

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	Ralstonia solanacearum	
Short description	Detection of R. solanacearum by IF in Pelargonium sp.	
Laboratory contact details	National Reference Centre, National Plant Protection Organization P.O. Box 9102, 6700 HC Wageningen, Netherlands	
Date and reference of the validation report	13/10/2011 - BAC-2010-01	
Validation process according to EPPO Standard PM 7/98:	Yes	
Reference of the test description	0	
Is the test the same as described in the EPPO DP?	Yes	
Is the lab accredited for this test?	Yes	
Plant species tested (if relevant)	Pelargonium zonale	
Matrices tested (if relevant)	From P. zonale stems	
List of methods used		
Method for extraction / isolation / baiting of target organism from matrix		
Molecular methods, e.g. hybridization, PCR and real time PCR		
Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay	X	IF using the antiserum Loewe 073566-C.4732
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		
Biochemical methods: e.g. enzyme electrophoresis, protein profiling		
Other		
<u>Analytical sensitivity (= limit of detection)</u>		
What is smallest amount of target that can be detected reliably?	5.9 x 10 ³ cfu/ml for P. zonale extracts	
<u>Diagnostic sensitivity</u>		
Proportion of infected/infested samples tested positive compared to results from the standard test , see appendix 2 of PM 7/98	100% (12 out 12)	
Specify the standard test	Fatty acid analysis and conventional PCR	
<u>Analytical specificity</u>		
Specificity value	100%	
Number of strains/populations of target organisms tested	32 (Table 2 and Table 4)	
Number of non-target organisms tested	20 (Table 4)	
Cross reacts with (specify the species)	None	
<u>Diagnostic Specificity</u>		
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	100% (20 out 20)	
Specify the standard test	Fatty acid analysis and conventional PCR	
<u>Reproducibility</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100%	
<u>Repeatability</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100%	
<u>Test performance study</u>		
Test performance study?	No	
Include brief details of the test performance study and its output.It available, provide a link to published article/report		
<u>Other information</u>		
Any other information considered	Selectivity studied based on three cultivars, namely	

useful e.g. robustness, ease of performing the test, etc.	Pelargonium zonale guido, Pelargonium peltatum balkon rood en Pelargonium grandiflorum cyntia. No matrix effect found
The following complementary files are available online:	<ul style="list-style-type: none">• Validation sheet IF for detection of R. solanacearum in Pelargonium sp. extracts