

**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.

<b>Target Organism</b>	Xanthomonas axonopodis pv. dieffenbachiae	
<b>Short description</b>	Detection of Xanthomonas axonopodis pv. dieffenbachiae by DAS-ELISA in leaves and pure culture	
<b>Laboratory contact details</b>	Anses, Laboratoire de la Santé des Végétaux- Unité ravageurs et pathogènes des plantes tropicales Pôle de Protection des Plantes, 7 Chemin de l'IRAT, 97410 Saint Pierre, France	
<b>Date and reference of the validation report</b>	2012-03 - Inter-laboratory ring test : Xanthomonas axonopodis pv. dieffenbachiae in Anthurium (Report Xad01-version 2)	
<b>Validation process according to EPPO Standard PM 7/98:</b>	No	
<b>Reference of the test description</b>	0 appendix 3 and PRI protocol for the detection of Xad by DAS-ELISA	
<b>Is the test the same as described in the EPPO DP?</b>	Yes	
<b>Is the lab accredited for this test?</b>	No	
<b>Plant species tested (if relevant)</b>	Anthurium sp.	
<b>Matrices tested (if relevant)</b>	Leaves and pure culture	
<b>List of methods used</b>		
<b>Method for extraction / isolation / baiting of target organism from matrix</b>	X	Extraction as in Appendix 1 of PM7/23(2)
<b>Molecular methods, e.g. hybridization, PCR and real time PCR</b>		
<b>Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay</b>	X	PRI protocol for detection of Xad by DAS-ELISA
<b>Plating methods: selective isolation</b>		
<b>Bioassay methods: selective enrichment in host plants, baiting, plant test and grafting.</b>		
<b>Pathogenicity test</b>		
<b>Fingerprint methods: protein</b>		

<b>profiling, fatty acid profiling &amp; DNA profiling</b>		
<b>Morphological and morphometrical methods intended for identification</b>		
<b>Biochemical methods: e.g. enzyme electrophoresis, protein profiling</b>		
<b>Other</b>		
<b>Analytical sensitivity (= limit of detection)</b>		
<b>What is smallest amount of target that can be detected reliably?</b>	10 <sup>4</sup> CFU.mL <sup>-1</sup>	
<b>Diagnostic sensitivity</b>		
<b>Proportion of infected/infested samples tested positive compared to results from the standard test , see appendix 2 of PM 7/98</b>	Comparative study : 100% ; Collaborative study : 63.5%-70.5%	
<b>Specify the standard test</b>	Isolation + AGDIA Indirect-ELISA on pure culture (OEPP PM7/23)	
<b>Analytical specificity</b>		
<b>Specificity value</b>	47%	
<b>Number of strains/populations of target organisms tested</b>	50 (see attached downloadable file Appendix 1)	
<b>Number of non-target organisms tested</b>	53 (see attached downloadable file Appendix 2)	
<b>Cross reacts with (specify the species)</b>	DAS-ELISA can not exclude strains described as Xad but not pathogenic to Anthurium and some strains that belong to the same species but to a different pathovar. In addition, this method can not exclude some saprophytic strains.	
<b>Diagnostic Specificity</b>		
<b>Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test</b>	Comparative study : 94%; Collaborative study : 91%-93%	
<b>Specify the standard test</b>	Isolation + AGDIA Indirect-ELISA on pure culture (OEPP PM7/23)	
<b>Reproducibility</b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	74%-78%	
<b>Repeatability</b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	89%-91%	
<b>Test performance study</b>		
<b>Test performance study?</b>	Yes	
<b>Include brief details of the test</b>	Because of its lack of specificity, the DAS-ELISA should not be	

<b>performance study and its output. It available, provide a link to published article/report</b>	used for identification purposes. Report is downloadable from this database.
<b><u>Other information</u></b>	
<b>Any other information considered useful          e.g. robustness, ease of performing the test, etc.</b>	
The following complementary files are available online:	<ul style="list-style-type: none"> <li>• <a href="#">Appendix 1-List target strains</a></li> <li>• <a href="#">Appendix 2-List of non-target strains</a></li> <li>• <a href="#">Inter-laboratory ring test : Xanthomonas axonopodis pv. dieffenbachiae in Anthurium (Report Xad01-version 2)</a></li> </ul>