples/h can be processed)
- Tissue samples of different thickness may be homogenized
- Changing the rack is fast and easy
- Ergonomic and easy handling
- 27% lighter than the previous model
- 100% Made in Switzerland



**Scan me.**  
Watch the HOMEX video  
on our YouTube channel.



## HOMEX XS – *The compact homogenizer*

- Automated easy-to-use system
- Space saving and low weight machine
- High efficiency with homogenization of more than 100 samples per hour
- For homogenization of all kinds of tissues without sharp edges
- Filtered extract can be used for analyses such as ELISA, PCR or other analytical applications
- Optimized for BIOREBA extraction bags Universal and Universal-U-form
- Adjustable rotation speed and homogenization time
- Stop timer function
- Ergonomic handling

# Extraction Devices



## Homogenizer hand model

- Suitable for small sample numbers and for samples of softer tissue (leaves, sprouts, flowers etc.)
- Optimal grinding
- Can be used with all types of BIOREBA extraction bags

### Products

	Art. No.	Quantity
HOMEX 7 incl. Standard Rack	400007S	1
HOMEX 7 incl. Rack 4/25	4000074	1
HOMEX XS	400008	1
Homogenizer hand model	400010	1

### Replacement parts for HOMEX 7

	Art. No.	Quantity
Standard Rack for HOMEX 7	400014S	1
Rack 4/25 for HOMEX 7	4000164	1
Replacement head for HOMEX 7	400017	1
Aluminium bars for Standard Rack HOMEX 7	400027	6



**BIOpick** is a device for taking heel core samples from potato tubers (e.g. for testing for quarantine bacterial diseases such as ring rot caused by *Clavibacter* and brown rot caused by *Ralstonia*). It makes coring more ergonomic and allows up to 200 heel end cores to be collected and transferred into a 50ml collection tube. Sampling can be performed manually or semi-automatically by connecting the BIOpick to a laboratory blender using the supplied adapter.



### BIOpick – Your Potato Sample Device

- Time-saving
- Ergonomic
- Reusable
- Flexible use: Manual or Semi-automatic
- High throughput: up to 20 cores/min



Scan me.

Watch the BIOpick video  
on our YouTube channel.

### BIOpick – Your Potato Sample Device

	Art. No.	Quantity
BIOpick, stainless steel, 3pcs	BP003	1
Adapter for BIOpick, stainless steel	BPA01	1
Brushes for BIOpick, 3 pcs	BPB03	1 set
BIOpick set (BIOpick, adapter, cleaning brushes)	BPS01	1 set

# Potato DNA/RNA rapid extraction set



## Nucleic acid extraction for potato samples

The Potato DNA/RNA Rapid Extraction Kit is designed for phytodiagnostic use. It allows **quick and easy** extraction of DNA and RNA from potato tuber and leaf samples. The extraction requires the use of only two buffers. Time-consuming processing steps are eliminated. A particularly cost-effective advantage is that the Potato DNA / RNA Rapid Extraction Kit does not require expensive machinery.

## The characteristics of our Potato DNA/RNA rapid extraction set are:

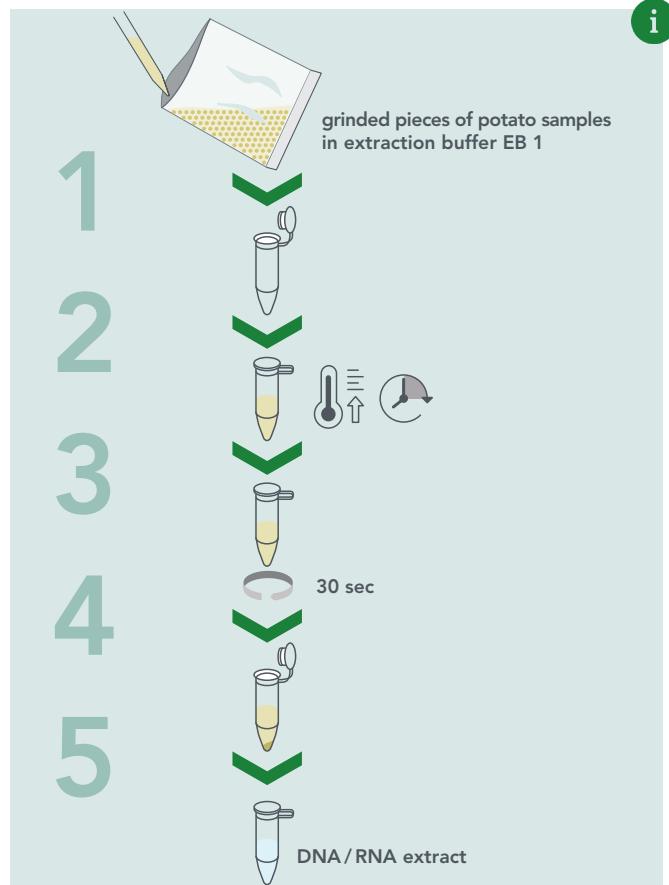
- Fast extraction in 30 minutes only
- Easy to use: only 5 steps
- Optimized for pools of up to 25 potato samples
- No specialised machines are needed
- Room temperature storage and shipment
- Total nucleic acids – extracts DNA and RNA in one procedure
- Validated and accredited method according to ISO / IEC 17025
- Extracted nucleic acids can be used for diagnostic tests such as real time PCR and PCR macroarray
- Assays for viruses, bacteria and fungi

Sets are stored and shipped at **room temperature** for easy handling.

The set contains all the reagents and extraction bags required for DNA/RNA extraction. Separate samples for DNA and RNA extraction are not required as the kit extracts total nucleic acids. Downstream applications such as real-time PCR or PCR macroarray for detection of viruses, bacteria or fungi can be performed using one extract.

The extraction method using the Potato DNA/RNA Rapid Extraction Kit has been validated and accredited according to ISO / IEC 17025. The method is **approved for seed potato certification**.

Four set sizes are available for pools of 10 or up to 25 potato samples and for 96 or 192 extractions respectively (see next page).



Art. No.	Product	No. of reactions	Amount of samples (potatoes)
810003	Potato DNA/RNA rapid extraction set 96 / 10x for 96 extractions (Pool size: up to 10 tuber samples) set includes: <ul style="list-style-type: none"><li>• Rapid extraction buffer EB 1 (p) 100ml</li><li>• Rapid extraction buffer EB 2 (p) 50 ml</li><li>• Extraction bags Standard 12x15 cm 100 pcs</li></ul>	96	up to 10
810004	Potato DNA/RNA rapid extraction set 96 / 25x for 96 extractions (Pool size: up to 25 tuber samples) set includes: <ul style="list-style-type: none"><li>• Rapid extraction buffer EB 1 (p) 200ml</li><li>• Rapid extraction buffer EB 2 (p) 50 ml</li><li>• Extraction bags Standard 12x15 cm 100 pcs</li></ul>	96	up to 25
810005	Potato DNA/RNA rapid extraction set 192 / 10x for 192 extractions (Pool size: up to 10 tuber samples) set includes: <ul style="list-style-type: none"><li>• Rapid extraction buffer EB 1 (p) 200ml</li><li>• Rapid extraction buffer EB 2 (p) 100 ml</li><li>• Extraction bags Standard 12x15 cm 2 x 100 pcs</li></ul>	192	up to 10
810006	Potato DNA/RNA rapid extraction set 192 / 25x for 192 extractions (Pool size: up to 25 tuber samples) set includes: <ul style="list-style-type: none"><li>• Rapid extraction buffer EB 1 (p) 2 x 200ml</li><li>• Rapid extraction buffer EB 2 (p) 100 ml</li><li>• Extraction bags Standard 12x15 cm 2 x 100 pcs</li></ul>	192	up to 25

## Extraction buffers for ELISA



### ELISA Extraction buffer

Depending on the plant samples to be analyzed, a **different** extraction buffer will be required. For most plants, the extraction buffer «General» is suitable. For the analysis of grapevines, the extraction buffer «Grapevine» is required. For testing tubers and sprouts of potatoes, bulbs of onions and other Allium spp. and seeds, the extraction buffer «Bulbs and Tubers» is required. For CaMV tests the special extraction buffer «Caulimo» is required. Information on the correct use of the extraction buffer is given in the «Product Information» supplied with our ELISA reagents.

Product	Art. No.	Size	sufficient for
Extraction buffer «General» (10x)	110120	500 ml	1000 samples**
Extraction buffer «Grapevine» (5x)	110123	2 x 500 ml	1000 samples**
Extraction buffer «Bulbs & Tubers» ***	110122	500 ml	1000 samples**
Extraction buffer «Caulimo» ****	110124	500 ml	1000 samples
Extraction buffer «Caulimo» ****	110224	250 ml	500 samples

\*\* Calculated with 5 ml extraction buffer per sample of 0.25 g

\*\*\* Composed of 500 ml extraction buffer «General» (10x) and 50 g egg albumin

\*\*\*\* Includes extraction buffer «Caulimo» (10x), urea, and egg albumin

# Overview: Plant Pathogen Diagnostic Tests

Our **AgriStrip** products are listed in alphabetical order on page 15. Our **ELISA** reagents, reagent sets and complete kits are listed in alphabetical order on page 17–42. Our **qPCR** products are listed on page 43–45. **The table below illustrates the prevalence of pathogens in relation to different crop groups:**

Pathogen name	Acronym	AgriStrip	ELISA	qPCR
<b>Potatoes</b>				
Alfalfa mosaic virus	AMV		•	
Andean potato latent virus	APLV		•	
Andean potato mottle virus	APMoV		•	
Potato leafroll virus	PLRV		•	
Potato mop-top virus	PMTV		•	
Poty group	Poty group		•	
Potato virus A	PVA	•	•	•
Potato virus M	PVM	•	•	•
Potato virus S	PVS	•	•	
Potato virus V	PVV		•	
Potato virus X	PVX	•	•	
Potato virus Y (monoclonal cocktail)	PVY-mono cock	•	•	•
Potato virus Y (monoclonal)	PVY-mono	•	•	•
Potato virus Y (polyclonal)	PVY-poly	•	•	•
Potato virus Y-necrotic	PVY-necrotic	•	•	•
Ralstonia solanacearum	Rs	•	•	
Spongospore subterranea f.sp. subterranea	Sss	•	•	
Tomato black ring virus	TBRV		•	
Tobacco necrosis virus	TNV		•	
Tomato spotted wilt virus	TSWV	•	•	
Verticillium spp.	Verticillium		•	
<b>Grapevines</b>				
Arabis mosaic virus	ArMV		•	
ArMV+GFLV	ArMV+GFLV		•	
Grapevine fanleaf virus	GFLV		•	
Grapevine fleck virus	GfkV		•	
Grapevine leafroll assoc. virus 1	GLRaV-1		•	
Grapevine leafroll assoc. virus 1+3	GLRaV-1+3		•	
Grapevine leafroll assoc. virus 2	GLRaV-2		•	
Grapevine leafroll assoc. virus 3	GLRaV-3		•	
Grapevine leafroll assoc. virus generic 4 strains	GLRaV-4 strains		•	
Grapevine leafroll assoc. virus 4 strain 6	GLRaV-4 strain 6		•	
Grapevine pinot gris virus	GPGV		•	
Grapevine virus A	GVA		•	
Grapevine red blotch virus	GRBV			•
Raspberry ringspot virus-ch	RpRSV-ch		•	
Raspberry ringspot virus-g	RpRSV-g		•	
Strawberry latent ringspot virus	SLRSV		•	
Tomato black ring virus	TBRV		•	
Tomato ringspot virus	ToRSV		•	
Tomato ringspot virus-Ch	ToRSV-Ch		•	
Tobacco ringspot virus	TRSV		•	
<b>Vegetables</b>				
Acidovorax avenae subsp. citrulli	Aac	•	•	
African cassava mosaic virus	ACMV (TYLCV)		•	
Bean common mosaic virus	BCMV		•	
Bean common mosaic necrosis virus	BCMNV		•	
Bean golden mosaic virus	BGMV (TYLCV)		•	
Beet necrotic yellow vein virus	BNYVV		•	
Cauliflower mosaic virus	CaMV		•	
Cucumber green mottle mosaic virus	CGMMV		•	
Cucumber mosaic virus	CMV	•	•	

