

**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>	Thrips palmi	
<b>Short description</b>	Morphological identification of Thrips palmi	
<b>Laboratory contact details</b>	ILVO Institute for Agricultural and Fisheries Research Burg. Van Gansberghelaan 96, 9820 Merelbeke - Melle, Belgium	
<b>Date and reference of the validation report</b>	19/05/2011 - F16_I11	
<b>Validation process according to EPPO Standard PM 7/98:</b>	No	
<b>Reference of the test description</b>	0 EPPO Bulletin (2001), 31, 53-60	
<b>Is the test the same as described in the EPPO DP?</b>	Yes	
<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>	Microscopic slides with T. palmi and other thrips species (adults and 2nd instar larvae)	
<b>List of methods used</b>		
<b>Method for extraction / isolation / baiting of target organism from matrix</b>	X	Visual inspection of the microscopic slides with microscope
<b>Molecular methods, e.g. hybridization, PCR and real time PCR</b>		
<b>Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay</b>		
<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>	X	Morphological identification using microscope and checklists F03_I05 (adults) or F03_I06 (2nd instar larvae) with most important morphological characters of <i>T. palmi</i> . The morphological characters for the adults are described in PM 7/3 (1) and used in the checklist. The morphological characters for the 2nd instar larvae in the checklist are based on Masahisa Miyazaki Iwao Kuda (1986)(*) Before the analysis starts there is always a control of an adult or 2nd instar larva (standard reference material from the Netherlands) with checklist F03_I17 (adult) or F03_I16 (2nd instar larva). Checklist F03_I29 is used to determine the stage of the thrips (adult, 1st or 2nd larva).
<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>		1 thrips (adult or larva) 20 microscopic slides were made (9 slides with 1 adult and 11 slides with 1 larva (2nd instar larva)). Four annalists checked the slides. Each annalist was capable to detect the thrips (adult or larva) on the slides and was able to determine whether it was <i>T. palmi</i> or not.
<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 done
<b>Specify the standard test</b>		
<b><u>Analytical specificity</u></b>		
<b>Specificity value</b>		
<b>Number of strains/populations of target organisms tested</b>		Not done
<b>Number of non-target organisms tested</b>		Not done
<b>Cross reacts with (specify the species)</b>		Not done
<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 done
<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>		100% 10 microscopic slides with one adult or 2nd instar larva. Four annalists checked the slides on four different days.
<b><u>Repeatability</u></b>		

<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% 4 microscopic slides (each one with 1 adult). Five replicates and 4 analysts.
<b><u>Test performance study</u></b>	
<b>Test performance study?</b>	Yes
<b>Include brief details of the test performance study and its output. If available, provide a link to published article/report</b>	PhytoPAS Proficiency test PL0116 (Fapas, May 2009) with 10 participating laboratories, including DCP. 3 microscopic slides with 1 adult thrips, 1 slide with <i>T. palmi</i> , 1 slide with <i>T. flavus</i> and 1 slide with <i>T. tabaci</i> . DCP 100% satisfactory.
<b><u>Other information</u></b>	
<b>Any other information considered useful e.g. robustness, ease of performing the test, etc.</b>	