

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.

Target Organism	Bursaphelenchus xylophilus	
Short description	Identification of Bursaphelenchus xylophilus by nested PCR (Takeuchi et al. 2005)	
Laboratory contact details	Anses, Laboratoire de la Santé des Végétaux - Unité de Nématologie Domaine de la Motte au Viconte BP 35327, 35653 Le Rheu, France	
Date and reference of the validation report	2011-05 - Validation report may 2011	
Validation process according to EPPO Standard PM 7/98:	Yes	
Reference of the test description	0 PM7/4 (2) not included in appendix. Takeuchi Y, Kansaki N & Futai K (2005) A nested PCR-based method for detecting the pinewood nematode, Bursaphelenchus xylophilus, from pinewood. Nematology 7(5), 775-782	
Is the test the same as described in the EPPO DP?	No not included in PM7/4 (2)	
Is the lab accredited for this test?	No	
Plant species tested (if relevant)		
Matrices tested (if relevant)	Isolated nematodes	
List of methods used		
Method for extraction / isolation / baiting of target organism from matrix		
Molecular methods, e.g. hybridization, PCR and real time PCR	X	Nested PCR
Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay		
Plating methods: selective isolation		
Bioassay methods: selective enrichment in host plants, baiting, plant test and grafting.		
Pathogenicity test		

Fingerprint methods: protein profiling, fatty acid profiling & DNA profiling		
Morphological and morphometrical methods intended for identification		
Biochemical methods: e.g. enzyme electrophoresis, protein profiling		
Other		
Analytical sensitivity (= limit of detection)		
What is smallest amount of target that can be detected reliably?	5 nematodes	
Diagnostic sensitivity		
Proportion of infected/infested samples tested positive compared to results from the standard test , see appendix 2 of PM 7/98		
Specify the standard test		
Analytical specificity		
Specificity value	100%	
Number of strains/populations of target organisms tested	7 populations	
Number of non-target organisms tested	15 populations	
Cross reacts with (specify the species)	cross reactions with some populations of <i>B. mucronatus</i> and <i>B. sp</i> from France and China	
Diagnostic Specificity		
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test		
Specify the standard test		
Reproducibility		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100% for 5 individuals	
Repeatability		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100% for 5 individuals	
Test performance study		
Test performance study?	No	
Include brief details of the test performance study and its output.It available, provide a link to published article/report		

<u>Other information</u>	
Any other information considered useful e.g. robustness, ease of performing the test, etc.	The full report is available upon request to the laboratory.