

**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.

<b>Laboratory contact details</b>	Netherlands Institute for Vectors, Invasive plants and Plant health P.O. Box 9102, 6700 HC Wageningen, Netherlands
<b>Short description of the test</b>	Detection of pepino mosaic virus Pepino mosaic virus by Serological DAS-ELISA in leaves
<b>Date, reference of the validation report</b>	2015-08-24 - Validatie DAS-ELISA Pepino mosaic virus met antiserum Prime Diagnostics (in dutch)
<b>Validation process according to EPPO Standard PM7/98?</b>	yes
<b>Is the lab accredited for this test?</b>	no
<b>Was the validated data generated in the framework of a project?</b>	no
<b>Description of the test</b>	
<b>Organism(s)</b>	Pepino mosaic virus / Potexvirus pepini (PEPMV0)
<b>Detection / identification</b>	detection and identification
<b>Method(s)</b>	Serological DAS-ELISA
<b>Method: Serological DAS-ELISA</b>	
<b>Reference of the test description</b>	
<b>As or adapted from an EPPO diagnostic protocol</b>	yes
<b>New test being considered for inclusion in the next version of the EPPO diagnostic protocol?</b>	no
<b>EPPO Diagnostic Protocol name</b>	PM 7/113 <i>Pepino mosaic virus</i> (version 1)
<b>Name of the test</b>	DAS ELISA
<b>As or adapted from an IPPC diagnostic protocol</b>	no
<b>Is the test modified compared to the reference test</b>	no
<b>Kit</b>	
<b>Is a kit used</b>	no
<b>Other information</b>	
<b>Other details on the test</b>	Followed PM 7/113 (1) with minor modifications: 1. All used buffers are described in Giesbers et al.,

	2023 ( <a href="https://doi.org/10.1371/journal.pone.0277840">https://doi.org/10.1371/journal.pone.0277840</a> ). 2. $\pm$ 0.7 gram of leaf tissue was ground in 7 ml buffer using extraction bags and a hand-held homogenizer (Bioreba). 3. An additional negative control is used, consisting of homogenization buffer only. 4. Since a large variety of samples and targets is tested, the result assessment is based on a fixed decision threshold (OD 0.150 at 405nm).
<b>Performance Criteria :</b>	
<b>Organism 1.:</b>	<b>Potexvirus pepini(PEPMV0)</b>
<b>Analytical sensitivity</b>	
<b>What is smallest amount of target that can be detected reliably?</b>	10-fold serial dilutions series were made for 4 PepMV isolates. Based on the fixed detection limit (OD 0.150), three isolates could be detected up to a 10 <sup>-4</sup> dilution and one isolate up to 10 <sup>-3</sup> .
<b>Analytical specificity - inclusivity</b>	
<b>Number of strains/populations of target organisms tested</b>	Isolates obtained from Wageningen Plant Research (WPR): PepMV CH2 strain, PepMV US 1 strain, PepMV BB1137 (Peru) and a European isolate.
<b>Specificity value</b>	100%
<b>Analytical specificity - exclusivity</b>	
<b>Number of non-target organisms tested</b>	One isolate of the following viruses was tested: cucumber mosaic virus (CMV), potato aucuba mosaic virus (PAMV), potato virus X (PVX), potato virus Y (PVY), tomato spotted wilt virus (TSWV). The CMV, PVX, PVY and TSWV isolates tested in positive their specific DAS-ELISA test.
<b>Specificity value</b>	
<b>Test performance study</b>	
<b>Test performance study?</b>	no

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