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.

Tawat Organism	Dhytanbth	and kampuing	
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	Х	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	Х	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 detec	ction)	
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.