Reissue n° 1 Final report PT-03 Tm 1/2025

PT-03: "Identification of *Trichinella* larvae at the species level by a molecular method"

Reason for reissue: Correction of issue date
This document replaces the previous final report

Design

Purpose	Evaluation of laboratories competence in molecular identification of *Trichinella* larvae species	
Scheme type	Single, simultaneous	
Participants	National reference laboratories for parasites. Public and private laboratories	
N. of participants	Depending on request	
Method	not regulated	
Test method	chosen by the participant	
PT items	Matrix	not applicable
	Item	*Trichinella* spp. larvae in 96% ethanol
	N. of samples	4 (10 larvae/each species) 1.5 ml vials for each participant
	Distribution	Preparation and packaging can be performed before shipment
Subcontracted activities	NA	
Results evaluation	Qualitative	

Implementation

N. of participants	24	PT items	PT panel	10 larvae for each of the following species: *T. spiralis, T. nativa, T. britovi e T. pseudospiralis*
Public laboratories	-		Shipping	DHL
Private laboratories	-			

NRLs	24	Shipping dates	March 17, 2025

The PT final evaluation was qualitative only. The PT was considered passed if all isolates or, in case of single larvae at least one of them for each isolate, were correctly identified.

Laboratory code	N. right identification	N. wrong identification	N. missed identification	Final evaluation
TM60	4	0	0	positive
TM61	4	0	0	positive
TM62	4	0	0	positive
TM63	4	0	0	positive
TM64	4	0	0	positive
TM65	4	0	0	positive
TM66	4	0	0	positive
TM67	4	0	0	positive
TM68	4	0	0	positive
TM69	3	1	0	negative
TM70	4	0	0	positive
TM71	4	0	0	positive
TM72	3	0	1	negative
TM73	4	0	0	positive
TM74	4	0	0	positive
TM75	4	0	0	positive
TM76	4	0	0	positive
TM77	4	0	0	positive
TM78	-	-	-	NA
TM79	4	0	0	positive
TM80	4	0	0	positive
TM81	4	0	0	positive
TM82	4	0	0	positive
TM83	4	0	0	positive

PT Provider
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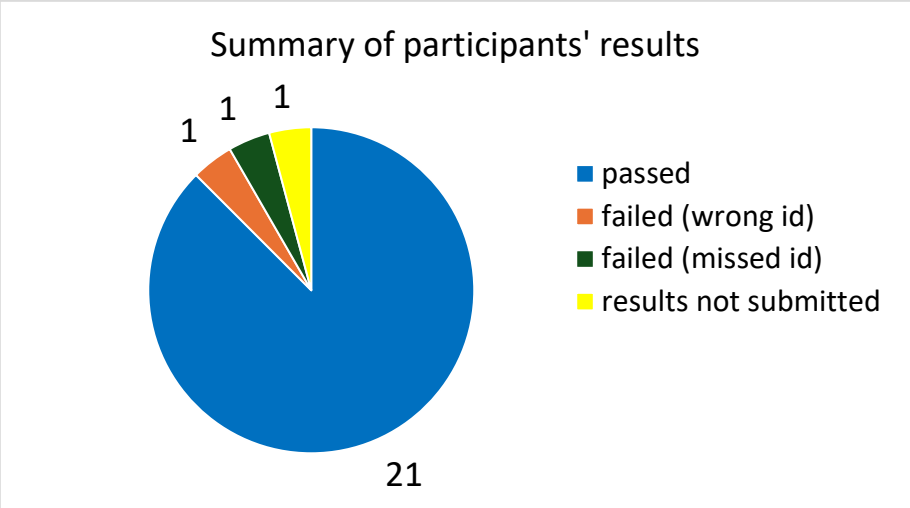
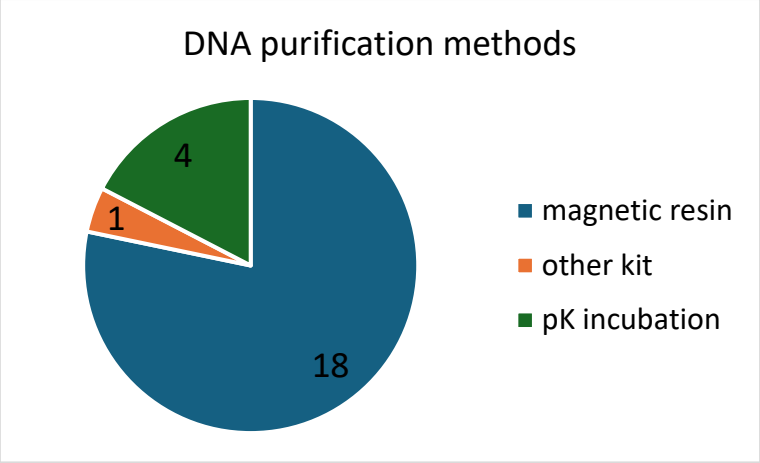
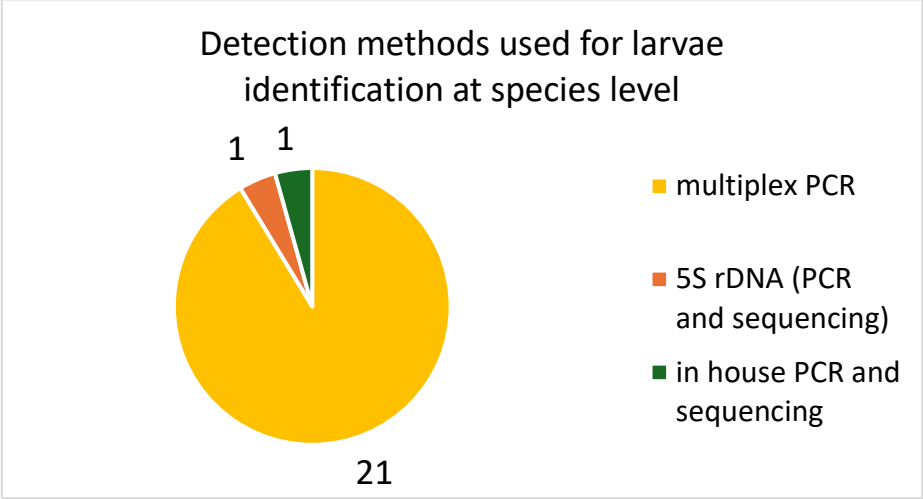
Graphical summary







