## 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.

Netherlands Institute for Vectors, Invasive plants and Plant health P.O. Box 9102, 6700 HC Wageningen, Netherlands	
Validation of the Menzel & Winter real-time RT-PCR for the detection and identification of tomato brown rugose fruit virus	
2023-02-06 - 2021.molbio.012	
yes	
yes	
no	
Tomato brown rugose fruit virus / Tobamovirus fructirugosum (TOBRFV)	
detection and identification	
Molecular Extraction DNA RNA Molecular real time RT PCR	
Reference of the test description	
yes	
no no	
PM 7/146 Tomato brown rugose fruit virus (version 1)	
no	
yes	
QIAGEN	
RNeasy Plant Mini Kit	
no see validation report	

Other information	
Method: Molecular real time RT PCR	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	yes
New test being considered for inclusion in the next version of the EPPO diagnostic protocol?	no
EPPO Diagnostic Protocol name	PM 7/146 Tomato brown rugose fruit virus (version 1)
Name of the test	Real-time RT-PCR Menzel and Winter (2021)
Is the test modified compared to the reference test	no
Kit	
Is a kit used	yes
Manufacturer name	Applied Biosystems
Specify the kit used	TaqMan RNA-to-CT 1-Step Kit
Kit used following the manufacturer's instructions?	yes
Other information	
Reaction type	Simplex - Probe
Performance Criteria :	
Organism 1.:	Tobamovirus fructirugosum(TOBRFV)
Analytical sensitivity	
[	
What is smallest amount of target that can be detected reliably?	Relative dilution of 10^10.
	Relative dilution of 10^10.
detected reliably?	Relative dilution of 10^10.  33 ToBRFV isolates tested 137 ToBRFV isolates in silico
detected reliably? <u>Analytical specificity - inclusivity</u> Number of strains/populations of target	33 ToBRFV isolates tested 137 ToBRFV isolates in
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Analytical specificity - inclusivity  Number of strains/populations of target organisms tested  Specificity value  Analytical specificity - exclusivity  Number of non-target organisms tested	33 ToBRFV isolates tested 137 ToBRFV isolates in silico 100%  Several Solanum lycopersicum and Capsicum sp.
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Analytical specificity - inclusivity  Number of strains/populations of target organisms tested  Specificity value  Analytical specificity - exclusivity  Number of non-target organisms tested  Specificity value  Reproducibility  Provide the calculated % of agreement for a	33 ToBRFV isolates tested 137 ToBRFV isolates in silico 100%  Several Solanum lycopersicum and Capsicum sp. infecting tobamoviruses. See report.
Analytical specificity - inclusivity  Number of strains/populations of target organisms tested  Specificity value  Analytical specificity - exclusivity  Number of non-target organisms tested  Specificity value  Reproducibility  Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	33 ToBRFV isolates tested 137 ToBRFV isolates in silico 100%  Several Solanum lycopersicum and Capsicum sp. infecting tobamoviruses. See report.
Analytical specificity - inclusivity  Number of strains/populations of target organisms tested  Specificity value  Analytical specificity - exclusivity  Number of non-target organisms tested  Specificity value  Reproducibility  Provide the calculated % of agreement for a given level of the pest (see PM 7/98)  Repeatability  Provide the calculated % of agreement for a	33 ToBRFV isolates tested 137 ToBRFV isolates in silico 100%  Several Solanum lycopersicum and Capsicum sp. infecting tobamoviruses. See report.  100

The following complementary files are available online:	<ul> <li>2021.molbio.012 Validation real-time PCR Menzel &amp; Winter ToBRFV V2.0</li> </ul>

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