Pathogen name	Acronym	AgriStrip	ELISA	qPCR
<b>Vegetables</b>				
Cucurbit yellow stunting disorder virus	CYSVD		●	
Erysimum latent virus	ErLV		●	
Garlic common latent virus	GCLV		●	
Lettuce mosaic virus	LMV	●	●	
Leek yellow stripe virus	LYSV		●	
Mirafiori lettuce big-vein virus	MiLBVV		●	
Onion yellow dwarf virus	OYDV		●	
Pepino mosaic virus	PepMV	●	●	
Pepper mild mottle virus	PMMoV	●	●	
Poty group	Poty group		●	
Papaya ringspot virus	PRSV (=WMV-1)		●	
Potato virus X	PVX	●	●	
Potato virus Y	PVY	●	●	
Radish mosaic virus	RaMV		●	
Soybean mosaic virus	SMV		●	
Squash leaf curl virus	SLCV		●	
Squash mosaic virus	SqMV		●	
Tomato bushy stunt virus	TBSV		●	
Tomato chlorotic spot virus	TCSV (TSWV)		●	
Tobacco mosaic virus	TMV	●	●	
Tobacco necrosis virus	TNV		●	
Tomato apex necrosis virus	ToANV		●	
Tomato brown rugose fruit virus	ToBRFV	●	●	●
Tomato mosaic virus	ToMV	●	●	
Tomato mottle virus	ToMoV (TYLCV)		●	
Tomato ringspot virus	ToRSV		●	
Tomato ringspot virus-Ch	ToRSV-Ch		●	
Tospovirus broad-spectrum (I,II,III)	Tospo (I,II,III)		●	
Tobacco streak virus	TSV		●	
Tomato spotted wilt virus	TSWV	●	●	
Turnip mosaic virus	TuMV		●	
Tomato yellow leaf curl virus	TYLCV		●	
Turnip yellow mosaic virus	TYMV		●	
Verticillium spp.	Verticillium		●	
Watermelon mosaic virus 1	WMV-1 (=PRSV)		●	
Watermelon mosaic virus 2	WMV-2		●	
Zucchini yellow mosaic virus	ZYMV		●	
<b>Field Crops</b>				
Alfalfa mosaic virus	AMV		●	
Barley yellow dwarf virus-B	BYDV-B		●	
Barley yellow dwarf virus-F	BYDV-F		●	
Barley yellow dwarf virus-RPV	BYDV-RPV		●	
Beet necrotic yellow vein virus	BNYVV		●	
Cauliflower mosaic virus	CaMV		●	
Cucumber mosaic virus	CMV	●	●	
Ceral yellow dwarf virus-RPV	CYDV-RPV (BYDV-RPV)		●	
Groundnut ringspot virus	GRSV (TSWV)		●	
Maize chlorotic mottle virus	MCMV	●	●	
Maize dwarf mosaic virus	MDMV		●	
Petunia asteroid mosaic virus	PeAMV		●	
Poty group	Poty group		●	
Potato virus X	PVX	●	●	
Potato virus Y	PVY	●	●	
Radish mosaic virus	RaMV		●	
Sugarcane mosaic virus	SCMV		●	
Tobacco mosaic virus	TMV	●	●	
Tobacco necrosis virus	TNV		●	
Tobacco streak virus	TSV		●	
Tomato spotted wilt virus	TSWV	●	●	
Turnip yellow mosaic virus	TYMV		●	

Pathogen name	Acronym	AgriStrip	ELISA	qPCR
<b>Ornamentals</b>				
Acidovorax avenae subsp. <i>cattleyae</i>	Aacat		●	
Alfalfa mosaic virus	AMV		●	
Apple mosaic virus	ApMV		●	
Arabis mosaic virus	ArMV		●	
Calibrachoa mottle virus	CbMV		●	
Cucumber mosaic virus	CMV	●	●	
Erysimum latent virus	ErLV		●	
Impatiens necrotic spot virus	INSV	●	●	
Petunia asteroid mosaic virus	PeAMV		●	
Pelargonium flower-break virus	PFBV		●	
Pelargonium leaf curl virus	PLCV		●	
Pelargonium line pattern virus	PLPV		●	
Prunus necrotic ringspot virus	PNRSV		●	
Poty group	Poty group		●	
Potato virus A	PVA	●	●	
Potato virus X	PVX	●	●	
Potato virus Y	PVY	●	●	
Ralstonia <i>solanacearum</i>	Rs	●	●	
Strawberry latent ringspot virus	SLRSV		●	
Tobacco mosaic virus	TMV	●	●	
Tobacco necrosis virus	TNV		●	
Tomato mosaic virus	ToMV		●	
Tomato ringspot virus	ToRSV		●	
Tomato ringspot virus-Ch	ToRSV-Ch		●	
Tospovirus broad-spectrum (I,II,III)	Tospo (I,II,III)		●	
Tobacco ringspot virus	TRSV		●	
Tobacco streak virus	TSV		●	
Tomato spotted wilt virus	TSWV	●	●	
<i>Verticillium</i> spp.	Verticillium		●	
Xanthom. <i>campestris</i> pv. <i>pelargonii</i>	Xcp (Xh)		●	
<b>Fruit Trees &amp; Small Fruits</b>				
Apple chlorotic leaf spot virus	ACLSV		●	
Apple mosaic virus	ApMV		●	
Apple proliferation phytoplasma	ApP		●	
Arabis mosaic virus	ArMV		●	
Apple stem grooving virus	ASGV		●	
Apple stem pitting virus	ASPV		●	
Cherry leaf roll virus-ch	CLRV-ch		●	
Cherry leaf roll virus-e	CLRV-e		●	
Citrus tristeza virus	CTV		●	
<i>Erwinia amylovora</i>	Ea	●		
Petunia asteroid mosaic virus	PeAMV		●	
Papaya ringspot virus	PRSV (=WMV-1)		●	
Plum pox virus (Sharka)	PPV	●	●	
Prune dwarf virus	PDV		●	
Prunus necrotic ringspot virus	PNRSV		●	
Poty group	Poty group		●	
Raspberry bushy dwarf virus	RBDV		●	
Raspberry ringspot virus-ch	RpRSV-ch		●	
Soybean mosaic virus	SMV		●	
Strawberry latent ringspot virus	SLRSV		●	
Strawberry mild yellow edge PV	SMYEPV		●	
Tomato ringspot virus-ch	ToRSV-ch		●	
Tomato ringspot virus	ToRSV		●	
Tobacco ringspot virus	TRSV		●	
Tobacco streak virus	TSV		●	
<i>Verticillium</i> spp.	Verticillium		●	
Xanthomonas <i>fragariae</i>	Xfr		●	

# AgriStrip – Lateral flow test

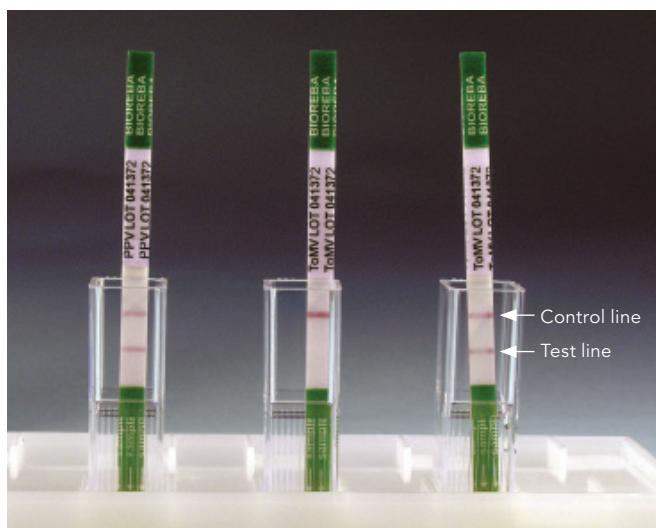


The rapid one-step assay for the detection of plant pathogens

The **AgriStrip**, developed and manufactured by BIOREBA, is based on lateral flow immunochromatography using specific antibodies. The AgriStrip is designed to confirm the presence of a specific pathogen in suspect plant samples on the spot **within minutes**.

## The characteristics of our AgriStrip are:

- The performance of the test is very easy and fast
- Cost effective
- No need of special laboratory equipment
- Especially suitable when testing is required on-site, such as in greenhouses or fields
- Test strips can be kept as permanent records
- Available as Complete kit for 25 assays or as set with 25 or 100 strips, respectively



## AgriStrip Complete Kit 25

Component	Assays
	25
AgriStrips	25 pcs
AgriStrip Extraction buffer ready-to-use	100 ml
Pipettes, disposable	25 pcs
Extraction bags Universal	25 pcs
Cuvettes, disposable	25 pcs
Cuvette rack	1 pc



## AgriStrip Set

Component	Assays	25	100
AgriStrips	25 pcs	100 pcs	
AgriStrip Extraction buffer ready-to-use	100 ml		500 ml

## Optional Products

Art. No.	Size
2166	Cuvette rack, holds 12 cuvettes
2534	Cuvettes, disposable
2292	Pipettes, disposable
430100	Extraction bags Universal
400010	Homogenizer hand model

**MOQ:** to further increase our production efficiency, we have decided to offer some of our AgriStrips (Lateral Flow Tests) on a minimum order quantity (MOQ) basis. The following pathogens will be affected: Aac, INSV, PMMoV, PVA, PVM, PVS, PVX and Sss. The MOQ only applies to the 8 plant pathogens mentioned, other pathogens such as CMV, EA, or PPV for example are not affected and have (as before) no MOQ.



Pathogen	Acronym	Art. No.	Format	Assays
<i>Acidovorax avenae</i> subsp. <i>citrulli</i> (on request)	Aac	161981	AgriStrip Complete kit 25	25
		161982	AgriStrip Set 25	25
		161983	AgriStrip Set 100	100
<i>Cucumber mosaic virus</i>	CMV	160681	AgriStrip Complete kit 25	25
		160682	AgriStrip Set 25	25
		160683	AgriStrip Set 100	100
<i>Erwinia amylovora</i> (Fire blight)	Ea	153081	AgriStrip Complete kit 25	25
		153082	AgriStrip Set 25	25
		153083	AgriStrip Set 100	100
<i>Impatiens necrotic spot virus</i> (on request)	INSV	190281	AgriStrip Complete kit 25	25
		190282	AgriStrip Set 25	25
		190283	AgriStrip Set 100	100
<i>Lettuce mosaic virus</i>	LMV	160581	AgriStrip Complete kit 25	25
		160582	AgriStrip Set 25	25
		160583	AgriStrip Set 100	100
<i>Maize chlorotic mottle virus</i>	MCMV	140781	AgriStrip Complete kit 25	25
		140782	AgriStrip Set 25	25
		140783	AgriStrip Set 100	100
<i>Pepino mosaic virus</i>	PepMV	161581	AgriStrip Complete kit 25	25
		161582	AgriStrip Set 25	25
		161583	AgriStrip Set 100	100
<i>Pepper mild mottle virus</i> (on request)	PMMoV	161781	AgriStrip Complete kit 25	25
		161782	AgriStrip Set 25	25
		161783	AgriStrip Set 100	100
<i>Plum pox virus</i> (Sharka)	PPV	150581	AgriStrip Complete kit 25	25
		150582	AgriStrip Set 25	25
		150583	AgriStrip Set 100	100
<i>Potato virus A</i> (on request)	PVA	112181	AgriStrip Complete kit 25	25
		112182	AgriStrip Set 25	25
		112183	AgriStrip Set 100	100
<i>Potato virus M</i> (on request)	PVM	112281	AgriStrip Complete kit 25	25
		112282	AgriStrip Set 25	25
		112283	AgriStrip Set 100	100
<i>Potato virus S</i> (on request)	PVS	110381	AgriStrip Complete kit 25	25
		110382	AgriStrip Set 25	25
		110383	AgriStrip Set 100	100
<i>Potato virus X</i> (on request)	PVX	110481	AgriStrip Complete kit 25	25
		110482	AgriStrip Set 25	25
		110483	AgriStrip Set 100	100
<i>Potato virus Y</i>	PVY	112981	AgriStrip Complete kit 25	25
		112982	AgriStrip Set 25	25
		112983	AgriStrip Set 100	100
<i>Ralstonia solanacearum</i>	Rs	170581	AgriStrip Complete kit 25	25
		170582	AgriStrip Set 25	25
		170583	AgriStrip Set 100	100
<i>Spongospora subterranea</i> f.sp. <i>subterranea</i> (Powdery scab of potato) (on request)	Sss	111181	AgriStrip Complete kit 25	25
		111182	AgriStrip Set 25	25
		111183	AgriStrip Set 100	100
<i>Tobacco mosaic virus</i>	TMV	190481	AgriStrip Complete kit 25	25
		190482	AgriStrip Set 25	25
		190483	AgriStrip Set 100	100
<i>Tomato mosaic virus</i>	ToMV	152681	AgriStrip Complete kit 25	25
		152682	AgriStrip Set 25	25
		152683	AgriStrip Set 100	100
<i>Tomato spotted wilt virus</i>	TSWV	190181	AgriStrip Complete kit 25	25
		190182	AgriStrip Set 25	25
		190183	AgriStrip Set 100	100

# AgriStrip<sub>cassette</sub> – The rapid one-step assay



## The rapid one-step assay for the detection of plant pathogens in a new format

The «ToBRFV AgriStrip<sub>cassette</sub>» rapid test, developed and produced by BIOREBA, allows the presence of ToBRFV, also known as «Jordan virus», to be detected in suspect samples in the field **within minutes**.