Overtime comparison of results (last 5 years)

Laboratory code	2021	2022	2023	2024	2025
TM60	negative	positive	positive	positive	positive
TM61	positive	positive	positive	positive	positive
TM62	positive	positive	positive	positive	positive
TM63	positive	positive	positive	positive	positive
TM64	positive	positive	positive	positive	positive
TM65	positive	positive	positive	positive	positive
TM66	negative	positive	positive	positive	positive
TM67	positive	positive	positive	positive	positive
TM68	positive	positive	positive	positive	positive
TM69	negative	positive	positive	positive	negative
TM70	negative	negative	negative	negative	positive
TM71	positive	positive	positive	positive	positive
TM72	positive	positive	positive	positive	negative
TM73	negative	positive	positive	positive	positive
TM74	positive	positive	positive	positive	positive
TM75	negative	positive	positive	positive	positive
TM76	negative	positive	positive	positive	positive
TM77	positive	positive	positive	positive	positive
TM78	positive	-	positive	positive	-*
TM79	negative	positive	positive	-	positive
TM80	positive	positive	positive	positive	positive
TM81	positive	positive	positive	negative	positive
TM82	positive	positive	positive	positive	positive
TM83	positive	positive	negative	positive	positive

*the laboratory did not send results

Comments:

Most participants identified the samples using the multiplex PCR method. Two participants, however, used methods based on PCR and sequencing of genes such as 5S, 16S, and COIII. DNA purification was primarily performed using commercial kits based on magnetic beads, except for four participants who used a protocol involving incubation in Tris-HCl and proteinase K solutions. Out of a total of 24 participants, 21 passed the test. One laboratory failed due to incorrect identification, another failed because it did not obtain amplification from one of the samples, and finally, one participant did not submit any results.

Written and elaborated by
PTP person in charge

Dr. G. Marucci

Verified and issued by
The Director

Dr. A. Casulli

Date 24/09/2025

Notes:

1. To guarantee confidentiality, participant laboratories are identified by alphanumeric codes. PT participant identity is kept confidential and bound by professional secrecy. The PTP reserves itself the right to provide the laboratory PT result to the competent authority on request.
2. The organizer designates a qualified company for the transport and delivery of PT items.
3. Each participating laboratory receives a PT panel according to the PT scheme. Each PT item consists of 4 or 12 1.5 ml vials containing four different *Trichinella spp*. The homogeneity of PT items is ensured by an accurate control of the number of larvae spiked into each vial (item), made by two operators using a stereo microscope. PT items are stable for 5 years from the date of preparation (corresponding to the shipping date), provided that they are maintained in suitable conditions.
4. At the beginning of each year, the organizer draws up a PT program and makes it known by sending an email to the NRLs.
5. The final report issued for each PT round shows the PT program implementation.

End of the report