

**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>	Ralstonia solanacearum	
<b>Short description</b>	Isolation of Ralstonia solanacearum on SMSA	
<b>Laboratory contact details</b>	National Reference Centre, National Plant Protection Organization P.O. Box 9102, 6700 HC Wageningen, Netherlands	
<b>Date and reference of the validation report</b>	September 2009 and May 2013 - BAC-2009-01, BAC-2010-05 and BAC 2016-04 (Rosa)	
<b>Validation process according to EPPO Standard PM 7/98:</b>	Yes	
<b>Reference of the test description</b>	0 isolation on semi-selective medium SMSA	
<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>	Solanum tuberosum, Pelargonium sp; Rosa sp.	
<b>Matrices tested (if relevant)</b>	Potato tuber, pelargonium petioles, Rosa sp. and water samples	
<b>List of methods used</b>		
<b>Method for extraction / isolation / baiting of target organism from matrix</b>		
<b>Molecular methods, e.g. hybridization, PCR and real time PCR</b>		
<b>Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay</b>		
<b>Plating methods: selective isolation</b>	X	Isolation on semi-selective SMSA
<b>Bioassay methods: selective enrichment in host plants, baiting, plant test and grafting.</b>		
<b>Pathogenicity test</b>		
<b>Fingerprint methods: protein 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>	From potato tuber $3 \times 10^2$ cfu/ml, From pelargonium petioles $6,5 \times 10^2$ cfu/ml From Rosa $8,6 \times 10^2$ cfu/ml . From water samples $3 \times 10^1$ cfu/ml,	
<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>	100%	
<b>Specify the standard test</b>	Real time PCR for identification of Ralstonia solanacearum (Weller et al., 2000)	
<b>Analytical specificity</b>		
<b>Specificity value</b>	100%	
<b>Number of strains/populations of target organisms tested</b>	24 strains of Ralstonia solanacearum (different race/biovar combinations)	
<b>Number of non-target organisms tested</b>	37 strains of non-target organisms that can be found on potato tubers, water and ornamental plants	
<b>Cross reacts with (specify the species)</b>	Some growth on SMSA by Pseudomonas andropogonis, Burkholderia cepacia, Ralstonia pickettii and Pseudomonas syzygii, however colony morphology is not typical for Ralstonia solanacearum (negative results)	
<b>Diagnostic Specificity</b>		
<b>Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test</b>	100%	
<b>Specify the standard test</b>	Real time PCR for identification of Ralstonia solanacearum (Weller et al., 2000)	
<b>Reproducibility</b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100%	
<b>Repeatability</b>		
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100%	
<b>Test performance study</b>		
<b>Test performance study?</b>	No	
<b>Include brief details of the test performance study and its output.It</b>		

<b>available, provide a link to published article/report</b>	
<b>Other information</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="#">BAC-1010-005 methodevalidatie kweek Ralstonia solanacearum in Pelargonium en water v2</a></li> <li>• <a href="#">BAC-2016-04 verslag labvalidatie kweek Rsol Fylo type L vanuit Rosa sp.</a></li> <li>• <a href="#">Validation of the isolation of Ralstonia solanacearum from potato tuber extract</a></li> </ul>