

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.

Laboratory contact details	Anses Plant Health Laboratory - Nematology Unit Domaine de la Motte au Viconte BP 35327, 35653 Le Rheu, France
Short description of the test	Detection of Bursaphelenchus xylophilus in wood extract with real-time PCR Cao et al. 2005
Date, reference of the validation report	2014-09-01 - Anses 2014 Rapport validation_Bx PCR temps réel_V2
Validation process according to EPPO Standard PM7/98?	yes
Is the lab accredited for this test?	no
Was the validated data generated in the framework of a project?	no
If yes, please specify	
Description of the test	
Organism(s)	Bursaphelenchus xylophilus(BURSXY)
Detection / identification	detection and identification
Matrix(ces) tested	Wood Wood extract
Plant species tested	Pinus sp.
Method(s)	Molecular Extraction DNA RNA Molecular real time RT PCR
Method: Molecular Extraction DNA RNA	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	
New test being considered for inclusion in the next version of the EPPO diagnostic protocol?	
As or adapted from an IPPC diagnostic protocol	
Is the test modified compared to the reference test	
Kit	
Is a kit used	
Other information	

Other details on the test	
Method: Molecular real time RT PCR	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	no
New test being considered for inclusion in the next version of the EPPO diagnostic protocol?	
As or adapted from an IPPC diagnostic protocol	no
Reference of the test	Cao AX, Liu XZ, Zhu SF & lu BS (2005)Detection of the pinewood nematode, Bursaphelenchus xylophilus, using a realtime polymerase chain reaction assay. Phytopathology 95, 566-571.
Is the test modified compared to the reference test	
Kit	
Is a kit used	
Other information	
Reaction type	
Other details on the test	
Are the performance characteristics included in the EPPO diagnostic protocol?	
Performance Criteria :	
Organism 1.:	Bursaphelenchus xylophilus(BURSXY)
Analytical sensitivity	
What is smallest amount of target that can be detected reliably?	1 nematode
Diagnostic sensitivity	
Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98	100%
Standard test(s)	Morphology
Analytical specificity - inclusivity	
Number of strains/populations of target organisms tested	7 populations (see full report or Table 1)
Specificity value	100%
Analytical specificity - exclusivity	
Number of non-target organisms tested	15 populations (see full report or Table 1)
Specificity value	100% Cross reaction with any other Bursaphelenchus species only in case of high DNA concentration
Cross reacts with	

Diagnostic Specificity	
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	99.4% (3 false positives results/500 samples including 490 uninfested samples)
Specify the test(s)	Morphology
Reproducibility	
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100% for one nematode
Repeatability	
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100% for one nematode
Test performance study	
Test performance study?	no
Brief details of the test performance study and its output. It available, link to published article/report	
Other information	
Any other information considered useful	
The following complementary files are available online:	<ul style="list-style-type: none"> • B. xylophilus - Cao et al 2005 -Table 1 Specificity.pdf

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