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	Meloidogyne chitwoodi Meloidogyne fallax	
Short description	Specied specific PCR detection for Meloidogyne chitwoodi, M. fallax and M. hapla	
Laboratory contact details	Anses Plant Health Laboratory - Nematology Unit Domaine de la Motte au Viconte BP 35327, 35653 Le Rheu, France	
Date and reference of the validation report	September 2010 - Validation report - Septembre 2010	
Validation process according to EPPO Standard PM 7/98:	Yes	
Reference of the test description	0 PM7/41(2) - Appendix 4 Wishart et al. (2002) Ribosomal intergenic spacer : a polymerase chain reaction diagnostic for Meloidogyne chitwoodi, M. fallax and M. hapla. Phytopathology 92, 884–892	
Is the test the same as described in the EPPO DP?	Modified dNTPs cencentration reduced	
Is the lab accredited for this test?	Yes	
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	Species specific PCR (IGS region)
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?	1 J2 for M. fallax and 1 J2 for M. chitwoodi	
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% for M. fallax and 97% for M. chitwoodi	
Number of strains/populations of target organisms tested	2 populations for M. falalx and 5 populations for M. chotwoodi (see annex 1 of validation report for details)	
Number of non-target organisms tested	28 populations of nematodes (see Annex 1 of validation report for details)	
Cross reacts with (specify the species)	Detected as M. chitwoodi for some of the replicates : M. javanica (1 population), M. enterolobii (1 population), Heterodera schachtii and Xiphinema sp.	
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 M. fallax and M. chitwoodi	
Repeatability		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100 % for M. fallax and M. chitwoodi	
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.**	The full report is available upon request to the laboratory.