ToBRFV belongs to the genus Tobamovirus and causes various symptoms such as yellow or brown wrinkled spots on fruit, narrowed and mosaic discoloration of leaves, and deformed or irregularly ripened fruit. The main host plants of ToBRFV are tomato (*Solanum lycopersicum*) and pepper (*Capsicum spp.*). ToBRFV is on the EPPO-A2 list of pests recommended for regulation as a quarantine pest as of September 2020.

### The content of AgriStrip<sub>cassette</sub> kit:

- 5 cassettes packed with desiccant bags
- 5 tubes containing glass beads and extraction buffer
- 5 dropper tips
- 1 technical information
- 1 product information

Pathogen	Acronym	Art. No.	Format	Assays
<b>Tomato brown rugose fruit virus</b>	ToBRFV	152881NF	ToBRFV AgriStrip <sub>cassette</sub> kit	5

# ELISA Reagents, Sets and Kits



## Individual ELISA Reagents

IgG and/or conjugate for the working volume of 200 µl/test/well available for 96, 480 or 960 assays.



## ELISA Reagent Sets

Component	Assays	480	960	5000 <sup>®</sup>
IgG	0.1 ml	0.2 ml	1 ml	
Conjugate	0.1 ml	0.2 ml	1 ml	
Positive control	2.5 ml	2.5 ml	5 x 2.5 ml	
Negative control	2.5 ml	2.5 ml	5 x 2.5 ml	
Microtiter plates	5	10	60	

<sup>®</sup> Available for potato viruses PLRV, PVA, PVM, PVS, PVX and PVY.



## ELISA Complete Kits

Component	Assays	96	480	960	5000 <sup>®</sup>
IgG	0.025 ml	0.1 ml	0.2 ml	1 ml	
Conjugate	0.025 ml	0.1 ml	0.2 ml	1 ml	
Positive control	2.5 ml	2.5 ml	2.5 ml	5 x 2.5 ml	
Negative control	2.5 ml	2.5 ml	2.5 ml	5 x 2.5 ml	
Extraction buffer (10x)*	50 ml	250 ml	500 ml	5 x 500 ml	
Coating buffer	1 tablet	1 tablet	2 tablets	10 tablets	
Conjugate buffer (10x)	2 ml	10 ml	20 ml	100 ml	
Substrate buffer (5x)	4 ml	20 ml	2 x 20 ml	200 ml	
Washing buffer	1 tablet	1 pouch	2 pouches	2 containers	
Substrate (pNPP)**	4 tablets (5 mg)	5 tablets (20 mg)	10 tablets (20 mg)	bulk powder (5 g)	
Egg Albumin**	5 g	25 g	50 g	250 g	
Microtiter plates	1	5	10	60	

\* For grapevine testing, twice as much buffer is included since the concentration is 5x

\*\* Is included only with the extraction buffer «Bulbs & Tubers»

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Acidovorax avenae subsp. <i>citrulli</i></b> polyclonal - polyclonal*	Aac	161912	IgG	0.2 ml	1000
		161915	IgG	0.1 ml	500
		161919	IgG	0.025 ml	100
		161922	Conjugate	0.2 ml	1000
		161925	Conjugate	0.1 ml	500
		161929	Conjugate	0.025 ml	100
		161953	Positive control	2.5 ml	12
<b>Please note: available on request</b>		180043	Negative control	2.5 ml	12
		161962	Reagent set 960		960
		161965	Reagent set 480		480
		161972	Complete kit 960		960
		161975	Complete kit 480		480
		161977	Complete kit 96		96
<b>Acidovorax avenae subsp. <i>cattleyae</i></b> polyclonal - polyclonal	Aacat	170612	IgG	0.2 ml	1000
		170615	IgG	0.1 ml	500
		170619	IgG	0.025 ml	100
		170622	Conjugate	0.2 ml	1000
		170625	Conjugate	0.1 ml	500
		170629	Conjugate	0.025 ml	100
<b>Please note: available on request</b>		170653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		170662	Reagent set 960		960
		170665	Reagent set 480		480
		170672	Complete kit 960		960
		170675	Complete kit 480		480
		170677	Complete kit 96		96
<b>African cassava mosaic virus</b>	ACMV	see Tomato yellow leaf curl virus			
<b>Alfalfa mosaic virus</b> polyclonal - polyclonal	AMV	140512	IgG	0.2 ml	1000
		140515	IgG	0.1 ml	500
		140519	IgG	0.025 ml	100
		140522	Conjugate	0.2 ml	1000
		140525	Conjugate	0.1 ml	500
		140529	Conjugate	0.025 ml	100
		140553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		140562	Reagent set 960		960
		140565	Reagent set 480		480
		140572	Complete kit 960		960
		140575	Complete kit 480		480
		140577	Complete kit 96		96
<b>Andean potato latent virus</b> polyclonal - polyclonal	APLV	110912	IgG	0.2 ml	1000
		110915	IgG	0.1 ml	500
		110919	IgG	0.025 ml	100
		110922	Conjugate	0.2 ml	1000
		110925	Conjugate	0.1 ml	500
		110929	Conjugate	0.025 ml	100
		110953	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		110962	Reagent set 960		960
		110965	Reagent set 480		480
		110972	Complete kit 960		960
		110975	Complete kit 480		480
		110977	Complete kit 96		96

\*refers to coating IgG and conjugate, respectively.  
Product Information on [www.bioreba.com](http://www.bioreba.com)

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Andean potato mottle virus</b> polyclonal - polyclonal	APMoV	111012	IgG	0.2 ml	1000
		111015	IgG	0.1 ml	500
		111019	IgG	0.025 ml	100
		111022	Conjugate	0.2 ml	1000
		111025	Conjugate	0.1 ml	500
		111029	Conjugate	0.025 ml	100
		111053	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		111062	Reagent set 960		960
		111065	Reagent set 480		480
		111072	Complete kit 960		960
		111075	Complete kit 480		480
		111077	Complete kit 96		96
<b>Apple chlorotic leaf spot virus</b> polyclonal - polyclonal	ACLSV	151012	IgG	0.2 ml	1000
		151015	IgG	0.1 ml	500
		151019	IgG	0.025 ml	100
		151022	Conjugate	0.2 ml	1000
		151025	Conjugate	0.1 ml	500
		151029	Conjugate	0.025 ml	100
		151053	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151062	Reagent set 960		960
		151065	Reagent set 480		480
		151072	Complete kit 960		960
		151075	Complete kit 480		480
		151077	Complete kit 96		96
<b>Apple mosaic virus</b> polyclonal - polyclonal	ApMV	150712	IgG	0.2 ml	1000
		150715	IgG	0.1 ml	500
		150719	IgG	0.025 ml	100
		150722	Conjugate	0.2 ml	1000
		150725	Conjugate	0.1 ml	500
		150729	Conjugate	0.025 ml	100
		150753	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		150762	Reagent set 960		960
		150765	Reagent set 480		480
		150772	Complete kit 960		960
		150775	Complete kit 480		480
		150777	Complete kit 96		96
<b>Apple proliferation phytoplasma</b> monoclonal - monoclonal	ApP	151712	IgG	0.2 ml	1000
		151715	IgG	0.1 ml	500
		151719	IgG	0.025 ml	100
		151722	Conjugate	0.2 ml	1000
		151725	Conjugate	0.1 ml	500
		151729	Conjugate	0.025 ml	100
		151753	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151762	Reagent set 960		960
		151765	Reagent set 480		480
		151772	Complete kit 960		960
		151775	Complete kit 480		480
		151777	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Apple stem grooving virus</b>	ASGV	150812	IgG	0.2 ml	1000
polyclonal - polyclonal		150815	IgG	0.1 ml	500
		150819	IgG	0.025 ml	100
		150822	Conjugate	0.2 ml	1000
		150825	Conjugate	0.1 ml	500
		150829	Conjugate	0.025 ml	100
		150853	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		150862	Reagent set 960		960
		150865	Reagent set 480		480
		150872	Complete kit 960		960
		150875	Complete kit 480		480
		150877	Complete kit 96		96
<b>Apple stem pitting virus</b>	ASPV	151812	IgG	0.2 ml	1000
monoclonal - monoclonal		151815	IgG	0.1 ml	500
		151819	IgG	0.025 ml	100
		151822	Conjugate	0.2 ml	1000
		151825	Conjugate	0.1 ml	500
		151829	Conjugate	0.025 ml	100
		151853	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151862	Reagent set 960		960
		151865	Reagent set 480		480
		151872	Complete kit 960		960
		151875	Complete kit 480		480
		151877	Complete kit 96		96
<b>Arabis mosaic virus</b>	ArMV	120312	IgG	0.2 ml	1000
polyclonal - polyclonal		120315	IgG	0.1 ml	500
		120319	IgG	0.025 ml	100
		120322	Conjugate	0.2 ml	1000
		120325	Conjugate	0.1 ml	500
		120329	Conjugate	0.025 ml	100
		120353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120362	Reagent set 960		960
		120365	Reagent set 480		480
		120372	Complete kit 960		960
		120373	Grapevine Complete kit 960		960
		120375	Complete kit 480		480
		120376	Grapevine Complete kit 480		480
		120377	Complete kit 96		96
		120378	Grapevine Complete kit 96		96
<b>Arabis mosaic virus + Grapevine fanleaf virus</b>	ArMV + GFLV	120212	IgG	0.2 ml	1000
polyclonal / monoclonal - monoclonal		120215	IgG	0.1 ml	500
		120219	IgG	0.025 ml	100
		120222	Conjugate	0.2 ml	1000
		120225	Conjugate	0.1 ml	500
		120229	Conjugate	0.025 ml	100
		120253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120262	Reagent set 960		960
		120265	Reagent set 480		480
		120273	Complete kit 960		960
		120276	Complete kit 480		480
		120278	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Barley yellow dwarf virus - B (PAV-like)</b> polyclonal - polyclonal	BYDV-B	140112	IgG	0.2 ml	1000
		140115	IgG	0.1 ml	500
		140119	IgG	0.025 ml	100
		140122	Conjugate	0.2 ml	1000
		140125	Conjugate	0.1 ml	500
		140129	Conjugate	0.025 ml	100
		140153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		140162	Reagent set 960		960
		140165	Reagent set 480		480
		140172	Complete kit 960		960
		140175	Complete kit 480		480
		140177	Complete kit 96		96
<b>Barley yellow dwarf virus - F (MAV-like)</b> polyclonal - polyclonal	BYDV - F	140212	IgG	0.2 ml	1000
		140215	IgG	0.1 ml	500
		140219	IgG	0.025 ml	100
		140222	Conjugate	0.2 ml	1000
		140225	Conjugate	0.1 ml	500
		140229	Conjugate	0.025 ml	100
		140253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		140262	Reagent set 960		960
		140265	Reagent set 480		480
		140272	Complete kit 960		960
		140275	Complete kit 480		480
		140277	Complete kit 96		96
<b>Barley yellow dwarf virus - RPV</b> polyclonal - polyclonal	BYDV - RPV	140612	IgG	0.2 ml	1000
		140615	IgG	0.1 ml	500
		140619	IgG	0.025 ml	100
		140622	Conjugate	0.2 ml	1000
		140625	Conjugate	0.1 ml	500
		140629	Conjugate	0.025 ml	100
		140653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		140662	Reagent set 960		960
		140665	Reagent set 480		480
		140672	Complete kit 960		960
		140675	Complete kit 480		480
		140677	Complete kit 96		96
<b>Bean common mosaic virus</b> polyclonal - polyclonal	BCMV	162012	IgG	0.2 ml	1000
		162015	IgG	0.1 ml	500
		162019	IgG	0.025 ml	100
		162022	Conjugate	0.2 ml	1000
		162025	Conjugate	0.1 ml	500
		162029	Conjugate	0.025 ml	100
		162053	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		162062	Reagent set 960		960
		162065	Reagent set 480		480
		162072	Complete kit 960		960
		162075	Complete kit 480		480
		162077	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Bean common mosaic necrosis virus</b> polyclonal - polyclonal	BCMV	162112 162115 162119 162122 162125 162129 162153 180043 162162 162165 162172 162175 162177	IgG IgG IgG Conjugate Conjugate Conjugate Positive control Negative control Reagent set 960 Reagent set 480 Complete kit 960 Complete kit 480 Complete kit 96	0.2 ml 0.1 ml 0.025 ml 0.2 ml 0.1 ml 0.025 ml 2.5 ml 2.5 ml 960 480 960 480 96	1000 500 100 1000 500 100 12 12 960 480 960 480 96
<b>Bean golden mosaic virus</b>	BGMV	see Tomato yellow leaf curl virus			
<b>Beet necrotic yellow vein virus (Rhizomania)</b> polyclonal - polyclonal	BNYVV	160112 160115 160119 160122 160125 160129 160153 180043 160162 160165 160172 160175 160177	IgG IgG IgG Conjugate Conjugate Conjugate Positive control Negative control Reagent set 960 Reagent set 480 Complete kit 960 Complete kit 480 Complete kit 96	0.2 ml 0.1 ml 0.025 ml 0.2 ml 0.1 ml 0.025 ml 2.5 ml 2.5 ml 960 480 960 480 96	1000 500 100 1000 500 100 12 12 960 480 960 480 96
<b>Calibrachoa mottle virus</b> polyclonal - polyclonal	CbMV	170712 170715 170719 170722 170725 170729 170753 180043 170762 170765 170772 170775 170777	IgG IgG IgG Conjugate Conjugate Conjugate Positive control Negative control Reagent set 960 Reagent set 480 Complete kit 960 Complete kit 480 Complete kit 96	0.2 ml 0.1 ml 0.025 ml 0.2 ml 0.1 ml 0.025 ml 2.5 ml 2.5 ml 960 480 960 480 96	1000 500 100 1000 500 100 12 12 960 480 960 480 96
<b>Please note: available on request</b>					
<b>Cauliflower mosaic virus</b> polyclonal - polyclonal	CaMV	162212 162215 162219 162222 162225 162229 162253 180043 162262 162265 162272 162275 162277	IgG IgG IgG Conjugate Conjugate Conjugate Positive control Negative control Reagent set 960 Reagent set 480 Complete kit 960 Complete kit 480 Complete kit 96	0.2 ml 0.1 ml 0.025 ml 0.2 ml 0.1 ml 0.025 ml 2.5 ml 2.5 ml 960 480 960 480 96	1000 500 100 1000 500 100 12 12 960 480 960 480 96
Needs special extraction buffer «Caulimo»					
<b>Cereal yellow dwarf virus - RPV</b>	CYDV - RPV	see Barley yellow dwarf virus - RPV			

