Validation report

DAS-ELISA INSV

Article No.: 190277 (INSV Complete kit 96) / 190275 (INSV Complete kit 480) / 190272 (INSV Complete kit 960)

General information:

Target Pathogen	INSV (Impatiens necrotic spot virus / Orthotospovirus impatiensnecromaculae)
Genus	*Orthotospovirus*
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal (coat) and monoclonal (conjugate) antibodies developed against an INSV isolate from Hippeastrum.
Sampling	Leaf samples: 1:50 (w/v) in extraction buffer "general". Usage of different plant tissue dilutions (1:50 and 1:250) are suggested to increase test security.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized INSV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, blossoms Transmission by vectors (thrips).
Tested species infected	*Capsicum annuum* (Bell Pepper) *Nicotiana Benthamiana* (Tobacco) *Nicotiana Clevelandii* (Tobacco) *Nicotiana tabacum* "Xanthi" (Tobacco) *Petunia x hybrida* (Petunia) *Solanum lycopersicum* (Tomato)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	18
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	42
Detected isolates / geographic regions (Inclusivity)	INSV 1369 (Switzerland, Petunia) INSV PV-0280 (US, Tobacco) INSV 021012 (Switzerland, Tobacco) INSV 220414 (Switzerland, Tobacco) INSV 300414 (Switzerland, Tobacco) INSV 210514 (Switzerland, Tomato) INSV 100614 (Switzerland, Tomato)
Cross reaction with (Exclusivity)	-
No cross reaction tested with (Exclusivity)	Aacat (*Acidovorax avenae* subsp. *cattleyae*) ApP (Apple proliferation phytoplasma) CaMV (Cauliflower mosaic virus)

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	CMV (Cucumber mosaic virus) GRSV (Groundnut ringspot virus) IYSV (Iris yellow spot virus) PLRV (Potato leafroll virus) SMYEPV (Strawberry mild yellow edge potexvirus) TBRV (Tomato black ring virus) TBSV (Tomato bushy stunt virus) TCSV (Tomato chlorotic spot virus) TSWV (Tomato spotted wilt virus)
No matrix effect observed with (Selectivity)	*Allium cepa* (Onion) *Allium sativum* (Garlic) *Capsicum annuum* (Bell Pepper) *Cyclamen persicum* (Cyclamen) *Nicotiana benthamiana* (Tobacco) *Pelargonium* (Pelargonium) *Petunia × hybrida* (Petunia) *Phalaenopsis* (Orchid) *Solanum lycopersicum* (Tomato)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10^{-3} dilution of infected tissue (pathogen titer unknown).
Sensitivity on host matrix	INSV on leaves of tobacco: 1:6'250 dilution INSV on leaves of tomato: 1:1'250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	1996, 2019, 2024
External validation	-
Reproducibility	100%
Repeatability	100%
Validation information	Internally, the reagents have been validated with the BIOREBA isolate collection, composed of various samples with diverse plant host range, collected within the last 40 years.

Validation release Date:
August 25th, 2026

QC manager:

Version: 1 – 25.08.2026.

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