

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	EUPHRESKO PANTOEA STEWARTII , , EUPHRESKO
Short description of the test	Conventional PCR (AGES primers) from corn seed macerate
Date, reference of the validation report	2011-05-31 -
Validation process according to EPPO Standard PM7/98?	yes
Is the lab accredited for this test?	no
Was the validated data generated in the framework of a project?	Euphresco
If yes, please specify	EUPH-PANTOEA
Description of the test	
Organism(s)	Pantoea stewartii subsp. stewartii (ERWIST)
Detection / identification	identification
Matrix(ces) tested	Pure culture PCR can be performed for identification of isolates/strains and symptomatic plant parts; for asymptomatic part or seed detection, in the framework of the test performance study, this PCR was not the most sensitive but the evaluation of this PCR was performed with DNA extraction.
Plant species tested	Zea mays
Method(s)	Molecular Conventional PCR
Method: Molecular Conventional PCR	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	yes
EPPO Diagnostic Protocol name	PM 7/060 Pantoea stewartii (version 2)
Name of the test	PCR (AGES primers)
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 the smallest amount of target that can be detected reliably?	10 ² CFU/mL on pure culture
Diagnostic sensitivity	
Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98	Not tested
Analytical specificity - inclusivity	
Number of strains/populations of target organisms tested	Inclusivity tested with 15 target strains: 100% (bacterial suspension concentrations about 10 ⁷ bact./mL) Pantoea stewartii subsp. stewartii: CFBP 3167/ NCPPB 2295/ICMP 257ATCC 8199; CFBP1719/ ICPB SS104; CFBP 2502 / NCPPB 449 CFBP 3157/ NCPPB 1553; CFBP 3166 / ICMP 5930; CFBP 3393/ LMG 2716/ PDDCC 270; CFBP 3394/ LMG 2717/ PDDCC 722; CFBP 3395/ LMG 2718/ ATCC 8200; CFBP 3396/ LMG 2719/ PDDCC 5929; CFBP 3445/ NCPPB 3379; CFBP 3517; CFBP 3168; CFBP 3165; CFBP 3169; NCPPB 3253
Specificity value	Inclusivity + exclusivity= 96,7% on 30 target and no-target strains
Analytical specificity - exclusivity	
Number of non-target organisms tested	Exclusivity was performed by one lab on a list of 100 non-target strains and obtained 99% with the cross reaction of P indologenes
Specificity value	Yes with Pantoea stewartii subsp. indologenes
Diagnostic Specificity	
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test	Not tested
Repeatability	
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100%
Test performance study	
Test performance study?	yes
Brief details of the test performance study and its output. It available, link to published article/report	Based on the test performance study with 5 laboratories involved, in the framework of EUPH05 Pantoea stewartii ssp. stewartii, EUPHRESCO Final Report 2010-2011 Analytical sensitivity: 70% of agreement at 7 x10 ⁴ CFU/mL Diagnostic sensitivity (10 samples/2repeats/soak/lab): 70 % Diagnostic specificity (5 samples/2repeats/soak/lab): 76 % (cross reaction with Pantoea stewartii subsp. indologenes) Qualitative Repeatability: 95 % Accuracy: <90% Qualitative Reproducibility: 58 %