

**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.

<b>Laboratory contact details</b>	Anses Plant Health Laboratory - Bacteriology, Virology and GMO Unit 7 rue Jean Dixm�ras, 49000 Angers, France
<b>Short description of the test</b>	Detection of 'Candidatus Phytoplasma phoenicium' with an internal control by real time PCR adapted from Jawhari et al. (2015)
<b>Date, reference of the validation report</b>	2024-12-20 - Cousseau-Suhard P., Loiseau M., Rolland M., 2024. RV D�tection de 'Candidatus Phytoplasma phoenicium' par PCR en temps r�el. version 01
<b>Validation process according to EPPO Standard PM7/98?</b>	yes
<b>Is the lab accredited for this test?</b>	no
<b>Was the validated data generated in the framework of a project?</b>	no
<b>Description of the test</b>	
<b>Organism(s)</b>	'Candidatus Phytoplasma phoenicium' (PHYPPH)
<b>Detection / identification</b>	detection and identification
<b>Matrix(ces) tested</b>	Wood phloem tissue
<b>Plant species tested</b>	Prunus
<b>Method(s)</b>	Molecular real time PCR
<b>Method: Molecular real time PCR</b>	
<b>Reference of the test description</b>	
<b>As or adapted from an EPPO diagnostic protocol</b>	yes
<b>New test being considered for inclusion in the next version of the EPPO diagnostic protocol?</b>	no
<b>EPPO Diagnostic Protocol name</b>	PM 7/150 'Candidatus Phytoplasma phoenicium' (version 1)
<b>Name of the test</b>	Specific real time PCR (Jawhari et al., 2015)
<b>As or adapted from an IPPC diagnostic protocol</b>	no
<b>Is the test modified compared to the reference test</b>	yes Addition of an internal control (CyOXID primers from Papayiannis et al, 2021) and optimization for

	routine analysis in lab conditions
<b>Kit</b>	
<b>Is a kit used</b>	no
<b>Other information</b>	
<b>Reaction type</b>	Duplex
<b>Other details on the test</b>	Target ITS and 23SrDNA of 'Ca. P. phoenicium'.
<b>Performance Criteria :</b>	
<b>Organism 1.:</b>	<b>'Candidatus Phytoplasma phoenicium'(PHYPPH)</b>
<b>Analytical sensitivity</b>	
<b>What is the smallest amount of target that can be detected reliably?</b>	Last level at 100% of detection: $1 \times 10^{-4}$ for almond tree and $1 \times 10^{-5}$ for apricot.
<b>Analytical specificity - inclusivity</b>	
<b>Number of strains/populations of target organisms tested</b>	10 DNA extracts of different Prunus sp. infected by 'Ca. P. phoenicium'
<b>Specificity value</b>	100%
<b>Analytical specificity - exclusivity</b>	
<b>Number of non-target organisms tested</b>	5 DNA extracts of healthy prunus, 10 DNA extracts of plants contaminated by other phytoplasmas of prunus or other bacteria or viruses of prunus
<b>Specificity value</b>	100%
<b>Reproducibility</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	76%
<b>Repeatability</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	95.2%
<b>Test performance study</b>	
<b>Test performance study?</b>	no
<b>Other information</b>	
<b>Any other information considered useful</b>	More information can be obtained on request from Anses, Plant Health Laboratory.

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