

**EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION**  
**ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES**  
**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.

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| <b>Laboratory contact details</b>                                                                   | Anses Plant Health Laboratory - Nematology Unit<br>Domaine de la Motte au Viconte BP 35327, 35653<br>Le Rheu, France |
| <b>Short description of the test</b>                                                                | Identification of <i>Heterodera glycines</i>                                                                         |
| <b>Date, reference of the validation report</b>                                                     | 2015-02-01 - validation report                                                                                       |
| <b>Validation process according to EPPO Standard PM7/98?</b>                                        | yes                                                                                                                  |
| <b>Is the lab accredited for this test?</b>                                                         | no                                                                                                                   |
| <b>Was the validated data generated in the framework of a project?</b>                              |                                                                                                                      |
| <b>Description of the test</b>                                                                      |                                                                                                                      |
| <b>Organism(s)</b>                                                                                  | <i>Heterodera glycines</i> (HETDGL)                                                                                  |
| <b>Detection / identification</b>                                                                   | identification                                                                                                       |
| <b>Method(s)</b>                                                                                    | Molecular real time PCR                                                                                              |
| <b>Method: Molecular real time PCR</b>                                                              |                                                                                                                      |
| <b>Reference of the test description</b>                                                            |                                                                                                                      |
| <b>As or adapted from an EPPO diagnostic protocol</b>                                               | yes                                                                                                                  |
| <b>New test being considered for inclusion in the next version of the EPPO diagnostic protocol?</b> | no                                                                                                                   |
| <b>EPPO Diagnostic Protocol name</b>                                                                | PM 7/089 <i>Heterodera glycines</i> (version 2)                                                                      |
| <b>Name of the test</b>                                                                             | Duplex real-time PCR (Ye, 2012)                                                                                      |
| <b>As or adapted from an IPPC diagnostic protocol</b>                                               | no                                                                                                                   |
| <b>Other information</b>                                                                            |                                                                                                                      |
| <b>Other details on the test</b>                                                                    | Species specific real time PCR test                                                                                  |
| <b>Are the performance characteristics included in the EPPO diagnostic protocol?</b>                | no                                                                                                                   |
| <b>Performance Criteria :</b>                                                                       |                                                                                                                      |
| <b>Organism 1.:</b>                                                                                 | <b><i>Heterodera glycines</i>(HETDGL)</b>                                                                            |
| <b><u>Analytical sensitivity</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>Analytical specificity - inclusivity</u></b>                                       |                                                                                                          |
| <b>Number of strains/populations of target organisms tested</b>                          | 6                                                                                                        |
| <b>Specificity value</b>                                                                 | 100%                                                                                                     |
| <b><u>Analytical specificity - exclusivity</u></b>                                       |                                                                                                          |
| <b>Number of non-target organisms tested</b>                                             | 20                                                                                                       |
| <b>Specificity value</b>                                                                 | Cross reaction observed with H. goettingiana with a Ct value >30                                         |
| <b>Cross reacts with</b>                                                                 | Heterodera goettingiana                                                                                  |
| <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>Test performance study</b>                                                            |                                                                                                          |
| <b>Test performance study?</b>                                                           | no                                                                                                       |
| <b>Other information</b>                                                                 |                                                                                                          |
| <b>Any other information considered useful</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> |

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