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Cherry leaf roll virus - ch</b> polyclonal - polyclonal  Suitable for cherry, peach, walnut and birch isolates. Complementary to CLRV-e	CLRV - ch	150912	IgG	0.2 ml	1000
		150915	IgG	0.1 ml	500
		150919	IgG	0.025 ml	100
		150922	Conjugate	0.2 ml	1000
		150925	Conjugate	0.1 ml	500
		150929	Conjugate	0.025 ml	100
		150953	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		150962	Reagent set 960		960
		150965	Reagent set 480		480
		150972	Complete kit 960		960
		150975	Complete kit 480		480
		150977	Complete kit 96		96
<b>Cherry leaf roll virus - e*</b> polyclonal - polyclonal  Suitable for elderberry and walnut isolates. Complementary to CLRV-ch.	CLRV - e	151212	IgG	0.2 ml	1000
		151215	IgG	0.1 ml	500
		151219	IgG	0.025 ml	100
		151222	Conjugate	0.2 ml	1000
		151225	Conjugate	0.1 ml	500
		151229	Conjugate	0.025 ml	100
		151253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151262	Reagent set 960		960
		151265	Reagent set 480		480
		151272	Complete kit 960		960
		151275	Complete kit 480		480
		151277	Complete kit 96		96
<b>Citrus tristeza virus</b> polyclonal / monoclonal - polyclonal / monoclonal	CTV	151512	IgG	0.2 ml	1000
		151515	IgG	0.1 ml	500
		151519	IgG	0.025 ml	100
		151522	Conjugate	0.2 ml	1000
		151525	Conjugate	0.1 ml	500
		151529	Conjugate	0.025 ml	100
		151553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151562	Reagent set 960		960
		151565	Reagent set 480		480
		151572	Complete kit 960		960
		151575	Complete kit 480		480
		151577	Complete kit 96		96
<b>Cucumber green mottle mosaic virus</b> polyclonal - polyclonal  Please note: available on request	CGMMV	160712	IgG	0.2 ml	1000
		160715	IgG	0.1 ml	500
		160719	IgG	0.025 ml	100
		160722	Conjugate	0.2 ml	1000
		160725	Conjugate	0.1 ml	500
		160729	Conjugate	0.025 ml	100
		160753	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		160762	Reagent set 960		960
		160765	Reagent set 480		480
		160772	Complete kit 960		960
		160775	Complete kit 480		480
		160777	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Cucumber mosaic virus</b>	CMV	160612	IgG	0.2 ml	1000
polyclonal - polyclonal / monoclonal		160615	IgG	0.1 ml	500
		160619	IgG	0.025 ml	100
		160622	Conjugate	0.2 ml	1000
		160625	Conjugate	0.1 ml	500
		160629	Conjugate	0.025 ml	100
		160653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		160662	Reagent set 960		960
		160665	Reagent set 480		480
		160672	Complete kit 960		960
		160675	Complete kit 480		480
		160677	Complete kit 96		96
<b>Cucurbit yellow stunting disorder virus</b>	CYSDV	162312	IgG	0.2 ml	1000
polyclonal - polyclonal		162315	IgG	0.1 ml	500
		162319	IgG	0.025 ml	100
		162322	Conjugate	0.2 ml	1000
		162325	Conjugate	0.1 ml	500
		162329	Conjugate	0.025 ml	100
		162353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		162362	Reagent set 960		960
		162365	Reagent set 480		480
		162372	Complete kit 960		960
		162375	Complete kit 480		480
		162377	Complete kit 96		96
<b>Erysimum latent virus</b>	ErLV	170912	IgG	0.2 ml	1000
polyclonal - polyclonal		170915	IgG	0.1 ml	500
		170919	IgG	0.025 ml	100
		170922	Conjugate	0.2 ml	1000
		170925	Conjugate	0.1 ml	500
		170929	Conjugate	0.025 ml	100
		170953	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		170962	Reagent set 960		960
		170965	Reagent set 480		480
		170972	Complete kit 960		960
		170975	Complete kit 480		480
		170977	Complete kit 96		96
<b>Garlic common latent virus</b>	GCLV	160412	IgG	0.2 ml	1000
polyclonal - polyclonal		160415	IgG	0.1 ml	500
		160419	IgG	0.025 ml	100
		160422	Conjugate	0.2 ml	1000
		160425	Conjugate	0.1 ml	500
		160429	Conjugate	0.025 ml	100
		160453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		160462	Reagent set 960		960
		160465	Reagent set 480		480
		160472	Complete kit 960		960
		160475	Complete kit 480		480
		160477	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Grapevine fanleaf virus</b> polyclonal - monoclonal	GFLV	120412	IgG	0.2 ml	1000
		120415	IgG	0.1 ml	500
		120419	IgG	0.025 ml	100
		120422	Conjugate	0.2 ml	1000
		120425	Conjugate	0.1 ml	500
		120429	Conjugate	0.025 ml	100
		120453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120462	Reagent set 960		960
		120465	Reagent set 480		480
		120473	Complete kit 960		960
		120476	Complete kit 480		480
		120478	Complete kit 96		96
<b>Grapevine fleck virus</b> polyclonal - monoclonal	GFkV	120612	IgG	0.2 ml	1000
		120615	IgG	0.1 ml	500
		120619	IgG	0.025 ml	100
		120622	Conjugate	0.2 ml	1000
		120625	Conjugate	0.1 ml	500
		120629	Conjugate	0.025 ml	100
		120653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120662	Reagent set 960		960
		120665	Reagent set 480		480
		120673	Complete kit 960		960
		120676	Complete kit 480		480
		120678	Complete kit 96		96
<b>Grapevine leafroll - assoc. virus 1</b> monoclonal - monoclonal	GLRaV-1	120112	IgG	0.2 ml	1000
		120115	IgG	0.1 ml	500
		120119	IgG	0.025 ml	100
		120122	Conjugate	0.2 ml	1000
		120125	Conjugate	0.1 ml	500
		120129	Conjugate	0.025 ml	100
		120153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120162	Reagent set 960		960
		120165	Reagent set 480		480
		120173	Complete kit 960		960
		120176	Complete kit 480		480
		120178	Complete kit 96		96
<b>Grapevine leafroll - assoc. virus 1+3</b> polyclonal / monoclonal - monoclonal	GLRaV-1+3	120912	IgG	0.2 ml	1000
		120915	IgG	0.1 ml	500
		120919	IgG	0.025 ml	100
		120922	Conjugate	0.2 ml	1000
		120925	Conjugate	0.1 ml	500
		120929	Conjugate	0.025 ml	100
		120953	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120962	Reagent set 960		960
		120965	Reagent set 480		480
		120973	Complete kit 960		960
		120976	Complete kit 480		480
		120978	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Grapevine leafroll - assoc. virus 2</b>	GLRaV-2	120812	IgG	0.2 ml	1000
monoclonal - polyclonal		120815	IgG	0.1 ml	500
		120819	IgG	0.025 ml	100
		120822	Conjugate	0.2 ml	1000
		120825	Conjugate	0.1 ml	500
		120829	Conjugate	0.025 ml	100
		120853	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120862	Reagent set 960		960
		120865	Reagent set 480		480
		120873	Complete kit 960		960
		120876	Complete kit 480		480
		120878	Complete kit 96		96
<b>Grapevine leafroll - assoc. virus 3</b>	GLRaV-3	122312	IgG	0.2 ml	1000
polyclonal / monoclonal - monoclonal		122315	IgG	0.1 ml	500
		122319	IgG	0.025 ml	100
		122322	Conjugate	0.2 ml	1000
		122325	Conjugate	0.1 ml	500
		122329	Conjugate	0.025 ml	100
		122353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		122362	Reagent set 960		960
		122365	Reagent set 480		480
		122373	Complete kit 960		960
		122376	Complete kit 480		480
		122378	Complete kit 96		96
<b>Grapevine leafroll - assoc. virus generic 4 strains (former GLRaV-4-9)</b>	GLRaV-4 strains	122512	IgG	0.2 ml	1000
monoclonal - monoclonal		122515	IgG	0.1 ml	500
		122519	IgG	0.025 ml	100
		122522	Conjugate	0.2 ml	1000
		122525	Conjugate	0.1 ml	500
		122529	Conjugate	0.025 ml	100
		122553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		122562	Reagent set 960		960
		122565	Reagent set 480		480
		122573	Complete kit 960		960
		122576	Complete kit 480		480
		122578	Complete kit 96		96
<b>Grapevine leafroll - assoc. virus 4 strain 6 (former GLRaV-6)</b>	GLRaV-4 strain 6	122412	IgG	0.2 ml	1000
polyclonal - monoclonal		122415	IgG	0.1 ml	500
		122419	IgG	0.025 ml	100
		122422	Conjugate	0.2 ml	1000
		122425	Conjugate	0.1 ml	500
		122429	Conjugate	0.025 ml	100
		122453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		122462	Reagent set 960		960
		122465	Reagent set 480		480
		122473	Complete kit 960		960
		122476	Complete kit 480		480
		122478	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Grapevine pinot gris virus</b>	PGPV	120712	IgG	0.2 ml	1000
polyclonal - polyclonal		120715	IgG	0.1 ml	500
		120719	IgG	0.025 ml	100
		120722	Conjugate	0.2 ml	1000
		120725	Conjugate	0.1 ml	500
		120729	Conjugate	0.025 ml	100
		120753	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120762	Reagent set 960		960
		120765	Reagent set 480		480
		120773	Complete kit 960		960
		120776	Complete kit 480		480
		120778	Complete kit 96		96
<b>Grapevine virus A</b>	GVA	122212	IgG	0.2 ml	1000
polyclonal - polyclonal / monoclonal		122215	IgG	0.1 ml	500
		122219	IgG	0.025 ml	100
		122222	Conjugate	0.2 ml	1000
		122225	Conjugate	0.1 ml	500
		122229	Conjugate	0.025 ml	100
		122253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		122262	Reagent set 960		960
		122265	Reagent set 480		480
		122273	Complete kit 960		960
		122276	Complete kit 480		480
		122278	Complete kit 96		96
<b>Groundnut ringspot virus</b>	GRSV	see Tomato spotted wilt virus			
<b>Impatiens necrotic spot virus</b>	INSV	190212	IgG	0.2 ml	1000
polyclonal - monoclonal		190215	IgG	0.1 ml	500
		190219	IgG	0.025 ml	100
		190222	Conjugate	0.2 ml	1000
		190225	Conjugate	0.1 ml	500
		190229	Conjugate	0.025 ml	100
		190253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		190262	Reagent set 960		960
		190265	Reagent set 480		480
		190272	Complete kit 960		960
		190275	Complete kit 480		480
		190277	Complete kit 96		96
<b>Leek yellow stripe virus</b>	LYSV	160312	IgG	0.2 ml	1000
polyclonal - polyclonal		160315	IgG	0.1 ml	500
		160319	IgG	0.025 ml	100
		160322	Conjugate	0.2 ml	1000
		160325	Conjugate	0.1 ml	500
		160329	Conjugate	0.025 ml	100
		160353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		160362	Reagent set 960		960
		160365	Reagent set 480		480
		160372	Complete kit 960		960
		160375	Complete kit 480		480
		160377	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Lettuce mosaic virus</b>	LMV	160512	IgG	0.2 ml	1000
polyclonal - monoclonal		160515	IgG	0.1 ml	500
		160519	IgG	0.025 ml	100
		160522	Conjugate	0.2 ml	1000
		160525	Conjugate	0.1 ml	500
		160529	Conjugate	0.025 ml	100
For leaves and seeds		160553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		160562	Reagent set 960		960
		160565	Reagent set 480		480
		160572	Complete kit 960		960
		160575	Complete kit 480		480
