

EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION
ORGANISATION EUROPEENNE ET MEDITERRANEEENNE 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	Pantoea stewartii subsp. stewartii	
Short description	Detection of Pantoea stewartii subsp. stewartii in plant and seed extract by conventional PCR	
Laboratory contact details	Bavarian State Research Center for Agriculture, Institute for Plant Protection - Phytopathology and Diagnosis Lange Point 10, 85354 Freising, Germany	
Date and reference of the validation report	2017-09-19 -	
Validation process according to EPPO Standard PM 7/98:	Yes	
Reference of the test description	N/R Gehring I, Wensing A, Gernold M, Wiedemann W, Coplin DL, Geider K (2014) Molecular differentiation of Pantoea stewartii subsp. indologenes from subspecies stewartii and identification of new isolates from maize seeds. Journal of Applied Microbiology 116, 1553-1562. Nechwatal J, Friedrich-Zorn M, Theil S, Gebauer P, Wensing A (2018) Validation of a specific PCR screening test for Pantoea stewartii subsp. stewartii in maize (Zea mays) samples. Bulletin OEPP/ EPPO Bulletin, in press.	
Is the test the same as described in the EPPO DP?		
Is the lab accredited for this test?	Yes	
Plant species tested (if relevant)	Zea mays	
Matrices tested (if relevant)	seed soaking liquid, leaf extract	
List of methods used		
Method for extraction / isolation / baiting of target organism from matrix		
Molecular methods, e.g. hybridization, PCR and real time PCR	X	conventional 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		
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?	seed soaking liquid: 10^3 / ml leaf extract: 10^2 / ml	
<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	not done	
Specify the standard test	n/a	
<u>Analytical specificity</u>		
Specificity value	100%	
Number of strains/populations of target organisms tested	8 strains of target organism	
Number of non-target organisms tested	13 species, 26 strains	
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	not done	
Specify the standard test	n/a	
<u>Reproducibility</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	seed soaking liquid: 100% for 10^3 / ml, 75% for 10^2 / ml leaf extract: 100% for 10^2 / ml	
<u>Repeatability</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	seed soaking liquid: 100% for 10^2 / ml leaf extract: 100% for 10^2 / ml	
<u>Test performance study</u>		
Test performance study?	No	

<p>Include brief details of the test performance study and its output. If available, provide a link to published article/report</p>	
<p><u>Other information</u></p>	
<p>Any other information considered useful e.g. robustness, ease of performing the test, etc.</p>	
<p>The following complementary files are available online:</p>	<ul style="list-style-type: none"> • Strains used for specificity (inclusivity/ exclusivity) testing