

**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>	ILVO Institute for Agricultural and Fisheries Research Burg. Van Gansberghelaan 96, 9820 Merelbeke - Melle, Belgium
<b>Short description of the test</b>	Morphological identification of <i>D.virgifera</i> in pheromone traps
<b>Date, reference of the validation report</b>	2011-05-19 - F16_I09
<b>Validation process according to EPPO Standard PM7/98?</b>	no
<b>Is the lab accredited for this test?</b>	yes
<b>Was the validated data generated in the framework of a project?</b>	
<b>Description of the test</b>	
<b>Organism(s)</b>	<i>Diabrotica virgifera virgifera</i> (DIABVI)
<b>Detection / identification</b>	identification
<b>Method(s)</b>	Extraction Morphological
<b>Method: Extraction</b>	
<b>Reference of the test description</b>	
<b>Other information</b>	
<b>Other details on the test</b>	Visual inspection of the pheromone traps with stereomicroscope, using a lattice work (A→P, 1→25) to localize the beetles on the trap
<b>Method: Morphological</b>	
<b>Reference of the test description</b>	
<b>As or adapted from an EPPO diagnostic protocol</b>	yes
<b>EPPO Diagnostic Protocol name</b>	PM 7/036 <i>Diabrotica virgifera</i> (version 1)
<b>Is the test modified compared to the reference test</b>	no
<b>Other information</b>	
<b>Other details on the test</b>	Morphological identification using stereomicroscope and checklist (F03_I07) with most 1 / 3 important morphological characters of the

	beetle, same morphological characters as described in PM 7/36 (1). Before the analysis starts there is a control of a beetle (standard reference material from Hungary) with checklist F03_I11
<b>Are the performance characteristics included in the EPPO diagnostic protocol?</b>	<b>no</b>
<b>Performance Criteria :</b>	
<b>Organism 1.:</b>	<b>Diabrotica virgifera virgifera(DIABVI)</b>
<b>Analytical sensitivity</b>	
<b>What is smallest amount of target that can be detected reliably?</b>	1 individual beetle (In the validation test 10 pheromone traps were used, artificially infected with one D. virgifera each, on different places on the traps. Four annalists checked the traps and noticed the place on the trap (f.e. B23, G8))
<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>	Not done
<b>Standard test(s)</b>	Not relevant
<b>Analytical specificity - inclusivity</b>	
<b>Number of strains/populations of target organisms tested</b>	Not done
<b>Specificity value</b>	
<b>Analytical specificity - exclusivity</b>	
<b>Number of non-target organisms tested</b>	Not done
<b>Specificity value</b>	Not done
<b>Diagnostic Specificity</b>	
<b>Proportion of uninfected/uninfested samples (true negatives) testing negative compared to results from a standard test</b>	Not done
<b>Reproducibility</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% (10 pheromone traps (negative traps already used in maize fields), each of them artificially infected with 1 adult of D. virgifera. On each pheromone trap there was a large diversity of other insects, belonging to different orders. Four annalists checked the pheromone traps on four different days)
<b>Repeatability</b>	
<b>Provide the calculated % of agreement for a given level of the pest (see PM 7/98)</b>	100% (10 pheromone traps (negative traps already used in maize fields), each of them artificially infected with 1 adult of D. virgifera. On each pheromone trap there was a large diversity of other insects, belonging to different orders. Five replicates.)
<b>Test performance study</b>	

<b>Test performance study?</b>	yes
<b>Brief details of the test performance study and its output. It available, link to published article/report</b>	Interlaboratory test with 5 participating labs, including DCP. Each lab received 5 artificially infected pheromone traps. Same situation for each lab: the number of the beetles on the traps, as well as the location on the traps was identical. Result: one lab had a success rate of 71% (36,4% false positives and 18,2% false negatives). The other labs and DCP: success rate 100% (false positives and false negatives 0%).

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