		160577	Complete kit 96		96
<b>Maize chlorotic mottle virus</b>	MCMV	140712	IgG	0.2 ml	1000
polyclonal - polyclonal		140715	IgG	0.1 ml	500
		140719	IgG	0.025 ml	100
		140722	Conjugate	0.2 ml	1000
		140725	Conjugate	0.1 ml	500
		140729	Conjugate	0.025 ml	100
		140753	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		140762	Reagent set 960		960
		140765	Reagent set 480		480
		140772	Complete kit 960		960
		140775	Complete kit 480		480
		140777	Complete kit 96		96
<b>Maize dwarf mosaic virus</b>	MDMV	140312	IgG	0.2 ml	1000
polyclonal - polyclonal		140315	IgG	0.1 ml	500
		140319	IgG	0.025 ml	100
		140322	Conjugate	0.2 ml	1000
		140325	Conjugate	0.1 ml	500
		140329	Conjugate	0.025 ml	100
		140353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		140362	Reagent set 960		960
		140365	Reagent set 480		480
		140372	Complete kit 960		960
		140375	Complete kit 480		480
		140377	Complete kit 96		96
<b>Mirafiori lettuce big-vein virus</b>	MiLBVV	161612	IgG	0.2 ml	1000
polyclonal - polyclonal		161615	IgG	0.1 ml	500
		161619	IgG	0.025 ml	100
		161622	Conjugate	0.2 ml	1000
		161625	Conjugate	0.1 ml	500
		161629	Conjugate	0.025 ml	100
Please note: available on request		161653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161662	Reagent set 960		960
		161665	Reagent set 480		480
		161672	Complete kit 960		960
		161675	Complete kit 480		480
		161677	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Onion yellow dwarf virus</b> polyclonal - polyclonal	OYDV	160212	IgG	0.2 ml	1000
		160215	IgG	0.1 ml	500
		160219	IgG	0.025 ml	100
		160222	Conjugate	0.2 ml	1000
		160225	Conjugate	0.1 ml	500
		160229	Conjugate	0.025 ml	100
		160253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		160262	Reagent set 960		960
		160265	Reagent set 480		480
		160272	Complete kit 960		960
		160275	Complete kit 480		480
		160277	Complete kit 96		96
<b>Papaya ringspot virus</b> (= Watermelon mosaic virus 1) polyclonal - polyclonal	PRSV	151912	IgG	0.2 ml	1000
		151915	IgG	0.1 ml	500
		151919	IgG	0.025 ml	100
		151922	Conjugate	0.2 ml	1000
		151925	Conjugate	0.1 ml	500
		151929	Conjugate	0.025 ml	100
		151953	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151962	Reagent set 960		960
		151965	Reagent set 480		480
		151972	Complete kit 960		960
		151975	Complete kit 480		480
		151977	Complete kit 96		96
<b>Pelargonium flower break virus</b> polyclonal - polyclonal  Please note: available on request	PFBV	170212	IgG	0.2 ml	1000
		170215	IgG	0.1 ml	500
		170219	IgG	0.025 ml	100
		170222	Conjugate	0.2 ml	1000
		170225	Conjugate	0.1 ml	500
		170229	Conjugate	0.025 ml	100
		170253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		170262	Reagent set 960		960
		170265	Reagent set 480		480
		170272	Complete kit 960		960
		170275	Complete kit 480		480
		170277	Complete kit 96		96
<b>Pelargonium leaf curl virus</b> polyclonal - polyclonal  Please note: available on request	PLCV	170312	IgG	0.2 ml	1000
		170315	IgG	0.1 ml	500
		170319	IgG	0.025 ml	100
		170322	Conjugate	0.2 ml	1000
		170325	Conjugate	0.1 ml	500
		170329	Conjugate	0.025 ml	100
		170353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		170362	Reagent set 960		960
		170365	Reagent set 480		480
		170372	Complete kit 960		960
		170375	Complete kit 480		480
		170377	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Pelargonium line pattern virus</b>	PLPV	170412	IgG	0.2 ml	1000
polyclonal - polyclonal		170415	IgG	0.1 ml	500
		170419	IgG	0.025 ml	100
		170422	Conjugate	0.2 ml	1000
		170425	Conjugate	0.1 ml	500
		170429	Conjugate	0.025 ml	100
<b>Please note: available on request</b>		170453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		170462	Reagent set 960		960
		170465	Reagent set 480		480
		170472	Complete kit 960		960
		170475	Complete kit 480		480
		170477	Complete kit 96		96
<b>Pepino mosaic virus</b>	PepMV	161512	IgG	0.2 ml	1000
polyclonal - polyclonal		161515	IgG	0.1 ml	500
		161519	IgG	0.025 ml	100
		161522	Conjugate	0.2 ml	1000
		161525	Conjugate	0.1 ml	500
		161529	Conjugate	0.025 ml	100
		161553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161562	Reagent set 960		960
		161565	Reagent set 480		480
		161572	Complete kit 960		960
		161575	Complete kit 480		480
		161577	Complete kit 96		96
<b>Pepper mild mottle virus</b>	PMMoV	161712	IgG	0.2 ml	1000
polyclonal - polyclonal		161715	IgG	0.1 ml	500
		161719	IgG	0.025 ml	100
		161722	Conjugate	0.2 ml	1000
		161725	Conjugate	0.1 ml	500
		161729	Conjugate	0.025 ml	100
		161753	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161762	Reagent set 960		960
		161765	Reagent set 480		480
		161772	Complete kit 960		960
		161775	Complete kit 480		480
		161777	Complete kit 96		96
<b>Petunia asteroid mosaic virus</b>	PeAMV	170812	IgG	0.2 ml	1000
polyclonal - polyclonal		170815	IgG	0.1 ml	500
		170819	IgG	0.025 ml	100
		170822	Conjugate	0.2 ml	1000
		170825	Conjugate	0.1 ml	500
		170829	Conjugate	0.025 ml	100
<b>Please note: available on request</b>		170853	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		170862	Reagent set 960		960
		170865	Reagent set 480		480
		170872	Complete kit 960		960
		170875	Complete kit 480		480
		170877	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Plum pox virus (Sharka)</b> polyclonal - polyclonal / monoclonal	PPV	150512	IgG	0.2 ml	1000
		150515	IgG	0.1 ml	500
		150519	IgG	0.025 ml	100
		150522	Conjugate	0.2 ml	1000
		150525	Conjugate	0.1 ml	500
		150529	Conjugate	0.025 ml	100
		150553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		150562	Reagent set 960		960
		150565	Reagent set 480		480
		150572	Complete kit 960		960
		150575	Complete kit 480		480
		150577	Complete kit 96		96
<b>Potato leafroll virus</b> polyclonal - monoclonal	PLRV	110611	IgG	1.0 ml	5000
		110612	IgG	0.2 ml	1000
		110615	IgG	0.1 ml	500
		110619	IgG	0.025 ml	100
		110621	Conjugate	1.0 ml	5000
		110622	Conjugate	0.2 ml	1000
		110625	Conjugate	0.1 ml	500
		110629	Conjugate	0.025 ml	100
		110653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		110670	Reagent set 5000		5000
		110662	Reagent set 960		960
		110665	Reagent set 480		480
		110680	Complete kit 5000		5000
		110672	Complete kit 960		960
		110675	Complete kit 480		480
		110677	Complete kit 96		96
<b>Potato mop-top virus</b> monoclonal - monoclonal	PMTV	113012	IgG	0.2 ml	1000
		113015	IgG	0.1 ml	500
		113019	IgG	0.025 ml	100
		113022	Conjugate	0.2 ml	1000
		113025	Conjugate	0.1 ml	500
		113029	Conjugate	0.025 ml	100
		113053	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		113062	Reagent set 960		960
		113065	Reagent set 480		480
		113072	Complete kit 960		960
		113075	Complete kit 480		480
		113077	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Potato virus A</b>	PVA	112111	IgG	1.0 ml	5000
monoclonal - monoclonal		112112	IgG	0.2 ml	1000
		112115	IgG	0.1 ml	500
		112119	IgG	0.025 ml	100
		112121	Conjugate	1.0 ml	5000
		112122	Conjugate	0.2 ml	1000
		112125	Conjugate	0.1 ml	500
		112129	Conjugate	0.025 ml	100
		112153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		112170	Reagent set 5000		5000
		112162	Reagent set 960		960
		112165	Reagent set 480		480
		112180	Complete kit 5000		5000
		112172	Complete kit 960		960
		112175	Complete kit 480		480
		112177	Complete kit 96		96
<b>Potato virus M</b>	PVM	110211	IgG	1.0 ml	5000
polyclonal - polyclonal		110212	IgG	0.2 ml	1000
		110215	IgG	0.1 ml	500
		110219	IgG	0.025 ml	100
		110221	Conjugate	1.0 ml	5000
		110222	Conjugate	0.2 ml	1000
		110225	Conjugate	0.1 ml	500
		110229	Conjugate	0.025 ml	100
		110253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		110270	Reagent set 5000		5000
		110262	Reagent set 960		960
		110265	Reagent set 480		480
		110280	Complete kit 5000		5000
		110272	Complete kit 960		960
		110275	Complete kit 480		480
		110277	Complete kit 96		96
<b>Potato virus S</b>	PVS	110311	IgG	1.0 ml	5000
polyclonal - polyclonal		110312	IgG	0.2 ml	1000
		110315	IgG	0.1 ml	500
		110319	IgG	0.025 ml	100
		110321	Conjugate	1.0 ml	5000
		110322	Conjugate	0.2 ml	1000
		110325	Conjugate	0.1 ml	500
		110329	Conjugate	0.025 ml	100
		110353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		110370	Reagent set 5000		5000
		110362	Reagent set 960		960
		110365	Reagent set 480		480
		110380	Complete kit 5000		5000
		110372	Complete kit 960		960
		110375	Complete kit 480		480
		110377	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Potato virus V (PVY<sup>c</sup> 624)</b>	PVV	110812	IgG	0.2 ml	1000
polyclonal - polyclonal		110815	IgG	0.1 ml	500
		110819	IgG	0.025 ml	100
		110822	Conjugate	0.2 ml	1000
		110825	Conjugate	0.1 ml	500
		110829	Conjugate	0.025 ml	100
		110853	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		110862	Reagent set 960		960
		110865	Reagent set 480		480
		110872	Complete kit 960		960
		110875	Complete kit 480		480
		110877	Complete kit 96		96
<b>Potato virus X</b>	PVX	110411	IgG	1.0 ml	5000
polyclonal - polyclonal		110412	IgG	0.2 ml	1000
		110415	IgG	0.1 ml	500
		110419	IgG	0.025 ml	100
		110421	Conjugate	1.0 ml	5000
		110422	Conjugate	0.2 ml	1000
		110425	Conjugate	0.1 ml	500
		110429	Conjugate	0.025 ml	100
		110453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		110470	Reagent set 5000		5000
		110462	Reagent set 960		960
		110465	Reagent set 480		480
		110480	Complete kit 5000		5000
		110472	Complete kit 960		960
		110475	Complete kit 480		480
		110477	Complete kit 96		96
<b>Potato virus Y - monoclonal*</b>	PVY-mono	112511	IgG	1.0 ml	5000
monoclonal - monoclonal		112512	IgG	0.2 ml	1000
		112515	IgG	0.1 ml	500
		112519	IgG	0.025 ml	100
		112521	Conjugate	1.0 ml	5000
		112522	Conjugate	0.2 ml	1000
		112525	Conjugate	0.1 ml	500
		112529	Conjugate	0.025 ml	100
		112553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		112570	Reagent set 5000		5000
		112562	Reagent set 960		960
		112565	Reagent set 480		480
		112580	Complete kit 5000		5000
		112572	Complete kit 960		960
		112575	Complete kit 480		480
		112577	Complete kit 96		96

