

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	Globodera pallida Globodera rostochiensis	
Short description	Identification of Globodera pallida and G. rostochiensis by species specific PCR - Fullaondo 1999	
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	13/07/2010 - ref. 10/03	
Validation process according to EPPO Standard PM 7/98:	Yes	
Reference of the test description	0 Fullaondo et al. (1999). Identification of potato cyst nematode species Globodera rostochiensis and G. pallida by PCR using specific primer combination. Nematology 1, 157-163	
Is the test the same as described in the EPPO DP?	No not included in PM7/40	
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	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		
<u>Analytical sensitivity (= limit of detection)</u>		
What is smallest amount of target that can be detected reliably?	1 J2	
<u>Diagnostic sensitivity</u>		
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		
<u>Analytical specificity</u>		
Specificity value	91% for G. pallida (1 non target species detected as G. pallida among 11 non target species) 0 % for G. rostochiensis	
Number of strains/populations of target organisms tested	11 populations of G. pallida and 4 populations for G. rostochiensis (for details see validation report annex 2)	
Number of non-target organisms tested	7 populations nematodes species other than G. pallida or G. rostochiensis	
Cross reacts with (specify the species)	cross reaction with "G. mexicana" population (even if G. mexicana is not recognised as a validated species).	
<u>Diagnostic Specificity</u>		
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test		
Specify the standard test		
<u>Reproducibility</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	86% for Globodera pallida (at 1 J2 level) 0% for G. rostochiensis (at 1 J2 level)	
<u>Repeatability</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100% for Globodera pallida (at 1 J2 level) 0% for G. rostochiensis (at 1 J2 level)	
<u>Test performance study</u>		
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.