

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	ILVO Institute for Agricultural and Fisheries Research Burg. Van Gansberghelaan 96, 9820 Merelbeke - Melle, Belgium
Short description of the test	Detection of <i>Phytophthora kernoviae</i> by plating infected plant material and morfological evaluation the culture
Date, reference of the validation report	2009-12-21 - F16_S09
Validation process according to EPPO Standard PM7/98?	yes
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)	<i>Phytophthora kernoviae</i> (PHYTKE)
Detection / identification	detection
Method(s)	Isolation Morphological
Method: Isolation	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	yes
EPPO Diagnostic Protocol name	PM 7/112 <i>Phytophthora kernoviae</i> (version 1)
Name of the test	Isolation on P5ARP [H] (Jeffers & Martin, 1986)
Is the test modified compared to the reference test	yes slight modification to the semi-selective isolation medium
Other information	
Method: Morphological	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	yes
EPPO Diagnostic Protocol name	PM 7/112 <i>Phytophthora kernoviae</i> (version 1)

Name of the test	Morphological identification P5ARP [H]
Other information	
Other details on the test	Morphological identification using a microscope and a checklist (F03_S10) containing the most distinctive morphological characteristics of the organism as described in Brasier et al. (2005) Brasier C. , Beales P., Kirk S., Denman S. & Rose J. (2005). <i>Phytophthora kernoviae</i> sp. nov., an invasive pathogen causing bleeding stem lesions on forest trees and foliar necrosis of ornamentals in the UK. <i>Mycological Research</i> 109 (8): 853-859.
Are the performance characteristics included in the EPPO diagnostic protocol?	no
Performance Criteria :	
Organism 1.:	Phytophthora kernoviae(PHYTKE)
Analytical sensitivity	
What is smallest amount of target that can be detected reliably?	Two plated pieces of freshly infected leaf material out of 20 plated pieces
Diagnostic sensitivity	
Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98	100%. All samples that were analysed with real-time PCR gave identical results, i.e. there were no false negatives
Standard test(s)	Real-time PCR
Analytical specificity - inclusivity	
Number of strains/populations of target organisms tested	1
Specificity value	
Analytical specificity - exclusivity	
Number of non-target organisms tested	5 (<i>Phytophthora multivora</i> , <i>P. ramorum</i> , <i>P. hedraïandra</i> , <i>P. syringae</i> , <i>P. lateralis</i>)
Specificity value	none known
Diagnostic Specificity	
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	100%. All samples that were analysed with real-time PCR gave identical results, i.e. there were no false positives
Specify the test(s)	Real-time PCR
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	Robustness has also been established. Participated in FAPAS proficiency testing scheme and in interlaboratory comparisons.

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