

EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION
ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES
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.

Laboratory contact details	Bavarian State Research Center for Agriculture, Institute for Plant Protection - Phytopathology and Diagnosis Lange Point 10, 85354 Freising, Germany
Short description of the test	Detection of <i>Pantoea stewartii</i> subsp. <i>stewartii</i> in plant and seed extract by conventional PCR
Date, reference of the validation report	2017-09-19 -
Validation process according to EPPO Standard PM7/98?	yes
Is the lab accredited for this test?	yes
Was the validated data generated in the framework of a project?	
Description of the test	
Organism(s)	<i>Pantoea stewartii</i> subsp. <i>stewartii</i> (ERWIST)
Detection / identification	detection
Method(s)	Molecular Conventional PCR
Method: Molecular Conventional PCR	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	no
As or adapted from an IPPC diagnostic protocol	no
Reference of the test	Gehring I, Wensing A, Gernold M, Wiedemann W, Coplin DL Geider K (2014) Molecular differentiation of <i>Pantoea stewartii</i> subsp. <i>indologenes</i> from subspecies <i>stewartii</i> and identification of new isolates from maize seeds. <i>Journal of Applied Microbiology</i> 116, 1553-1562. Nechwatal J, FriedrichZorn M, Theil S, Gebauer P, Wensing A (2018) Validation of a specific PCR screening test for <i>Pantoea stewartii</i> subsp. <i>stewartii</i> in maize (<i>Zea mays</i>) samples. <i>Bulletin OEPP/ EPPO Bulletin</i> , in press.
Other information	
Are the performance characteristics included in the EPPO diagnostic protocol?	no

Performance Criteria :	
Organism 1.:	Pantoea stewartii subsp. stewartii(ERWIST)
Analytical sensitivity	
What is smallest amount of target that can be detected reliably?	seed soaking liquid: 10^3 / ml leaf extract: 10^2 / ml
Diagnostic sensitivity	
Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98	not done
Standard test(s)	n/a
Analytical specificity - inclusivity	
Number of strains/populations of target organisms tested	8 strains of target organism
Specificity value	100%
Analytical specificity - exclusivity	
Number of non-target organisms tested	13 species, 26 strains
Specificity value	100% no cross reaction
Diagnostic Specificity	
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	not done
Specify the test(s)	n/a
Reproducibility	
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
Repeatability	
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
Test performance study	
Test performance study?	no
The following complementary files are available online:	
	<ul style="list-style-type: none"> • Strains used for specificity (inclusivity/ exclusivity) testing

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