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	Institute for Sustainable Plant Protection via Amendola, 122/D. 70126 Bari. Italv	
Short description of the test	Detection of Xylella fastidiosa in perennial host species by LAMP-PCR	
Date, reference of the validation report	2015-07-01 - Maria Saponari, Giuliana Loconsole, Oriana Potere, Donato Boscia, 2015. DETECTION OF XYLELLA FASTIDIOSA, INTERLABORATORY VALIDATION - MOLECULAR AND SEROLOGICAL METHODS	
Validation process according to EPPO Standard PM7/98?	no	
Is the lab accredited for this test?	yes	
Was the validated data generated in the framework of a project?		
Description of the test		
Organism(s)	Xylella fastidiosa (XYLEFA)	
Detection / identification	detection	
Method(s)	Extraction Molecular LAMP	
Method: Extraction		
Reference of the test description		
Other information		
Other details on the test	 T. YASEEN, S. DRAGO, F. VALENTINI, T. ELBEAINO, G. STAMPONE, M. DIGIARO and A.M. D'ONGHIA. Onsite detection of Xylella fastidiosa in host plants and in "spy insects" using the real-time loopmediated isothermal amplification method, 2015. Phytopathologia Mediterranea 54: 488–496. manufacturer instructions provided by Enbiotech s.r.l Maria Saponari, Giuliana Loconsole, Oriana Potere, Donato Boscia, 2015. DETECTION OF XYLELLA FASTIDIOSA, INTERLABORATORY VALIDATION - MOLECULAR AND SEROLOGICAL METHODS. 	
Method: Molecular LAMP		
Reference of the test description		

Other information		
Other details on the test	 T. YASEEN, S. DRAGO, F. VALENTINI, T. ELBEAINO, G. STAMPONE, M. DIGIARO and A.M. D'ONGHIA. Onsite detection of Xylella fastidiosa in host plants and in "spy insects" using the real-time loopmediated isothermal amplification method, 2015. Phytopathologia Mediterranea 54: 488–496. manufacturer instructions provided by Enbiotech s.r.l Maria Saponari, Giuliana Loconsole, Oriana Potere, Donato Boscia, 2015. DETECTION OF XYLELLA FASTIDIOSA, INTERLABORATORY VALIDATION - MOLECULAR AND SEROLOGICAL METHODS 	
Are the performance characteristics included in the EPPO diagnostic protocol?	no	
Performance Criteria :		
Organism 1.:	Xylella fastidiosa(XYLEFA)	
Analytical sensitivity		
What is smallest amount of target that can be detected reliably?	up to 10 ² cfu/ml using dilutions ranging from 10 ⁷ to 10 CFU/ml, prepared by adding to the extraction buffer the proper aliquots of bacterial suspension after the incubation with a piece of healthy olive stem.	
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)	33 obtained positive samples/ 33 expected positive samples	
Diagnostic Specificity		
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	100%	
Specify the test(s)	27 obtained negative samples/ 27 expected negative samples	
Reproducibility		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100%	
Repeatability		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100%	
Test performance study		
Test performance study?	no	
Other information		
Any other information considered useful	Validation of the Lamp-PCR assay was carried out by the Laboratories listed below, under the supervision of the reference laboratory CNR-UNIBA.	

	• IPSP-CNR: Istituto per la Protezione Sostenibile delle Piante CNR, UOS Bari, (Italy); • DiSSPA-UNIBA: Dipartimento di Scienze del Suolo, della Pianta e degli Alimenti, Università degli Studi Aldo Moro, Bari (Italy); • CRSFA: Centro di Ricerca, Sperimentazione e Formazione in Agricoltura Basile Caramia, Locorotondo (BA) (Italy); • IAMB: Istituto Agronomico Mediterraneo, Valenzano (BA) (Italy); • Enblotech s.r.l. (PA) which provided the kit and the manufacturer instructions
The following complementary files are available online:	 protocols for diagnosis of Xylella fastidiosa Report interlaboratory validation 2015

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