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.

| Laboratory contact details | EUPH DNA Barcoding , , EUPHRESCO | |
|---|---|--|
| Short description of the test | DNA Barcoding - Optimizing and validating DNA barcoding protocols for Plant | |
| Date, reference of the validation report | 2016-06-30 - Final_report_DNA barcoding.doc | |
| Validation process according to EPPO Standard PM7/98? | yes | |
| Is the lab accredited for this test? | no | |
| Was the validated data generated in the framework of a project? | Euphresco | |
| If yes, please specify | EUPHRESCO DNA Barcoding - Optimizing and validating DNA barcoding protocols for plant pests | |
| | | |
| Description of the test | | |
| | | |
| Organism(s) | Ludwigia peploides (LUDPE) Ludwigia grandiflora (LUDUR) Hydrocotyle ranunculoides (HYDRA) Hydrocotyle vulgaris (HYDVU) Myriophyllum heterophyllum (MYPHE) | |
| Detection / identification | identification | |
| Method(s) | Molecular other | |
| Method: Molecular other | | |
| Reference of the test description | | |
| As or adapted from an EPPO diagnostic protocol | yes | |
| EPPO Diagnostic Protocol name | PM 7/129 DNA barcoding as an identification tool for a number of regulated pests (version 1) | |
| As or adapted from an IPPC diagnostic protocol | no | |
| Is the test modified compared to the reference test | no | |
| Kit | | |
| Is a kit used | no | |
| Other information | | |

| Other details on the test | BIO-X-ACT [™] Short Mix (Bioline) See report for details about the primers & protocols | |
|---|---|--|
| Are the performance characteristics included in the EPPO diagnostic protocol? | yes | |
| Performance Criteria : | | |
| Organism 1.: | Ludwigia peploides(LUDPE) | |
| Analytical sensitivity | | |
| What is smallest amount of target that can be detected reliably? | See report | |
| Diagnostic sensitivity | | |
| Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98 | 50% (100% after re-analysing the consensus sequence data provided by TPS participants) | |
| Analytical specificity - inclusivity | | |
| Number of strains/populations of target organisms tested | See report | |
| Specificity value | | |
| Analytical specificity - exclusivity | | |
| Number of non-target organisms tested | See report | |
| Specificity value | | |
| Reproducibility | | |
| Provide the calculated % of agreement for a given level of the pest (see PM 7/98) | See report | |
| Organism 2.: | Ludwigia grandiflora(LUDUR) | |
| Analytical sensitivity | | |
| What is smallest amount of target that can be detected reliably? | See report | |
| Diagnostic sensitivity | | |
| Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98 | 63% (100% after re-analysing the consensus sequence data provided by TPS participants) | |
| Analytical specificity - inclusivity | | |
| Number of strains/populations of target organisms tested | See report | |
| Specificity value | | |
| Analytical specificity - exclusivity | | |
| Number of non-target organisms tested | See report | |
| Specificity value | | |
| Reproducibility | | |
| Provide the calculated % of agreement for a given level of the pest (see PM 7/98) | See report | |

| Organism 3.: | Hydrocotyle ranunculoides(HYDRA) | |
|---|--|--|
| Analytical sensitivity | | |
| What is smallest amount of target that can be detected reliably? | See report | |
| Diagnostic sensitivity | | |
| Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98 | 75% (100% after re-analysing the consensus sequence data provided by TPS participants) | |
| Analytical specificity - inclusivity | | |
| Number of strains/populations of target organisms tested | See report | |
| Specificity value | | |
| Analytical specificity - exclusivity | | |
| Number of non-target organisms tested | See report | |
| Specificity value | | |
| Reproducibility | | |
| Provide the calculated % of agreement for a given level of the pest (see PM 7/98) | See report | |
| Organism 4.: | Hydrocotyle vulgaris(HYDVU) | |
| Analytical sensitivity | | |
| What is smallest amount of target that can be detected reliably? | See report | |
| Diagnostic sensitivity | | |
| Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98 | 63% (100% after re-analysing the consensus sequence data provided by TPS participants) | |
| Analytical specificity - inclusivity | | |
| Number of strains/populations of target organisms tested | See report | |
| Specificity value | | |
| Analytical specificity - exclusivity | | |
| Number of non-target organisms tested | See report | |
| Specificity value | | |
| Reproducibility | | |
| Provide the calculated % of agreement for a given level of the pest (see PM 7/98) | See report | |
| Organism 5.: | Myriophyllum heterophyllum(MYPHE) | |
| Analytical sensitivity | | |
| What is smallest amount of target that can be detected reliably? | See report | |
| Diagnostic sensitivity | | |

| Proportion of infected/infested samples tested positive compared to results from the standard test, see appendix 2 of PM 7/98 | 88% (100% after re-analysing the consensus sequence data provided by TPS participants) | |
|---|---|--|
| Analytical specificity - inclusivity | | |
| Number of strains/populations of target organisms tested | See report | |
| Specificity value | | |
| Analytical specificity - exclusivity | | |
| Number of non-target organisms tested | See report | |
| Specificity value | | |
| Reproducibility | | |
| Provide the calculated % of agreement for a given level of the pest (see PM 7/98) | See report | |
| Test performance study | | |
| Test performance study? | yes | |
| Brief details of the test performance study and its output.It available, link to published article/report | Test performance study involving 10 laboratories (8 of which provided data). See report for more information. | |

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