

**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>	Meloïdogyne chitwoodi Meloïdogyne fallax	
<b>Short description</b>	Specied specific PCR detection for Meloïdogyne chitwoodi, M. fallax and M. hapla	
<b>Laboratory contact details</b>	Anses, Laboratoire de la Santé des Végétaux - Unité de Nématologie Domaine de la Motte au Viconte BP 35327, 35653 Le Rheu, France	
<b>Date and reference of the validation report</b>	September 2010 - Validation report - Septembre 2010	
<b>Validation process according to EPPO Standard PM 7/98:</b>	Yes	
<b>Reference of the test description</b>	0 PM7/41(2) - Appendix 4 Wishart et al. (2002) Ribosomal intergenic spacer : a polymerase chain reaction diagnostic for Meloïdogyne chitwoodi, M. fallax and M. hapla. Phytopathology 92, 884-892	
<b>Is the test the same as described in the EPPO DP?</b>	Modified dNTPs concentration reduced	
<b>Is the lab accredited for this test?</b>	Yes	
<b>Plant species tested (if relevant)</b>		
<b>Matrices tested (if relevant)</b>	isolated nematodes	
<b>List of methods used</b>		
<b>Method for extraction / isolation / baiting of target organism from matrix</b>		
<b>Molecular methods, e.g. hybridization, PCR and real time PCR</b>	X	Species specific PCR (IGS region)
<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>		
<b>Biochemical methods: e.g. enzyme electrophoresis, protein profiling</b>		
<b>Other</b>		
<b>Analytical sensitivity (= limit of detection)</b>		
<b>What is smallest amount of target that can be detected reliably?</b>	1 J2 for <i>M. fallax</i> and 1 J2 for <i>M. chitwoodi</i>	
<b>Diagnostic sensitivity</b>		
<b>Proportion of infected/infested samples tested positive compared to results from the standard test , see appendix 2 of PM 7/98</b>		
<b>Specify the standard test</b>		
<b>Analytical specificity</b>		
<b>Specificity value</b>	100% for <i>M. fallax</i> and 97% for <i>M. chitwoodi</i>	
<b>Number of strains/populations of target organisms tested</b>	2 populations for <i>M. fallax</i> and 5 populations for <i>M. chitwoodi</i> (see annex 1 of validation report for details)	
<b>Number of non-target organisms tested</b>	28 populations of nematodes (see Annex 1 of validation report for details)	
<b>Cross reacts with (specify the species)</b>	Detected as <i>M. chitwoodi</i> for some of the replicates : <i>M. javanica</i> (1 population), <i>M. enterolobii</i> (1 population), <i>Heterodera schachtii</i> and <i>Xiphinema</i> sp.	
<b>Diagnostic Specificity</b>		
<b>Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test</b>		
<b>Specify the standard test</b>		
<b>Reproducibility</b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% for <i>M. fallax</i> and <i>M. chitwoodi</i>	
<b>Repeatability</b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100 % for <i>M. fallax</i> and <i>M. chitwoodi</i>	
<b>Test performance study</b>		
<b>Test performance study?</b>	No	
<b>Include brief details of the test performance study and its output.It available, provide a link to</b>		

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