Traditional broad-spectrum reagent.  
Recognizes all isolates except atypical isolates  
of PVY<sup>bb</sup> subgroup

\*For routine diagnostics, we recommend our full-spectrum  
PVY reagent ("PVY - monoclonal cocktail").

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Potato virus Y - monoclonal cocktail</b> monoclonal - monoclonal	PVY-monocock	112911 112912 112915 112919 112921 112922 112925 112929 112553 180043 112970 112962 112965 112980 112972 112975 112977	IgG IgG IgG IgG Conjugate Conjugate Conjugate Conjugate Positive control Negative control Reagent Set 5000 Reagent set 960 Reagent set 480 Complete kit 5000 Complete kit 960 Complete kit 480 Complete kit 96	1.0 ml 0.2 ml 0.1 ml 0.025 ml 1.0 ml 0.2 ml 0.1 ml 0.025 ml 2.5 ml 2.5 ml 5000 960 480 5000 960 480 96	5000 1000 500 100 5000 1000 500 100 12 12 5000 960 480 5000 960 480 96
<b>Potato virus Y - necrotic*</b> monoclonal - monoclonal	PVY <sup>N</sup>	112712 112715 112719 112722 112725 112729 112553 180043 112762 112765 112772 112775 112777	IgG IgG IgG Conjugate Conjugate Conjugate Positive control Negative control Reagent set 960 Reagent set 480 Complete kit 960 Complete kit 480 Complete kit 96	0.2 ml 0.1 ml 0.025 ml 0.2 ml 0.1 ml 0.025 ml 2.5 ml 2.5 ml 960 480 960 480 960 480 96	1000 500 100 1000 500 100 12 12 960 480 960 480 960 480 96
<b>Potato virus Y - polyclonal*</b> polyclonal - polyclonal	PVY - poly	110511 110512 110515 110519 110521 110522 110525 110529 112553 180043 110570 110562 110565 110580 110572 110575 110577	IgG IgG IgG IgG Conjugate Conjugate Conjugate Conjugate Positive control Negative control Reagent set 5000 Reagent set 960 Reagent set 480 Complete kit 5000 Complete kit 960 Complete kit 480 Complete kit 96	1.0 ml 0.2 ml 0.1 ml 0.025 ml 1.0 ml 0.2 ml 0.1 ml 0.025 ml 2.5 ml 2.5 ml 5000 960 480 5000 960 480 960 480 96	5000 1000 500 100 5000 1000 500 100 12 12 5000 960 480 5000 960 480 960 480 96
<b>Poty group test</b> monoclonal	Poty group	163072 163075	Complete kit 960 Complete kit 480		960 480

Only available as kit in indirect PTA-ELISA format.

<b>Pathogen</b>	<b>Abbr.</b>	<b>Art. No.</b>	<b>Reagent form</b>	<b>Size</b>	<b>Assays</b>
<b>Prune dwarf virus</b> polyclonal - polyclonal	PDV	150612	IgG	0.2 ml	1000
		150615	IgG	0.1 ml	500
		150619	IgG	0.025 ml	100
		150622	Conjugate	0.2 ml	1000
		150625	Conjugate	0.1 ml	500
		150629	Conjugate	0.025 ml	100
		150653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		150662	Reagent set 960		960
		150665	Reagent set 480		480
		150672	Complete kit 960		960
		150675	Complete kit 480		480
		150677	Complete kit 96		96
<b>Prunus necrotic ringspot virus</b> polyclonal - polyclonal	PNRSV	151112	IgG	0.2 ml	1000
		151115	IgG	0.1 ml	500
		151119	IgG	0.025 ml	100
		151122	Conjugate	0.2 ml	1000
		151125	Conjugate	0.1 ml	500
		151129	Conjugate	0.025 ml	100
		151153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151162	Reagent set 960		960
		151165	Reagent set 480		480
		151172	Complete kit 960		960
		151175	Complete kit 480		480
		151177	Complete kit 96		96
<b>Radish mosaic virus</b> polyclonal - polyclonal	RaMV	162412	IgG	0.2 ml	1000
		162415	IgG	0.1 ml	500
		162419	IgG	0.025 ml	100
		162422	Conjugate	0.2 ml	1000
		162425	Conjugate	0.1 ml	500
		162429	Conjugate	0.025 ml	100
		162453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		162462	Reagent set 960		960
		162465	Reagent set 480		480
		162472	Complete kit 960		960
		162475	Complete kit 480		480
		162477	Complete kit 96		96
<b>Ralstonia solanacearum</b> polyclonal - polyclonal	Rs	170512	IgG	0.2 ml	1000
		170515	IgG	0.1 ml	500
		170519	IgG	0.025 ml	100
		170522	Conjugate	0.2 ml	1000
		170525	Conjugate	0.1 ml	500
		170529	Conjugate	0.025 ml	100
		170553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		170562	Reagent set 960		960
		170565	Reagent set 480		480
		170572	Complete kit 960		960
		170575	Complete kit 480		480
		170577	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Raspberry bushy dwarf virus</b>	RBDV	152012	IgG	0.2 ml	1000
polyclonal - monoclonal		152015	IgG	0.1 ml	500
		152019	IgG	0.025 ml	100
		152022	Conjugate	0.2 ml	1000
		152025	Conjugate	0.1 ml	500
		152029	Conjugate	0.025 ml	100
		152053	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		152062	Reagent set 960		960
		152065	Reagent set 480		480
		152072	Complete kit 960		960
		152075	Complete kit 480		480
		152077	Complete kit 96		96
<b>Raspberry ringspot virus - ch</b>	RpRSV - ch	150412	IgG	0.2 ml	1000
polyclonal - polyclonal		150415	IgG	0.1 ml	500
		150419	IgG	0.025 ml	100
		150422	Conjugate	0.2 ml	1000
		150425	Conjugate	0.1 ml	500
		150429	Conjugate	0.025 ml	100
		150453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		150462	Reagent set 960		960
		150465	Reagent set 480		480
		150472	Complete kit 960		960
		150473	Grapevine Complete kit 960		960
		150475	Complete kit 480		480
		150476	Grapevine Complete kit 480		480
		150477	Complete kit 96		96
		150478	Grapevine Complete kit 96		96
<b>Raspberry ringspot virus - g*</b>	RpRSV - g	120512	IgG	0.2 ml	1000
polyclonal - polyclonal		120515	IgG	0.1 ml	500
		120519	IgG	0.025 ml	100
		120522	Conjugate	0.2 ml	1000
		120525	Conjugate	0.1 ml	500
		120529	Conjugate	0.025 ml	100
		120553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		120562	Reagent set 960		960
		120565	Reagent set 480		480
		120573	Complete kit 960		960
		120576	Complete kit 480		480
		120578	Complete kit 96		96
<b>Soybean mosaic virus</b>	SMV	162612	IgG	0.2 ml	1000
polyclonal - polyclonal		162615	IgG	0.1 ml	500
		162619	IgG	0.025 ml	100
		162622	Conjugate	0.2 ml	1000
		162625	Conjugate	0.1 ml	500
		162629	Conjugate	0.025 ml	100
		162653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		162662	Reagent set 960		960
		162665	Reagent set 480		480
		162672	Complete kit 960		960
		162675	Complete kit 480		480
		162677	Complete kit 96		96

Please note: available on request

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Spongospora subterranea f. sp. subterranea (Powdery scab of potato)</b>	Sss	111112	IgG	0.2 ml	1000
monoclonal - monoclonal		111115	IgG	0.1 ml	500
		111119	IgG	0.025 ml	100
		111122	Conjugate	0.2 ml	1000
		111125	Conjugate	0.1 ml	500
		111129	Conjugate	0.025 ml	100
		111153	Positive control	2.5 ml	12
Suitable for detecting resting spores on potato tubers and in soil.		180043	Negative control	2.5 ml	12
		111162	Reagent set 960		960
		111165	Reagent set 480		480
		111172	Complete kit 960		960
		111175	Complete kit 480		480
		111177	Complete kit 96		96
<b>Squash leaf curl virus</b>	SLCV	see Tomato yellow leaf curl virus			
<b>Squash mosaic virus</b>	SqMV	160912	IgG	0.2 ml	1000
polyclonal - polyclonal		160915	IgG	0.1 ml	500
		160919	IgG	0.025 ml	100
		160922	Conjugate	0.2 ml	1000
		160925	Conjugate	0.1 ml	500
		160929	Conjugate	0.025 ml	100
		160953	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		160962	Reagent set 960		960
		160965	Reagent set 480		480
		160972	Complete kit 960		960
		160975	Complete kit 480		480
		160977	Complete kit 96		96
<b>Strawberry latent ringspot virus</b>	SLRSV	151612	IgG	0.2 ml	1000
polyclonal - polyclonal		151615	IgG	0.1 ml	500
		151619	IgG	0.025 ml	100
		151622	Conjugate	0.2 ml	1000
		151625	Conjugate	0.1 ml	500
		151629	Conjugate	0.025 ml	100
		151653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151662	Reagent set 960		960
		151665	Reagent set 480		480
		151672	Complete kit 960		960
		151673	Grapevine Complete kit 960		960
		151675	Complete kit 480		480
		151676	Grapevine Complete kit 480		480
		151677	Complete kit 96		96
		151678	Grapevine Complete kit 96		96
<b>Strawberry mild yellow edge potexvirus</b>	SMYEPV	152112	IgG	0.2 ml	1000
polyclonal - monoclonal		152115	IgG	0.1 ml	500
		152119	IgG	0.025 ml	100
		152122	Conjugate	0.2 ml	1000
		152125	Conjugate	0.1 ml	500
		152129	Conjugate	0.025 ml	100
		152153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		152162	Reagent set 960		960
		152165	Reagent set 480		480
		152172	Complete kit 960		960
		152175	Complete kit 480		480
		152177	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Sugarcane mosaic virus</b>	SCMV	140412	IgG	0.2 ml	1000
polyclonal - polyclonal		140415	IgG	0.1 ml	500
		140419	IgG	0.025 ml	100
		140422	Conjugate	0.2 ml	1000
		140425	Conjugate	0.1 ml	500
		140429	Conjugate	0.025 ml	100
		140453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		140462	Reagent set 960		960
		140465	Reagent set 480		480
		140472	Complete kit 960		960
		140475	Complete kit 480		480
		140477	Complete kit 96		96
<b>Tobacco mosaic virus</b>	TMV	190412	IgG	0.2 ml	1000
polyclonal - polyclonal		190415	IgG	0.1 ml	500
		190419	IgG	0.025 ml	100
		190422	Conjugate	0.2 ml	1000
		190425	Conjugate	0.1 ml	500
		190429	Conjugate	0.025 ml	100
		190453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		190462	Reagent set 960		960
		190465	Reagent set 480		480
		190472	Complete kit 960		960
		190475	Complete kit 480		480
		190477	Complete kit 96		96
<b>Tobacco necrosis virus</b>	TNV	152412	IgG	0.2 ml	1000
polyclonal - polyclonal		152415	IgG	0.1 ml	500
		152419	IgG	0.025 ml	100
		152422	Conjugate	0.2 ml	1000
		152425	Conjugate	0.1 ml	500
		152429	Conjugate	0.025 ml	100
		152453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		152462	Reagent set 960		960
		152465	Reagent set 480		480
		152472	Complete kit 960		960
		152475	Complete kit 480		480
		152477	Complete kit 96		96
<b>Tobacco ringspot virus</b>	TRSV	152212	IgG	0.2 ml	1000
polyclonal - polyclonal		152215	IgG	0.1 ml	500
		152219	IgG	0.025 ml	100
		152222	Conjugate	0.2 ml	1000
		152225	Conjugate	0.1 ml	500
		152229	Conjugate	0.025 ml	100
		152253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		152262	Reagent set 960		960
		152265	Reagent set 480		480
		152272	Complete kit 960		960
		152273	Grapevine Complete kit 960		960
		152275	Complete kit 480		480
		152276	Grapevine Complete kit 480		480
		152277	Complete kit 96		96
		152278	Grapevine Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Tobacco streak virus</b> polyclonal - monoclonal	TSV	152312	IgG	0.2 ml	1000
		152315	IgG	0.1 ml	500
		152319	IgG	0.025 ml	100
		152322	Conjugate	0.2 ml	1000
		152325	Conjugate	0.1 ml	500
		152329	Conjugate	0.025 ml	100
		152353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		152362	Reagent set 960		960
		152365	Reagent set 480		480
		152372	Complete kit 960		960
		152375	Complete kit 480		480
		152377	Complete kit 96		96
<b>Tomato apex necrosis virus</b> <b>Synonym: Tomato marchitez virus (ToMarV)</b> polyclonal - polyclonal	ToANV	152712	IgG	0.2 ml	1000
		152715	IgG	0.1 ml	500
		152719	IgG	0.025 ml	100
		152722	Conjugate	0.2 ml	1000
		152725	Conjugate	0.1 ml	500
		152729	Conjugate	0.025 ml	100
		152753	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		152762	Reagent set 960		960
		152765	Reagent set 480		480
		152772	Complete kit 960		960
		152775	Complete kit 480		480
		152777	Complete kit 96		96
<b>Tomato black ring virus</b> polyclonal / monoclonal - polyclonal / monoclonal Broad-spectrum reagent	TBRV	113112	IgG	0.2 ml	1000
		113115	IgG	0.1 ml	500
		113119	IgG	0.025 ml	100
		113122	Conjugate	0.2 ml	1000
		113125	Conjugate	0.1 ml	500
		113129	Conjugate	0.025 ml	100
		113153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		113162	Reagent set 960		960
		113165	Reagent set 480		480
		113172	Complete kit 960		960
		113173	Grapevine Complete kit 960		960
		113175	Complete kit 480		480
		113176	Grapevine Complete kit 480		480
		113177	Complete kit 96		96
		113178	Grapevine Complete kit 96		96
<b>ToBRFV Tomato brown rugose fruit virus</b> polyclonal - polyclonal	ToBRFV	152812	IgG	0.2 ml	1000
		152815	IgG	0.1 ml	500
		152819	IgG	0.025 ml	100
		152822	Conjugate	0.2 ml	1000
		152825	Conjugate	0.1 ml	500
		152829	Conjugate	0.025 ml	100
		152853	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		152862	Reagent set 960		960
		152865	Reagent set 480		480
		152872	Complete kit 960		960
		152875	Complete kit 480		480
		152877	Complete kit 96		96

