

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	Pospiviroid	
Short description	Detection of pospiviroid in potato leaves by real-time RT-PCR	
Laboratory contact details	Dutch General Inspection Service (NAK) Randweg 14, 8304AS Emmeloord, Netherlands	
Date and reference of the validation report	November 2011 - Rapport van de labvalidatie: aantonen van pospivoroïden in aardappelblad m.b.v. real-time RT-PCR	
Validation process according to EPPO Standard PM 7/98:	No	
Reference of the test description	N/R M. Botermans, B.L.T.H. van de Vossenbergh, J.Th.J. Verhoeven, M. Hooffman, R. Dekter, E.T.M. Meekes (2013). Development and validation of a real-time RT-PCR assay for generic detection of pospiviroids. <i>Journal of Virological Methods</i> : 187:43-50	
Is the test the same as described in the EPPO DP?		
Is the lab accredited for this test?	No	
Plant species tested (if relevant)	Solanum tuberosum	
Matrices tested (if relevant)	leaves	
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 RT-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		
Analytical sensitivity (= limit of detection)		
What is smallest amount of target that can be detected reliably?	A) 1 infected leave in a pool of 100 healthy leaves B) sap of infected leave can be diluted 1: 2.500 in sap of healthy potato leaves	
Diagnostic sensitivity		
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		
Analytical specificity		
Specificity value	Analytical specificity: highly specific for Pospiviroid species, no cross reactions with viruses commonly occurring in potato	
Number of strains/populations of target organisms tested	CEVd, CLVd, CSVd, MPVd, PCFVd, PSTVd, TASVd, TCDVd, TPMVd, IrVd	
Number of non-target organisms tested	PVY, PVYn, PVYoc, PVA, PVX, PVS, PVM, PVV, PLRV, PepMV, PMTV, APLV, APMoV, PBRVSV.	
Cross reacts with (specify the species)		
Diagnostic Specificity		
Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test		
Specify the standard test		
Reproducibility		
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	
<u>Other information</u>	
Any other information considered useful e.g. robustness, ease of performing the test, etc.	