

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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| 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 |
| Description of the test | |
| Organism(s) | Bursaphelenchus xylophilus(BURSXY) |
| Detection / identification | detection and identification |
| Method(s) | Molecular Extraction DNA RNA Molecular real time RT PCR |
| Method: Molecular Extraction DNA RNA | |
| Reference of the test description | |
| Other information | |
| Method: Molecular real time RT PCR | |
| Reference of the test description | |
| As or adapted from an EPPO diagnostic protocol | no |
| 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. |
| Other information | |
| Performance Criteria : | |
| Organism 1.: | Bursaphelenchus xylophilus(BURSXY) |

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| 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 |
| 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 |
| 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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