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	Clavibacte	er michiganensis subsp. michiganensis	
Short description	Detection of Clavibacter michiganensis subsp. michiganensis from symptomatic plant material by plating		
Laboratory contact details	Netherlan health P.O. Box 9	ds Institute for Vectors, Invasive plants and Plant 9102, 6700 HC Wageningen, Netherlands	
Date and reference of the validation report	2010-04 - BAC-2010-03 Methodevalidatie van de uitplaattoets voor Clavibacter michiganensis subsp. michiganensis uit bladstengel van tomaat		
Validation process according to EPPO Standard PM 7/98:	Yes		
Reference of the test description	0 Koenraad 2009. Imp of Claviba tomato. (/	t, H., van Vliet, A., Neijndorff, N., and Woudt, B. provement of semi-selective media for the detection acter michiganensis subsp. michiganensis in seeds of Abstr.) Phytopathology 99:S66.	
Is the test the same as described in the EPPO DP?	No To be considered for revision on PM 7/042		
Is the lab accredited for this test?	No		
Plant species tested (if relevant)	Solanum l	ycopersicum	
Matrices tested (if relevant)	Petioles and sectioned 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			
Plating methods: selective isolation	Х	Isolation plating on two semi-selective media : FSCM and CMM1	
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				
Analytical sensitivity (= limit of detection)				
What is smallest amount of target that can be detected reliably?	1.0x10 ³ cfu*ml-1 for CMM1 and 9.0x10 ² cfu*ml-1 for FSCM			
Diagnostic sensitivity				
Proportion of infected/infested samples tested positive compared to results from the standard test , see appendix 2 of PM 7/98	100%			
Specify the standard test	Isolation on the conventional media SCM and D2ANX			
Analytical specificity				
Specificity value				
Number of strains/populations of target organisms tested	20 cmm strains (see details in the full validation report)			
Number of non-target organisms tested	20 related strains (see details in the full validation report)			
Cross reacts with (specify the species)	Cross reaction was only observed for Pseudomonas corrugata on the FSCM medium, resembling the colony morphology of cmm on this medium. However, Pseudomonas corrugata could not grow on the CMM1 medium.			
Diagnostic Specificity				
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	95%			
Specify the standard test	Isolation o	on the conventional media SCM and D2ANX		
<u>Reproducibility</u>				
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.	For the selectivity two different varieties of Solanum lycopersicum were included in this validation (Money maker and Saint Pierre). For both varieties comparable growth results were acquired.			
The following complementary files are available online:	 Method validation of the isolation method for Clavibacter michiganensis subsp. michiganensis from infected plant material, Plant Protection Service (in Dutch) 			