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 - Bacteriology, Virology and GMO Unit 7 rue Jean Dixméras, 49000 Angers, France
Short description of the test	Detection of Xylophilus ampelinus by Conventional PCR in leaves
Date, reference of the validation report	2019-01-01 -
Link to other validation data	- Detection of Xylophilus ampelinus by real time PCR in leaves
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?	
Description of the test	
Organism(s)	Xylophilus ampelinus (XANTAM)
Detection / identification	detection
Matrix(ces) tested	Leaves Petioles
Plant species tested	Vitis sp.
Method(s)	Molecular Extraction DNA RNA Molecular Conventional PCR
Method: Molecular Extraction DNA RNA	
Reference of the test description	
Kit	
Is a kit used	yes
Manufacturer name	BIONOBILE
Specify the kit used	QuickPick™ SML Plant DNA
Kit used following the manufacturer's instructions?	
Other information	
Method: Molecular Conventional PCR	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	yes

EPPO Diagnostic Protocol name	PM 7/096 Xylophilus ampelinus (version 1)
Name of the test	Conventional PCR targeting ITS (adapted from Manceau et al. (2005))
Is the test modified compared to the reference test	yes reactional mixture modified
Other information	
Are the performance characteristics included in the EPPO diagnostic protocol?	**no**
Performance Criteria :	
Organism 1.:	**Xylophilus ampelinus(XANTAM)**
Analytical sensitivity	
What is the smallest amount of target that can be detected reliably?	Conventional PCR Manceau et al., 2005 modified: 9.10^2 bact/mL
Diagnostic sensitivity	
Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98	100%
Analytical specificity - inclusivity	
Number of strains/populations of target organisms tested	Conventional PCR Manceau et al., 2005 modified (15 strains) - LNPV 05.02 CFBP 20.98 Vitis vinifera France 1979 - LNPV 29.32 CFBP 27.31 Vitis vinifera South Africa 1972 - LNPV 29.36 CFBP 22.66 Vitis vinifera France 1983 - LNPV 29.37 CFBP 18.42 Vitis vinifera France 1977 - LNPV 29.40 CFBP 23.99 Vitis vinifera France 1984 - LNPV 29.46 CFBP 19.28 Vitis vinifera Spain 1978 - LNPV 44.15 ⦸ Vitis vinifera France 2013 - LNPV 29.45 CFBP 18.34 Vitis vinifera France 1975 - LNPV 29.30 CFBP 20.59 Vitis vinifera France 1981 - LNPV 29.42 CFBP 11.92 Vitis vinifera Greece 1966 - LNPV 29.48 CFBP 19.27 Vitis vinifera Spain 1978
Specificity value	Inclusivity: Conventional PCR Manceau et al., 2005 modified: 100%
Analytical specificity - exclusivity	
Number of non-target organisms tested	Conventional PCR Manceau et al., 2005 modified (21 strains) - Xanthomonas arboricola pv. pruni LNPV 25.74 CFBP 39.01 Apricot (Prunus armeniaca) USA 1987 - Xanthomonas arboricola pv. juglandis LNPV 08.62 NCPPB 362 Chestnut (Juglans regia) UK 1955 - Xanthomonas fuscans subsp. aurantifolii LNPV 26.47 CFBP 29.04 Limon (Citrus limon) Argentina NA - Xanthomonas axonopodis pv. aurantifolii LNPV 26.80 CFBP 35.29 Limon (Citrus limon) Uruguay 1983 - Xanthomonas axonopodis pv. phaseoli LNPV 10.14 Bean (Phaseolus vulgaris) France 1994 - Xanthomonas fragariae LNPV 25.53 CFBP 21.57 Strawberry (Fragaria sp.) USA 1960 - Xanthomonas hortorum pv. carotae LNPV 17.76 ⦸ Carot (Daucus carota) France 1997 - Xanthomonas campestris pv. campestris LNPV 04.55 ⦸ Oleander

	(Nerium oleander) France 1990 - Xanthomonas hortorum pv. hederae LNPV 23.03 ⦸ Yvi (Hedera helix) France 2000 - Xanthomonas translucens pv. graminis LNPV 06.28 CFBP 20.58 Ray grass (Lolium perenne) ⦸ 1981 - Xanthomonas translucens pv. translucens LNPV 06.29 CFBP 25.44 Barley (Hordeum vulgare) India 1970 - Xanthomonas oryzae pv. oryzae LNPV 08.65 BCCM/LMG 806 Rice (Oryza sativa) Philippines NA - Agrobacterium vitis ⦸ CFBP 55.23 Grapevine (Vitis vinifera) Australia 1977 - Acidovorax valerianellae LNPV 28.51 ⦸ lettuce (Valerianella incusta) France 2004 - Pseudomonas syringae pv. siryngae LNPV 08.17 ⦸ Apricot (Prunus armeniaca) France 1994 - Xanthomonas axonopodis pv. viticola ⦸ CFBP 58.68 Grapevine (Vitis vinifera) Brazil 1998 - Xylella fastidiosa subsp. fastidiosa LNPV 24.34 ATCC 35879 Grapevine (Vitis vinifera) Florida, USA NA - Flavescence dorée ⦸ ⦸ Grapevine (Vitis vinifera) France ⦸ - Bois noir ⦸ ⦸ Grapevine (Vitis vinifera) France ⦸ - Grapevine saprophytic bacterium 1 France ⦸ Vigne (Vitis vinifera) France ⦸ - Grapevine saprophytic bacterium 2 france⦸ ⦸ Vigne (Vitis vinifera) France ⦸
Specificity value	Exclusivity: Conventional PCR Manceau et al., 2005 modified: 95% Conventional PCR Manceau et al., 2005 modified: crossreaction with Flavescence dorée phytoplasma
Cross-reacts with	flavescence dorée of grapevine
Diagnostic Specificity	
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	Conventional PCR Manceau et al., 2005 modified: 100%
Reproducibility	
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	Conventional PCR Manceau et al., 2005 modified: 100%
Repeatability	
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	Conventional PCR Manceau et al., 2005 modified: 100%
Test performance study	
Test performance study?	no
The following complementary files are available online:	• rapport validation méthode X.amp 2019

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