Because of ToBRFV quarantine recommendations,  
the positive controls are made from extracts of  
Tobamovirus-infected plants (ToBRFV-negative).

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Tomato bushy stunt virus</b>	TBSV	161812	IgG	0.2 ml	1000
polyclonal - polyclonal		161815	IgG	0.1 ml	500
		161819	IgG	0.025 ml	100
		161822	Conjugate	0.2 ml	1000
		161825	Conjugate	0.1 ml	500
		161829	Conjugate	0.025 ml	100
<b>Please note: available on request</b>		161853	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161862	Reagent set 960		960
		161865	Reagent set 480		480
		161872	Complete kit 960		960
		161875	Complete kit 480		480
		161877	Complete kit 96		96
<b>Tomato chlorotic spot virus</b>	TCSV	see Tomato spotted wilt virus			
<b>Tomato mosaic virus</b>	ToMV	152612	IgG	0.2 ml	1000
polyclonal - polyclonal		152615	IgG	0.1 ml	500
		152619	IgG	0.025 ml	100
		152622	Conjugate	0.2 ml	1000
		152625	Conjugate	0.1 ml	500
		152629	Conjugate	0.025 ml	100
		152653	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		152662	Reagent set 960		960
		152665	Reagent set 480		480
		152672	Complete kit 960		960
		152675	Complete kit 480		480
		152677	Complete kit 96		96
<b>Tomato mottle virus</b>	ToMoV	see Tomato yellow leaf curl virus			
<b>Tomato ringspot virus</b>	ToRSV	151412	IgG	0.2 ml	1000
polyclonal - polyclonal		151415	IgG	0.1 ml	500
		151419	IgG	0.025 ml	100
		151422	Conjugate	0.2 ml	1000
		151425	Conjugate	0.1 ml	500
		151429	Conjugate	0.025 ml	100
Broad-spectrum reagent, recognizes most common isolates from many host plants (fruit trees, small fruits, grapevines, ornamentals).		151453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151462	Reagent set 960		960
		151465	Reagent set 480		480
		151472	Complete kit 960		960
		151473	Grapevine Complete kit 960		960
		151475	Complete kit 480		480
		151476	Grapevine Complete kit 480		480
		151477	Complete kit 96		96
		151478	Grapevine Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Tomato ringspot virus-Ch*</b>	ToRSV-Ch	151312	IgG	0.2 ml	1000
polyclonal - polyclonal		151315	IgG	0.1 ml	500
		151319	IgG	0.025 ml	100
		151322	Conjugate	0.2 ml	1000
		151325	Conjugate	0.1 ml	500
		151329	Conjugate	0.025 ml	100
Specific for Chickadee (originally from apple) and grape yellow vein (GYV) strains. Complementary to ToRSV-PYBM.		151353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		151362	Reagent set 960		960
*For routine diagnostics, we recommend our ToRSV reagents.		151365	Reagent set 480		480
		151372	Complete kit 960		960
		151373	Grapevine Complete kit 960		960
		151375	Complete kit 480		480
		151376	Grapevine Complete kit 480		480
		151377	Complete kit 96		96
		151378	Grapevine Complete kit 96		96
<b>Tomato spotted wilt virus</b>	TSWV	190112	IgG	0.2 ml	1000
polyclonal - monoclonal		190115	IgG	0.1 ml	500
		190119	IgG	0.025 ml	100
		190122	Conjugate	0.2 ml	1000
		190125	Conjugate	0.1 ml	500
		190129	Conjugate	0.025 ml	100
Recognizes serogroups I, II of Tospoviruses (TSWV, TCSV, GRSV).		190153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		190162	Reagent set 960		960
		190165	Reagent set 480		480
		190172	Complete kit 960		960
		190175	Complete kit 480		480
		190177	Complete kit 96		96
<b>Tomato yellow leaf curl virus</b>	TYLCV	161412	IgG	0.2 ml	1000
polyclonal - monoclonal		161415	IgG	0.1 ml	500
		161419	IgG	0.025 ml	100
		161422	Conjugate	0.2 ml	1000
		161425	Conjugate	0.1 ml	500
		161429	Conjugate	0.025 ml	100
Broad-spectrum, recognizes TYLCV (different isolates), African cassava mosaic virus (ACMV), Bean golden mosaic virus (BGMV), East African cassava mosaic virus EACMV), Indian cassava mosaic virus (ICMV), Squash leaf curl virus (SLCV) and Tomato mottle virus (ToMoV).		161453	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161462	Reagent set 960		960
		161465	Reagent set 480		480
		161472	Complete kit 960		960
		161475	Complete kit 480		480
		161477	Complete kit 96		96
<b>Tospovirus broad-spectrum (serogroups I,II,III)</b>	Tospo (I, II, III)	190312	IgG	0.2 ml	1000
polyclonal - monoclonal		190315	IgG	0.1 ml	500
		190319	IgG	0.025 ml	100
		190322	Conjugate	0.2 ml	1000
		190325	Conjugate	0.1 ml	500
		190329	Conjugate	0.025 ml	100
Recognizes serogroups I, II,III of Tospoviruses (TSWV, TCSV, GRSV and INSV).		190353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		190362	Reagent set 960		960
		190365	Reagent set 480		480
		190372	Complete kit 960		960
		190375	Complete kit 480		480
		190377	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<b>Turnip mosaic virus</b>	TuMV	161012	IgG	0.2 ml	1000
polyclonal - monoclonal		161015	IgG	0.1 ml	500
		161019	IgG	0.025 ml	100
		161022	Conjugate	0.2 ml	1000
		161025	Conjugate	0.1 ml	500
		161029	Conjugate	0.025 ml	100
<b>Please note: available on request</b>		161053	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161062	Reagent set 960		960
		161065	Reagent set 480		480
		161072	Complete kit 960		960
		161075	Complete kit 480		480
		161077	Complete kit 96		96
<b>Turnip yellow mosaic virus</b>	TYMV	162512	IgG	0.2 ml	1000
polyclonal - polyclonal		162515	IgG	0.1 ml	500
		162519	IgG	0.025 ml	100
		162522	Conjugate	0.2 ml	1000
		162525	Conjugate	0.1 ml	500
		162529	Conjugate	0.025 ml	100
		162553	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		162562	Reagent set 960		960
		162565	Reagent set 480		480
		162572	Complete kit 960		960
		162575	Complete kit 480		480
		162577	Complete kit 96		96
<b>Verticillium spp.</b>	Verticillium	161312	IgG	0.2 ml	1000
monoclonal - monoclonal		161315	IgG	0.1 ml	500
		161319	IgG	0.025 ml	100
		161322	Conjugate	0.2 ml	1000
		161325	Conjugate	0.1 ml	500
		161329	Conjugate	0.025 ml	100
		161353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161362	Reagent set 960		960
		161365	Reagent set 480		480
		161372	Complete kit 960		960
		161375	Complete kit 480		480
		161377	Complete kit 96		96
<b>Watermelon mosaic virus 1</b>	WMV - 1	see Papaya ringspot virus			
<b>Watermelon mosaic virus 2</b>	WMV - 2	161112	IgG	0.2 ml	1000
polyclonal - polyclonal		161115	IgG	0.1 ml	500
		161119	IgG	0.025 ml	100
		161122	Conjugate	0.2 ml	1000
		161125	Conjugate	0.1 ml	500
		161129	Conjugate	0.025 ml	100
		161153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161162	Reagent set 960		960
		161165	Reagent set 480		480
		161172	Complete kit 960		960
		161175	Complete kit 480		480
		161177	Complete kit 96		96

Pathogen	Abbr.	Art. No.	Reagent form	Size	Assays
<i>Xanthomonas campestris</i> pv. <i>pelargonii</i>	Xcp	170112	IgG	0.2 ml	1000
Synonym: <i>Xanthomonas hortorum</i> (Xh)		170115	IgG	0.1 ml	500
polyclonal - polyclonal		170119	IgG	0.025 ml	100
		170122	Conjugate	0.2 ml	1000
		170125	Conjugate	0.1 ml	500
		170129	Conjugate	0.025 ml	100
		170153	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		170162	Reagent set 960		960
		170165	Reagent set 480		480
		170172	Complete kit 960		960
		170175	Complete kit 480		480
		170177	Complete kit 96		96
<i>Xanthomonas fragariae</i>	Xfr	150312	IgG	0.2 ml	1000
polyclonal - polyclonal		150315	IgG	0.1 ml	500
		150319	IgG	0.025 ml	100
		150322	Conjugate	0.2 ml	1000
		150325	Conjugate	0.1 ml	500
		150329	Conjugate	0.025 ml	100
		150353	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		150362	Reagent set 960		960
		150365	Reagent set 480		480
		150372	Complete kit 960		960
		150375	Complete kit 480		480
		150377	Complete kit 96		96
<i>Xanthomonas hortorum</i>	Xh	see <i>Xanthomonas campestris</i> pv. <i>pelargonii</i>			
<i>Zucchini yellow mosaic virus</i>	ZYMV	161212	IgG	0.2 ml	1000
polyclonal - polyclonal		161215	IgG	0.1 ml	500
		161219	IgG	0.025 ml	100
		161222	Conjugate	0.2 ml	1000
		161225	Conjugate	0.1 ml	500
		161229	Conjugate	0.025 ml	100
		161253	Positive control	2.5 ml	12
		180043	Negative control	2.5 ml	12
		161262	Reagent set 960		960
		161265	Reagent set 480		480
		161272	Complete kit 960		960
		161275	Complete kit 480		480
		161277	Complete kit 96		96

# qPCR Sets and Kits

By using BIOREBA's ready-to-use qPCR tests, customers **save** days of work compared to doing it themselves in the laboratory. Our qPCR products are supplied with lot specific data sheets. We are committed to **lot-to-lot consistency** for increased test reliability. Our qPCR sets include: Taq Master Mix, RT Master Mix, nuclease-free water, primers, probes and internal control mix.

