

**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>	National Institute of Biology, Department of Biotechnology and Systems Biology Vecna pot 111, 1000 Ljubljana, Slovenia
<b>Short description of the test</b>	Detection and identification of tomato spotted wilt tospovirus by ImmunoStrip LFD Agdia in symptomatic tomato leaves (prevalidation study)
<b>Date, reference of the validation report</b>	2020-12-14 - TSWV V1.0
<b>Link to other validation data</b>	- TSWV V1.0 Detection and identification of tomato spotted wilt tospovirus by ImmunoStrip LFD Agdia in symptomatic tomato leaves (TPS) - TSWV V1.0 Detection and identification of tomato spotted wilt tospovirus by AgriStrip LFD Bioreba in symptomatic tomato leaves (TPS) - TSWV V1.0 Detection and identification of tomato spotted wilt tospovirus by AgriStrip LFD Bioreba in symptomatic tomato leaves (prevalidation study)
<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>	Other_project
<b>If yes, please specify</b>	VALITEST
<b>Description of the test</b>	
<b>Organism(s)</b>	Tomato spotted wilt virus(TSWV00)
<b>Detection / identification</b>	detection and identification
<b>Matrix(ces) tested</b>	Leaves different tospovirus isolates from the collections of DSMZ, NIB, INRA, CREA, UB-FA, WSU and NVWA tested directly or spiked into tomato leaf extract
<b>Plant species tested</b>	Solanum lycopersicum
<b>Method(s)</b>	Serological Lateral Flow Device
<b>Method: Serological Lateral Flow Device</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>	
<b>EPPO Diagnostic Protocol name</b>	PM 7/139 Tospoviruses (genus Orthotospovirus) (version 1)
<b>Name of the test</b>	Lateral flow devices
<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>	yes
<b>Manufacturer name</b>	AGDIA
<b>Specify the kit used</b>	ImmunoStrip for TSWV
Kit used following the manufacturer's instructions?	yes
<b>Other information</b>	
<b>Reaction type</b>	
<b>Other details on the test</b>	
<b>Are the performance characteristics included in the EPPO diagnostic protocol?</b>	
<b>Performance Criteria :</b>	
<b>Organism 1.:</b>	<b>Tomato spotted wilt virus(TSWV00)</b>
<b>Analytical sensitivity</b>	
<b>What is smallest amount of target that can be detected reliably?</b>	100x dilution of the isolate TSWV-PV-0182, 1,000x dilution of the isolate TSWV-PV-0389 and 10,000x dilution of the isolate TSWV-PV-1175
<b>Diagnostic sensitivity</b>	
<b>Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98</b>	
<b>Standard test(s)</b>	
<b>Analytical specificity - inclusivity</b>	
<b>Number of strains/populations of target organisms tested</b>	13 TSWV isolates (5 isolates from DSMZ collection and 8 isolates from other collections)
<b>Specificity value</b>	100%
<b>Analytical specificity - exclusivity</b>	
<b>Number of non-target organisms tested</b>	10 other tospovirus species, represented with 17 isolates (ANSV00 isolate PV-1027; CaCV isolate PV-0864; CSNV00 isolate PV-0529 and NIB V 038; GRSV00 isolate PV-0205; INSV00 isolates PV-0281, PV-0280, PV-0485, PV-1123, and PV-1189; IYSV isolate PV-0528; MSMV isolate VE440; TCSV00 isolates PV-0390 and PV-0391; TYRV00 isolates PV-0526, and PV-0535, WSMoV isolate PV-0283).

<b>Specificity value</b>	76%
<b>Cross reacts with</b>	Alstroemeria necrotic streak virus Groundnut ringspot orthotospovirus Tomato chlorotic spot orthotospovirus
<b>Diagnostic Specificity</b>	
<b>Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test</b>	
<b>Specify the test(s)</b>	
<b>Reproducibility</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	
<b>Repeatability</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	
<b>Test performance study</b>	
<b>Test performance study?</b>	no
<b>Brief details of the test performance study and its output. It available, link to published article/report</b>	Preparation for test performance study organized in the framework of the VALITEST project
<b>Other information</b>	
<b>Any other information considered useful</b>	

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