

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.

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| Target Organism | Ralstonia solanacearum | |
| Short description | Detection of R. solanacearum by IF in Pelargonium sp. | |
| Laboratory contact details | Netherlands Institute for Vectors, Invasive plants and Plant health P.O. Box 9102, 6700 HC Wageningen, Netherlands | |
| Date and reference of the validation report | 13/10/2011 - BAC-2010-01 | |
| Validation process according to EPPO Standard PM 7/98: | Yes | |
| Reference of the test description | 0 | |
| Is the test the same as described in the EPPO DP? | Yes | |
| Is the lab accredited for this test? | Yes | |
| Plant species tested (if relevant) | Pelargonium zonale | |
| Matrices tested (if relevant) | From P. zonale stems | |
| List of methods used | | |
| Method for extraction / isolation / baiting of target organism from matrix | | |
| Molecular methods, e.g. hybridization, PCR and real time PCR | | |
| Serological methods: IF, ELISA, Direct Tissue Blot Immuno Assay | X | IF using the antiserum Loewe 073566-C.4732 |
| 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 | | |

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| Morphological and morphometrical methods intended for identification | | |
| Biochemical methods: e.g. enzyme electrophoresis, protein profiling | | |
| Other | | |
| <u>Analytical sensitivity (= limit of detection)</u> | | |
| What is smallest amount of target that can be detected reliably? | 5.9 x 10 ³ cfu/ml for P. zonale extracts | |
| <u>Diagnostic sensitivity</u> | | |
| Proportion of infected/infested samples tested positive compared to results from the standard test , see appendix 2 of PM 7/98 | 100% (12 out 12) | |
| Specify the standard test | Fatty acid analysis and conventional PCR | |
| <u>Analytical specificity</u> | | |
| Specificity value | 100% | |
| Number of strains/populations of target organisms tested | 32 (Table 2 and Table 4) | |
| Number of non-target organisms tested | 20 (Table 4) | |
| Cross reacts with (specify the species) | None | |
| <u>Diagnostic Specificity</u> | | |
| Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test | 100% (20 out 20) | |
| Specify the standard test | Fatty acid analysis and conventional PCR | |
| <u>Reproducibility</u> | | |
| Provide the calculated % of agreement for a given level of the pest (see PM 7/98) | 100% | |
| <u>Repeatability</u> | | |
| Provide the calculated % of agreement for a given level of the pest (see PM 7/98) | 100% | |
| <u>Test performance study</u> | | |
| Test performance study? | No | |
| Include brief details of the test performance study and its output.It available, provide a link to published article/report | | |
| <u>Other information</u> | | |
| Any other information considered | Selectivity studied based on three cultivars, namely | |

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| useful e.g. robustness, ease of performing the test, etc. | Pelargonium zonale guido, Pelargonium peltatum balkon rood en Pelargonium grandiflorum cyntia. No matrix effect found |
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| The following complementary files are available online: | <ul style="list-style-type: none"> • Validation sheet IF for detection of R. solanacearum in Pelargonium sp. extracts |