

**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>	ILVO Institute for Agricultural and Fisheries Research Burg. Van Gansberghelaan 96, 9820 Merelbeke, Belgium
<b>Short description of the test</b>	DAS-ELISA (screening) and one-step real-time PCR test for Tomato spotted wilt virus
<b>Date, reference of the validation report</b>	2018-02-12 - last version F16_V08; F16_V12
<b>Validation process according to EPPO Standard PM7/98?</b>	yes
<b>Is the lab accredited for this test?</b>	yes
<b>Was the validated data generated in the framework of a project?</b>	no
<b>Description of the test</b>	
<b>Organism(s)</b>	Orthotospovirus tomatomaculae(TSWV00)
<b>Detection / identification</b>	detection and identification
<b>Method(s)</b>	Molecular Extraction DNA RNA Molecular real time RT PCR Serological DASI-ELISA
<b>Method: Molecular Extraction DNA RNA</b>	
<b>Reference of the test description</b>	
<b>Other information</b>	
<b>Method: Molecular real time RT PCR</b>	
<b>Reference of the test description</b>	
<b>As or adapted from an EPPO diagnostic protocol</b>	yes
<b>EPPO Diagnostic Protocol name</b>	PM 7/034 Tomato spotted wilt, Impatiens necrotic spot and Watermelon silver mottle tospoviruses (version 1)
<b>Name of the test</b>	Taqman real time fluorescent RT-PCR (Boonham et al. 2001)
<b>Is the test modified compared to the reference test</b>	no
<b>Other information</b>	

<b>Reaction type</b>	Duplex - Probe
<b>Other details on the test</b>	qPCR: Boonham et al 2002: The detection of Tomato spotted wilt virus (TSWV) in individual thrips using real time fluorescent RT-PCR (TaqMan). Journal of Virological Methods 101 (2002) 37-48.
<b>Method: Serological DASi-ELISA</b>	
<b>Reference of the test description</b>	
<b>As or adapted from an EPPO diagnostic protocol</b>	yes
<b>EPPO Diagnostic Protocol name</b>	PM 7/034 Tomato spotted wilt, Impatiens necrotic spot and Watermelon silver mottle tospoviruses (version 1)
<b>Name of the test</b>	Triple Antibody Sandwich TAS-ELISA (based on Clark & Adams, 1997)
<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>	DSMZ
<b>Specify the kit used</b>	Tomato spotted wilt virus (TAS-ELISA) TSWV (RT-0105-0106/3)
Kit used following the manufacturer's instructions?	
<b>Other information</b>	
<b>Are the performance characteristics included in the EPPO diagnostic protocol?</b>	<b>no</b>
<b>Performance Criteria :</b>	
<b>Organism 1.:</b>	<b>Orthotospovirus tomatomaculæ(TSWV00)</b>
<b>Analytical specificity - inclusivity</b>	
<b>Number of strains/populations of target organisms tested</b>	6 Chrysanthemum Ingelmunster_2011; België RefV_TSWV_01 Chrysanthemum cv. Ludo Sleidinge_2011; België RefV_TSWV_02 Phalaenopsis_2009 Lochristi; België RefV_TSWV_03 Tomato Univ. Plovdiv, Bulgarije 2009 RefV_TSWV_04 Bell pepper Univ. Plovdiv, Bulgarije 2009 RefV_TSWV_05 Tomato spotted wilt virus (TSWV) - DCP 2013, isolate tomato, Belgium RefV_TSWV_06
<b>Specificity value</b>	
<b>Analytical specificity - exclusivity</b>	
<b>Number of non-target organisms tested</b>	12 CSVd chrysanthemum ToMV tomato TRSV tomato CMV tomato CSNV chrysanthemum CVB chrysanthemum INSV Monstera PepMV tomato PVY tomato TBRV potato TMV tobacco TYLCV tomato WSMoV tomato

<b>Specificity value</b>	Cross react with other tospoviruses (eg Chrysanthemum stem necrosis virus)
<b>Cross reacts with</b>	Chrysanthemum stem necrosis virus
<b>Reproducibility</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100%
<b>Repeatability</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100%
<b>Test performance study</b>	
<b>Test performance study?</b>	no

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