## qPCR PLRV/PVY and qPCR PVA/PVM



### qPCR set and kit for the detection of Potato Viruses

The qPCR sets enable the simultaneous detection (multiplex) of potato virus Y (**PVY**; all strains) and potato leafroll virus (**PLRV**) or **PVA** (potato virus A) and **PVM** (potato virus M) respectively with real time PCR.

Suitable tissues for the source of viral RNA are potato leaves and tubers (peel, stolon, sprouts). It is highly recommended to use the BIOREBA "Potato DNA/RNA rapid extraction" (included in the qPCR kits) for the extraction of RNA. The qPCR for the detection of PLRV/PVY/IC and PVA/PVM/IC was developed and validated in collaboration with Agroscope, the Swiss centre of excellence for research in the agriculture and food sector.

There are two set sizes available for 96 and for 192 samples and there are four kit sizes available for pools of 10 or up to 25 potato samples and for 96 or 192 extractions respectively.

## qPCR GRBV



### qPCR set for the detection of Grapevine Red Blotch Virus (GRBV)

The qPCR set enables the simultaneous detection (multiplex) of Grapevine red blotch virus (**GRBV**) and a *Vitis vinifera* host gene control (IC) with real-time PCR.

Suitable tissue sources of viral DNA are grapevine leaves or wood scrapings (phloem). BIOREBA recommends to homogenize samples using the BIOREBA homogenizer system HOMEX and BIOREBA extraction bags Universal, and to follow a CTAB buffer-based method for DNA extraction.

The qPCR for the detection of GRBV was developed in collaboration with Agroscope, the Swiss center of excellence for research in the agriculture and food sectors.

There are two set sizes available for 96 and 192 samples.

## qPCR ToBRFV



### qPCR set for the detection of Tomato Brown Rugose Fruit Virus (ToBRFV)

The qPCR set enables the detection of Tomato brown rugose fruit virus (**ToBRFV**) with a triplex real-time RT-PCR.

ToBRFV with its resistance-breaking ability is responsible for enormous economic losses. The EPPO (European and Mediterranean Plant Protection Organization) recommends ToBRFV to be regulated as a quarantine pathogen. ToBRFV causes different symptoms in different varieties. Observed symptoms include yellow or brown, wrinkled spots on fruits, narrowing and mosaic discolorations of leaves as well as deformed or irregularly ripened fruits. This test is suitable for detecting ToBRFV in plant leaves, seeds and fruits.

There are two set sizes available for 96 and 192 samples.

Art. No.	Product	No. of reactions	Amount of samples (potatoes)
839600	qPCR PLRV/PVY set 96 includes: • Taq Master Mix • RT Master Mix • Primers/Probes/IC Mix_PLRV/PVY • Nuclease free water • Positive and negative controls	96	
839200	qPCR PLRV/PVY set 192 includes: • Taq Master Mix • RT Master Mix • Primers/Probes/IC Mix_PLRV/PVY • Nuclease free water • Positive and negative controls	192	
839610	qPCR PLRV/PVY kit 96/10 includes: • qPCR PLRV/PVY set 96 • Potato DNA/RNA rapid extraction set 10x for 96 extractions and a pool of 10 potatoes	96	10
839625	qPCR PLRV/PVY kit 96/25 includes: • qPCR PLRV/PVY set 96 • Potato DNA/RNA rapid extraction set 25x for 96 extractions and a pool of 25 potatoes	96	25
839210	qPCR PLRV/PVY kit 192/10 includes: • qPCR PLRV/PVY set 192 • Potato DNA/RNA rapid extraction set 10x for 192 extractions and a pool of 10 potatoes	192	10
839225	qPCR PLRV/PVY kit 192/25 includes: • qPCR PLRV/PVY set 192 • Potato DNA/RNA rapid extraction set 25x for 192 extractions and a pool of 25 potatoes	192	25
849600	qPCR PVA/PVM set 96 includes: • Taq Master Mix • RT Master Mix • Primers/Probes/IC Mix_PVA/PVM/IC • Nuclease free water • Positive and negative controls	96	
849200	qPCR PVA/PVM set 192 includes: • Taq Master Mix • RT Master Mix • Primers/Probes/IC Mix_PVA/PVM/IC • Nuclease free water • Positive and negative controls	192	
849610	qPCR PVA/PVM kit 96/10 includes: • qPCR PVA/PVM set 96 • Potato DNA/RNA rapid extraction set 10x for 96 extractions and a pool of 10 potatoes	96	10
849625	qPCR PVA/PVM kit 96/25 includes: • qPCR PVA/PVM set 96 • Potato DNA/RNA rapid extraction set 25x for 96 extractions and a pool of 25 potatoes	96	25
849210	qPCR PVA/PVM kit 192/10 includes: • qPCR PVA/PVM set 192 • Potato DNA/RNA rapid extraction set 10x for 192 extractions and a pool of 10 potatoes	192	10

Art. No.	Product	No. of reactions	Amount of samples (potatoes)
849225	qPCR PVA/PVM kit 192/25 includes: • qPCR PVA/PVM set 192 • Potato DNA/RNA rapid extraction set 25x for 192 extractions and a pool of 25 potatoes	192	25
879600	qPCR GRBV set 96 includes: • Taq Probe Master Mix • Primers/Probes Mix GRBV/IC • Nuclease free water	96	
879200	qPCR GRBV set 192 includes: • Taq Probe Master Mix • Primers/Probes Mix GRBV/IC • Nuclease free water	192	
889600*	qPCR ToBRFV set 96 includes: • Taq Master Mix • RT Master Mix • Primers/Probes Mix ToBRFV/COX • Nuclease free water	96	
889200*	qPCR ToBRFV set 192 includes: • Taq Master Mix • RT Master Mix • Primers/Probes Mix ToBRFV/COX • Nuclease free water	192	

\* A ToBRFV RNA positive control (PC, Art. No. 880053, 30 µl) and a plant RNA negative control (NC, Art. No. 830043, 30 µl) is available separately upon request. It is mandatory to clarify before ordering, whether the ToBRFV PC may be imported into your country of destination.

# ELISA Buffers



The ELISA buffers are supplied either as tablets or as concentrated liquids (5x or 10x concentrate). These formats are **easier** and **more accurate** to use than powder concentrates. There is no need for time-consuming dissolution of PVP and other chemicals or pH adjustment. Extraction, coating and conjugate buffers are available in different colours to avoid mistakes. ELISA buffers are available either individually or as part of complete kits (see page 17).

Product	Art. No.	Size	sufficient for
Coating buffer	110110	50 tablets	25000 assays
Coating buffer	110111	10 tablets	5000 assays
Coating buffer	110112	2 tablets	1000 assays
Conjugate buffer (10x)	110140	100 ml	5000 assays
Conjugate buffer (10x)	110142	20 ml	1000 assays
Substrate buffer* (5x)	110130	200 ml	5000 assays
Substrate buffer* (5x)	110132	40 ml	1000 assays
Washing buffer (PBST)	110150	10 tablets	10 x 1 liter
Washing buffer (PBST) powder	110152	50 g	5 liters
Washing buffer (PBST) powder	110153	250 g	25 liters
Washing buffer (PBST) powder	110154	1250 g	125 liters
Extraction buffer «General» (10x)	110120	500 ml	1000 samples**
Extraction buffer «Grapevine» (5x)	110123	2 x 500 ml	1000 samples**
Extraction buffer «Bulbs & Tubers» ***	110122	500 ml	1000 samples**
Extraction buffer «Caulimo» ****	110124	500 ml	1000 samples
Extraction buffer «Caulimo» ****	110224	250 ml	500 samples

\* For use with pNPP (see below)

\*\* Calculated with 5 ml extraction buffer per sample of 0.25 g

\*\*\* Composed of 500 ml extraction buffer «General» (10x) and 50 g egg albumin

\*\*\*\* Includes extraction buffer «Caulimo» (10x), urea, and egg albumin

# Substrates

Product	Art. No.	Size	sufficient for
pNPP blister-packed tablets (20 mg)*	110180	10 tablets	1000 assays
pNPP blister-packed tablets (20 mg)*	110080	50 tablets	5000 assays
pNPP blister-packed tablets (5 mg)*	110185	10 tablets	250 assays
pNPP blister-packed tablets (5 mg)*	110085	50 tablets	1250 assays
pNPP bulk tablets (5 mg)**	50-80-01	100 tablets	2500 assays
pNPP bulk powder***	4165.8	1 x 5 g	25000 assays
pNPP bulk powder***	4165.9	1 x 25 g	125000 assays

\* Single packed, providing optimal protection and long-term stability (shelf life: 3 years at -20°C)

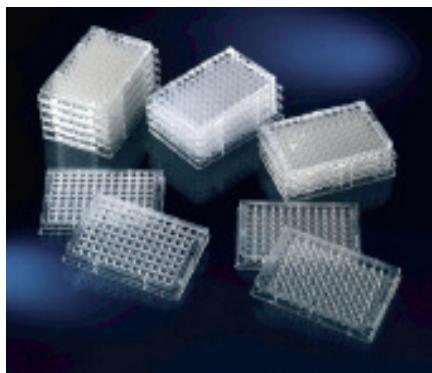
\*\* Bulk reagent (shelf life: 3 years at -20°C)

\*\*\* Excellent quality bulk substrate; needs a balance with 0.1 mg accuracy (shelf life: 5 years at -20°C)

# Chemicals

Product	Art. No.	Size
BSA standard grade	700110	75 g
Egg albumin	5461.250	250 g
Egg albumin	5461.1000	1 kg

# Consumables



## ELISA Plates

Product	Art. No.	Size
Nunc-Immuno Plates MaxiSorp F96, certified	520000	10
Standard packaging: 6 x 10 plates	520000	60
ELISA plate covers (for multiple use)*	520001	10
Rubber sheets for ELISA plates (for multiple use)*	500003	10

\*ELISA plates are covered during incubation with a sheet of parafilm which is pressed down firmly by a rubber sheet inside a plate cover. The plate cover is fixed to the plate with rubber bands. This prevents evaporation during incubation.



## Reservoirs

Product	Art. No.	Size
Single reservoir 70 ml (polypropylene)	330.01	20
8-channel reservoir 40 ml (polystyrene)	330.08.9	10
12-channel reservoir 40 ml (polystyrene)	330.12.9	10

# BIOREBA Testing Service Laboratory for Plant Pathogen Diagnostics



Association of Swiss Laboratories  
Verband Schweizer Laboratorien  
Association des Laboratoires Suisses  
Associazione dei Laboratori Svizzeri

**BIOREBA Testing Service** offers you its expertise in diagnostic assays for the detection of plant pathogens (viruses, bacteria, fungi and phytoplasmas).

More than 30 years of experience with analysis of samples of most agricultural sectors and employment of different state-of-the-art methods and technologies guarantee the **highest** possible accuracy of test results.

Each case is handled in **close** communication with the client to determine the optimal sampling and transport of samples, as well as the most appropriate testing method and conditions. This ensures that each customer receives the right service for their needs in the most cost effective and timely manner.

Our testing service complies with the strict rules and quality standards of **ISO/IEC 17025** and confidentiality is maintained in all communications and data processing.

For further information please visit our website [www.bioreba.com](http://www.bioreba.com) or contact us by telephone or email at [admin@bioreba.ch](mailto:admin@bioreba.ch).



**Prices:** Please contact us now for a quote. Our pricing is based on sample volume, sample types, number of pathogens to be tested per sample, and testing method.

# Quality Management

Our **vision** is to provide products and services of outstanding quality to our customers around the world. Our Quality Management System is an integral part of all our operations. Our value added processes are constantly being improved. Within the framework of our quality management system, we are constantly looking for ways to further develop our company.

BIOREBA has been ISO certified for many years. Our quality management system in accordance with **ISO 9001:2015** applies not only to the production, research and development stages, but also to the worldwide distribution of our products and the testing service for customers.

In addition, we share our own experience with our customers in our **ISO/IEC 17025** accredited testing laboratory and support them in process validation or other quality-related issues. BIOREBA is an official testing laboratory for phytodiagnostics. As such, we participate in numerous Test Performance Studies (TPS).



# Worldwide distribution



BIOREBA is committed to providing our sample preparation products, plant pathogen diagnostic tests and ancillary products on a global scale. We supply our products worldwide. In addition, we have established long-term strategic relationships with local partners in **more than 50 countries**.

You can find a list of our distributors on our website:  
[www.bioreba.com](http://www.bioreba.com)

For direct sales support, please contact your local distributor or BIOREBA at our headquarters in Switzerland.



## Mission Statement

“With the detection of plant diseases, we enable to promote a stable, consistent food supply for humans and animals **worldwide**.”



# Your Partner in Agro-Diagnostics

**www.bioreba.com**