

**EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION**  
**ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES**  
(11-17239)

**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.

<b>Target Organism</b>	Plum pox virus Prunus necrotic ringspot virus Prune dwarf virus	
<b>Short description</b>	detection of PPV, PNRV and PDV by DAS-ELISA	
<b>Laboratory contact details</b>	Bavarian State Research Center for Agriculture, Institute for Plant Protection - Phytopathology and Diagnosis Lange Point 10, 85354 Freising, Germany	
<b>Date and reference of the validation report</b>	31/03/2014 - FB 20.02.05/5	
<b>Validation process according to EPPO Standard PM 7/98:</b>	Yes	
<b>Reference of the test description</b>	N/R AA 20.02.02.06 ELISA tests of seeds (stones), leaves, buttons, bark of different Prunus species for PDV, PNRSV and PPV AA 20.02.02.01 Performance of the DAS ELISA for virus detection on plant material	
<b>Is the test the same as described in the EPPO DP?</b>		
<b>Is the lab accredited for this test?</b>	Yes	
<b>Plant species tested (if relevant)</b>	Not relevant	
<b>Matrices tested (if relevant)</b>	Leaf material	
<b>List of methods used</b>		
<b>Method for extraction / isolation / baiting of target organism from matrix</b>		
<b>Molecular methods, e.g. hybridization, PCR and real time PCR</b>		
<b>Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay</b>	X	DAS-ELISA: Nunc maxisorp plates; antisera Loewe Biochemica, coating 100 µl: PDV Loewe 07051 PPV Loewe 07186 universal PNRSV Loewe 07052
<b>Plating methods: selective isolation</b>		
<b>Bioassay methods: selective enrichment in host plants, baiting, plant test and grafting.</b>		
<b>Pathogenicity test</b>		

<b>Fingerprint methods: protein profiling, fatty acid profiling &amp; DNA profiling</b>		
<b>Morphological and morphometrical methods intended for identification</b>		
<b>Biochemical methods: e.g. enzyme electrophoresis, protein profiling</b>		
<b>Other</b>		
<b><u>Analytical sensitivity (= limit of detection)</u></b>		
<b>What is smallest amount of target that can be detected reliably?</b>	For PPV and PDV: 100% correct positive up to a dilution of 1:40960 (highest dilution tested; dilution in negative extract from tobacco). Analytical sensitivity is lower for PNRSV (100% correct positive up to 1:2560, dilution in negative extract from tobacco)	
<b><u>Diagnostic sensitivity</u></b>		
<b>Proportion of infected/infested samples tested positive compared to results from the standard test , see appendix 2 of PM 7/98</b>	Not evaluated	
<b>Specify the standard test</b>		
<b><u>Analytical specificity</u></b>		
<b>Specificity value</b>	Not evaluated	
<b>Number of strains/populations of target organisms tested</b>	1 positive PDV control Loewe Biochemica 1 positive PNRSV control PV-PC-0962 DSMZ 1 positive PPV control PV-PC-0305 DSMZ	
<b>Number of non-target organisms tested</b>		
<b>Cross reacts with (specify the species)</b>		
<b><u>Diagnostic Specificity</u></b>		
<b>Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test</b>	Not evaluated	
<b>Specify the standard test</b>		
<b><u>Reproducibility</u></b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	Two technical assistants: (dilution in extract from negative tobacco) 100% for PDV and PPV up to and including dilution 1:40960 (highest dilution tested, ) 100 % for PNRSV up to and including dilution 1:2560	
<b><u>Repeatability</u></b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% for PDV and PPV up to dilution 1:40960 (highest dilution tested, dilution in negative extract from tobacco). 100 % for PNRSV up to dilution 1:2560 (dilution in negative extract from tobacco)	

<b>Test performance study</b>	
<b>Test performance study?</b>	No
<b>Include brief details of the test performance study and its output. If available, provide a link to published article/report</b>	
<b>Other information</b>	
<b>Any other information considered useful e.g. robustness, ease of performing the test, etc.</b>	
The following complementary files are available online:	<ul style="list-style-type: none"> <li>• <a href="#">FB 20.02.05_5 Ergänzung Methodenvvalidierung_PDV PNRSV PPV</a></li> </ul>