EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION
ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES
(11-17239)
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.

Target Organism	Phytophthora kernoviae
Short description	Detection of Phytophthora kernoviae by plating infected plant material and morfological evaluation the culture
Laboratory contact details	ILVO Institute for Agricultural and Fisheries Research Burg. Van Gansberghelaan 96, 9820 Merelbeke - Melle, Belgium
Date and reference of the validation report	2009-12-21 - F16_S09
Validation process according to EPPO Standard PM 7/98:	Yes
Reference of the test description	0 Brasier C. , Beales P., Kirk S., Denman S. & Rose J. (2005). Phytophthora kernoviae sp. nov., an invasive pathogen causing bleeding stem lesions on forest trees and foliar necrosis of ornamentals in the UK. Mycological Reaserch 109 (8): 853-859.
Is the test the same as described in the EPPO DP?	Modified slight modification to the semi-selective isolation medium
Is the lab accredited for this test?	Yes
Plant species tested (if relevant)	Rhododendron ponticum "Variegatum"
Matrices tested (if relevant)	Leaves and stems of Rhododendron ponticum "Variegatum"

List of methods used		
Method for extraction / isolation / baiting of target organism from matrix	X	Isolation: pieces of surface-sterilized symptomatic plant material are plated onto semi-selective medium (P5ARP)
Molecular methods, e.g. hybridization, PCR and real time PCR		
Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay		
Plating methods: selective isolation		
Bioassay methods: selective enrichment in host plants, baiting, plant test and grafting.		
Pathogenicity test		

Fingerprint methods: protein profiling, fatty acid profiling & DNA profiling		
Morphological and morphometrical methods intended for identification	X	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)
Biochemical methods: e.g. enzyme electrophoresis, protein profiling		
Other		

Analytical sensitivity (= limit of detection)

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
Specify the standard test	Real-time PCR

Analytical specificity

Specificity value	
Number of strains/populations of target organisms tested	1
Number of non-target organisms tested	5 (Phytophthora multivora, P. ramorum, P. hedraiandra, P. syringae, P. lateralis)
Cross reacts with (specify the species)	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 standard test	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
Include brief details of the test performance study and its output.It	

available, provide a link to published article/report	
Other information	
Any other information considered useful **e.g. robustness, ease of performing the test, etc.**	Robustness has also been established. Participated in FAPAS proficiency testing scheme and in interlaboratory comparisons.