EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION
ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES

Summary sheet of validation data for a diagnostic test

The EPPO Standard PM 7/98 *Specific requirements for laboratories preparing accreditation for a plant pest diagnostic activity* describes how validation should be conducted. It also includes definitions of performance criteria.

Laboratory contact details	Netherlands Institute for Vectors, Invasive plants and Plant health P.O. Box 9102, 6700 HC Wageningen, Netherlands
Short description of the test	Serological detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp.
Date, reference of the validation report	2020-06-30 - PPV1
Link to other validation data	- PPV1 Serological detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Serological detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Serological detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Serological detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Molecular detection of plum pox virus (PPV) in symptomatic and asymptomatic leaves of Prunus spp. - PPV1 Serological detection of plum pox virus (PPV)

	in symptomatic and asymptomatic leaves of Prunus spp.
Validation process according to EPPO Standard PM7/98?	yes
Is the lab accredited for this test?	no
Was the validated data generated in the framework of a project?	Other_project
If yes, please specify	VALITEST
Description of the test	
Organism(s)	Plum pox virus / Potyvirus plumpoxi (PPV000)
Detection / identification	detection
Matrix(ces) tested	Leaves PPV negative material was acquired from the NVWA (Wageningen, NL) collection and from Naktuinbouw (Horst, NL).
Plant species tested	Nicotiana benthamiana, Prunus, Prunus avium, Prunus domestica, Prunus persica
Method(s)	Serological DAS-ELISA
Method: Serological DAS-ELISA	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	yes
EPPO Diagnostic Protocol name	PM 7/032 Plum pox potyvirus (version 1)
As or adapted from an IPPC diagnostic protocol	no
Is the test modified compared to the reference test	no
Kit	
Is a kit used	yes
Manufacturer name	AGDIA
Specify the kit used	ELISA Reagent Set for Plum pox virus (PPV) (SRA 31505)
Kit used following the manufacturer's instructions?	yes
Other information	
Other details on the test	- ELISA Reagent Set for Plum pox virus (PPV) (cat. no. SRA 31505/0096 - 96reactions/1 plate) - Buffer Pack, ELISA Supplemental Buffers Alkphos (cat. no. ACC 00113/0500 Buffer Pack - 500 tests) - Negative Control for Plum pox virus (PPV) (cat. no. LNC 31505/PEACH LF)

Performance Criteria :	
Organism 1.:	**Potyvirus plumpoxi(PPV000)**
Analytical sensitivity	
What is the smallest amount of target that can be detected reliably?	PPV-infected Nicotiana benthamiana extracts could be diluted up to at least 10x times in PPV free Prunus sp. extract and still show a positive signal
Diagnostic sensitivity	
Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98	80%
Standard test(s)	Known status of of samples. Positive samples with known Ct values were diluted in PPV free Prunus extract.
Analytical specificity - inclusivity	
Number of strains/populations of target organisms tested	PPV strain An, C, CR, D, EA, M, Rec, T
Specificity value	100%
Analytical specificity - exclusivity	
Number of non-target organisms tested	NA
Specificity value	NA
Diagnostic Specificity	
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	91.7%
Specify the test(s)	Known status of of samples. All specimens were sequenced using NGS to verify viral content (PPV and other viruses)
Reproducibility	
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	85.83%
Repeatability	
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	83.33% evaluated with 2 replicate samples
Test performance study	
Test performance study?	yes
Brief details of the test performance study and its output.It available, link to published article/report	Test performance study organized in the framework of the VALITEST project involving 6 laboratories from 6 countries
The following complementary files are available online:	• VALITEST PPV TPS REPORT

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