

EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION
ORGANISATION EUROPEENNE ET MEDITERRANEEENNE 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	Molecular identification of Globodera pallida and G. rostochiensis - PCR-RFLP	
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 - Evaluation comparative de différents outils moléculaire pour l'identification de Globodera pallida et G. rostochiensis - ref 10/03	
Validation process according to EPPO Standard PM 7/98:	Yes	
Reference of the test description	0 PM7/40 (2) APPENDIX 3 - PART C Thiéry & Mugniéry (1996) Interspecific rDNA restriction fragment length polymorphism in Globodera species, parasites of Solanaceous plants. Fundamental and Applied Nematology 19, 471-479.	
Is the test the same as described in the EPPO DP?	Yes	
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	PCR-RFLP
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 individual of J2 stage	
<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 among 11) 100% for G. rostochiensis	
Number of strains/populations of target organisms tested	11 populations of G. pallida and 4 populations of G. rostochiensis (refer to evaluation report 10/03 - annex 2)	
Number of non-target organisms tested	7 populations tested (list of populations, refer to evaluation report 10/03 - annex 2)	
Cross reacts with (specify the species)	no cross reaction	
<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)	90% for G. pallida (at the level of 1 J2 stage) 93% for G. rostochiensis (at the level of 1 J2 stage)	
<u>Repeatability</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100% for both species	
<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.	presence of unpublished profiles for South American populations of G. pallida. The full report is available upon request to the laboratory.