

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	Monilinia fructicola	
Short description	detection of Monilinia fructicola in fruits by real-time PCR	
Laboratory contact details	Netherlands Institute for Vectors, Invasive plants and Plant health P.O. Box 9102, 6700 HC Wageningen, Netherlands	
Date and reference of the validation report	2010-12-07 - MOVA no. 2006.molbio.001	
Validation process according to EPPO Standard PM 7/98:	Yes	
Reference of the test description	N/R IR van Brouwershaven, ML Bruil, GCM van Leeuwen, LFF Kox, 2010. A real-time (Taqman) PCR assay to differentiate Monilinia fructicola from other brown rot fungi of fruit crops. Plant Pathology 59, 548-555	
Is the test the same as described in the EPPO DP?	Yes	
Is the lab accredited for this test?	No	
Plant species tested (if relevant)	Prunus spp	
Matrices tested (if relevant)	fruits	
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	real time 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?	0.6 pg of Monilinia spp. DNA	
<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		
Specify the standard test		
<u>Analytical specificity</u>		
Specificity value		
Number of strains/populations of target organisms tested	12 isolates of Monilinia fructicola	
Number of non-target organisms tested	16 non-target orgaisms (incl. three other Monilinia spp)	
Cross reacts with (specify the species)	no cross reaction observed	
<u>Diagnostic Specificity</u>		
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test		
Specify the standard test		
<u>Reproducibility</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)		
<u>Repeatability</u>		
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)		
<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 useful
e.g. robustness, ease of performing the test, etc.