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	Pospiviroi	d		
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 Vossenberg, J.Th.J. Verhoeven, M. Hooftman, R. Dekter, E.T.M. Meekes (2013). Development and validation of a real-time RT-PCR assay for generic detection of pospiviroids. Journal of Virological Methods: 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	Х	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 no cross r	specificity: highly specific for Pospiviroid species, eactions 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, PBRSV.			
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	1			
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	
Other information	
Any other information considered useful e.g. robustness, ease of performing the test, etc.	