

**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>	Heterodera glycines	
<b>Short description</b>	Identification of Heterodera glycines	
<b>Laboratory contact details</b>	Anses Plant Health Laboratory - Nematology Unit Domaine de la Motte au Viconte BP 35327, 35653 Le Rheu, France	
<b>Date and reference of the validation report</b>	2015-02 - validation report	
<b>Validation process according to EPPO Standard PM 7/98:</b>	Yes	
<b>Reference of the test description</b>	N/R YE W. (2012). Development of PrimeTime-Real-Time PCR for species identification of soybean cyst nematode (Heterodera glycines) in North Carolina. Journal of Nematology, 44(3), 284-290.	
<b>Is the test the same as described in the EPPO DP?</b>		
<b>Is the lab accredited for this test?</b>	No	
<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 real time PCR test
<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</b>		

<b>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><u>Analytical sensitivity (= limit of detection)</u></b>		
<b>What is smallest amount of target that can be detected reliably?</b>	1 juvenile (Ct value<30 in our conditions)	
<b><u>Diagnostic sensitivity</u></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><u>Analytical specificity</u></b>		
<b>Specificity value</b>	100%	
<b>Number of strains/populations of target organisms tested</b>	6	
<b>Number of non-target organisms tested</b>	20	
<b>Cross reacts with (specify the species)</b>	Cross reaction observed with H. goettingiana with a Ct value >30	
<b><u>Diagnostic Specificity</u></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><u>Reproducibility</u></b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% (with 1 or 2 juveniles)	
<b><u>Repeatability</u></b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% (with 1 or 2 juveniles)	
<b><u>Test performance study</u></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 published article/report</b>		
<b><u>Other information</u></b>		

<b>Any other information considered useful</b> <b>e.g. robustness, ease of performing the test, etc.</b>	Robustness evaluated when changing annealing temperature (+/- 1]C), results were conform.
The following complementary files are available online:	<ul style="list-style-type: none"> <li>• <a href="#">Populations list and results_Ye 2012</a></li> </ul>