

**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.

<b>Laboratory contact details</b>	Anses Plant Health Laboratory - Nematology Unit Domaine de la Motte au Viconte BP 35327, 35653 Le Rheu, France
<b>Short description of the test</b>	Detection of Bursaphelenchus xylophilus in wood extract with real-time PCR Cao et al. 2005
<b>Date, reference of the validation report</b>	2014-09-01 - Anses 2014 Rapport validation_Bx PCR temps réel_V2
<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>	no
<b>Description of the test</b>	
<b>Organism(s)</b>	Bursaphelenchus xylophilus (BURSXY)
<b>Detection / identification</b>	detection and identification
<b>Method(s)</b>	Molecular Extraction DNA RNA Molecular real time RT PCR
<b>Method: Molecular Extraction DNA RNA</b>	
<b>Reference of the test description</b>	
<b>Other information</b>	
<b>Method: Molecular real time RT PCR</b>	
<b>Reference of the test description</b>	
<b>As or adapted from an EPPO diagnostic protocol</b>	no
<b>As or adapted from an IPPC diagnostic protocol</b>	no
<b>Reference of the test</b>	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.
<b>Other information</b>	
<b>Performance Criteria :</b>	
<b>Organism 1.:</b>	<b>Bursaphelenchus xylophilus(BURSXY)</b>

<b>Analytical sensitivity</b>	
<b>What is smallest amount of target that can be detected reliably?</b>	1 nematode
<b>Diagnostic sensitivity</b>	
<b>Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98</b>	100%
<b>Standard test(s)</b>	Morphology
<b>Analytical specificity - inclusivity</b>	
<b>Number of strains/populations of target organisms tested</b>	7 populations (see full report or Table 1)
<b>Specificity value</b>	100%
<b>Analytical specificity - exclusivity</b>	
<b>Number of non-target organisms tested</b>	15 populations (see full report or Table 1)
<b>Specificity value</b>	100% Cross reaction with any other Bursaphelenchus species only in case of high DNA concentration
<b>Diagnostic Specificity</b>	
<b>Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test</b>	99.4% (3 false positives results/500 samples including 490 uninfested samples)
<b>Specify the test(s)</b>	Morphology
<b>Reproducibility</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% for one nematode
<b>Repeatability</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% for one nematode
<b>Test performance study</b>	
<b>Test performance study?</b>	no
<b>The following complementary files are available online:</b>	<ul style="list-style-type: none"> <li>• <a href="#">B. xylophilus - Cao et al 2005 -Table 1 Specificity.pdf</a></li> </ul>

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