

**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.

<b>Target Organism</b>	Phytophthora kernoviae	
<b>Short description</b>	Detection of Phytophthora kernoviae by plating infected plant material and morfological evaluation the culture	
<b>Laboratory contact details</b>	ILVO Institute for Agricultural and Fisheries Research Burg. Van Gansberghelaan 96, 9820 Merelbeke, Belgium	
<b>Date and reference of the validation report</b>	2009-12-21 - F16_S09	
<b>Validation process according to EPPO Standard PM 7/98:</b>	Yes	
<b>Reference of the test description</b>	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.	
<b>Is the test the same as described in the EPPO DP?</b>	Modified slight modification to the semi-selective isolation medium	
<b>Is the lab accredited for this test?</b>	Yes	
<b>Plant species tested (if relevant)</b>	Rhododendron ponticum "Variegatum"	
<b>Matrices tested (if relevant)</b>	Leaves and stems of Rhododendron ponticum "Variegatum"	
<b>List of methods used</b>		
<b>Method for extraction / isolation / baiting of target organism from matrix</b>	X	Isolation: pieces of surface-sterilized symptomatic plant material are plated onto semi-selective medium (P5ARP)
<b>Molecular methods, e.g. hybridization, PCR and real time PCR</b>		
<b>Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay</b>		
<b>Plating methods: selective isolation</b>		
<b>Bioassay methods: selective enrichment in host plants, baiting, plant test and grafting.</b>		
<b>Pathogenicity test</b>		
<b>Fingerprint methods: protein</b>		

<b>profiling, fatty acid profiling &amp; DNA profiling</b>		
<b>Morphological and morphometrical methods intended for identification</b>	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)
<b>Biochemical methods: e.g. enzyme electrophoresis, protein profiling</b>		
<b>Other</b>		
<b><u>Analytical sensitivity (= limit of detection)</u></b>		
<b>What is smallest amount of target that can be detected reliably?</b>	Two plated pieces of freshly infected leaf material out of 20 plated pieces	
<b><u>Diagnostic sensitivity</u></b>		
<b>Proportion of infected/infested samples tested positive compared to results from the standard test , see appendix 2 of PM 7/98</b>	100%. All samples that were analysed with real-time PCR gave identical results, i.e. there were no false negatives	
<b>Specify the standard test</b>	Real-time PCR	
<b><u>Analytical specificity</u></b>		
<b>Specificity value</b>		
<b>Number of strains/populations of target organisms tested</b>	1	
<b>Number of non-target organisms tested</b>	5 (Phytophthora multivora, P. ramorum, P. hedraiandra, P. syringae, P. lateralis)	
<b>Cross reacts with (specify the species)</b>	none known	
<b><u>Diagnostic Specificity</u></b>		
<b>Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test</b>	100%. All samples that were analysed with real-time PCR gave identical results, i.e. there were no false positives	
<b>Specify the standard test</b>	Real-time PCR	
<b><u>Reproducibility</u></b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100 %	
<b><u>Repeatability</u></b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100 %	
<b><u>Test performance study</u></b>		
<b>Test performance study?</b>	No	
<b>Include brief details of the test performance study and its output.It available, provide a link to</b>		

<b>published article/report</b>	
<b><u>Other information</u></b>	
<b>Any other information considered useful e.g. robustness, ease of performing the test, etc.</b>	Robustness has also been established. Participated in FAPAS proficiency testing scheme and in interlaboratory comparisons.