

**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.

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| <b>Laboratory contact details</b>                                      | National Institute of Biology, Department of Biotechnology and Systems Biology<br>Vecna pot 121, 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)<br>- TSWV V1.0 Detection and identification of tomato spotted wilt tospovirus by AgriStrip LFD Bioreba in symptomatic tomato leaves (TPS)<br>- 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 / Orthotospovirus tomatomaculae (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  |

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| <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 Tomato spotted wilt virus (TSWV) (ISK 39300)  |
| Kit used following the manufacturer's instructions?  | yes  |
| <b>Other information</b>   |  |
| <b>Performance Criteria :</b>  |  |
| <b>Organism 1.:</b>  | <b>Orthotospovirus tomatomaculae(TSWV00)</b>   |
| <b>Analytical sensitivity</b>  |  |
| <b>What is the 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>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<br>Groundnut ringspot orthotospovirus<br>Tomato chlorotic spot orthotospovirus  |
| <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  |