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	Duplex PCR based identification of Bursaphelenchus xylophilus Jiang 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 - Evaluation d'outils moléculaires d'identification de Bursaphelenchus xylophilus sur individus isolés	
Validation process according to EPPO Standard PM 7/98:	Yes	
Reference of the test description	0 Jiang L, Zheng J, Waeyenberge L, Subbotin S, Moens M (2005) Duplex PCR based identification of Bursaphelenchus xylophilus (Steiner & Buhrer,1934) Nickle, 1970. Russian Journal of Nematology, 2005, 13(2), 115-121	
Is the test the same as described in the EPPO DP?	No Cited but not described in full	
Is the lab accredited for this test?	No	
Plant species tested (if relevant)		
Matrices tested (if relevant)	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	Two steps PCR : 1 universal PCR + 1 species specific 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	not performed	
Specify the standard test	not relevant	
Analytical specificity		
Specificity value	100%	
Number of strains/populations of target organisms tested	7 populations (see table1)	
Number of non-target organisms tested		
Cross reacts with (specify the species)	15 populations (see table1)	
Diagnostic Specificity		
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	Not performed	
Specify the standard test	Not relevant	
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	
Other information	
Any other information considered useful **e.g. robustness, ease of performing the test, etc.**	see table 2. The full report is available upon request to the laboratory.
The following complementary files are available online:	• comparison of different PCR tests • Table 1 Specificity_PCR