

Final report PT-Tm 1/2019

PT “Identification of *Trichinella* larvae at the species level by a molecular method”

Design

Purpose	Evaluation of laboratories in charge for official control on food	
Scheme type	Single	
Participants	Public and private, European laboratories	
N. of participants	Depending on request	
Method	not regulated	
Test method	chosen by the participant	
PT items	Matrix	not applicable
	Item	<i>Trichinella</i> spp. larvae in 96% ethanol
	N. of samples	4 vials for each participant (10 larvae/vial)
	Distribution	Preparation and packaging can be performed before shipment
Subcontracted activities	NA	
Results evaluation	Qualitative	

Implementation

N. of participants	23	PT items	PT panel 4 vials	10 larvae for each of the following species: <i>T. spiralis</i> , <i>T. nativa</i> , <i>T. britovi</i> , and T6 genotype
Public laboratories				
Private laboratories				
NRLs	23		Shipping	DHL

PT Provider
 Unit of Foodborne and Neglected Parasitic Diseases
 Istituto Superiore di Sanità

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PTP N° 0005

Membro degli Accordi di Mutuo Riconoscimento
 EA, IAF e ILAC

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Shipping dates	March 11, 2019
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Qualitative results

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
NRL1	4	0	0	positive
NRL2	4	0	0	positive
NRL3	3	1	0	negative
NRL6	4	0	0	positive
NRL7	4	0	0	positive
NRL8	4	0	0	positive
NRL10	4	0	0	positive
NRL12	4	0	0	positive
NRL13	4	0	0	positive
NRL14	2	2	0	negative
NRL16	4	0	0	positive
NRL17	4	0	0	positive
NRL18	4	0	0	positive
NRL20	4	0	0	positive
NRL21	4	0	0	positive
NRL22	4	0	0	positive
NRL23	4	0	0	positive
NRL24	4	0	0	positive
NRL25	4	0	0	positive
NRL35	4	0	0	positive
NRL40	3	1	0	negative
NRL47	4	0	0	positive
TLE6	4	0	0	positive

Legend: Laboratories that failed the PT are marked in red.

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Summary of qualitative results:

Number of participant laboratories	23
Number of participants that passed the PT	20
Number of participants that failed the PT	3

Overtime comparison of results (last 5 years)

Laboratory code	2015	2016	2017	2018	2019
NRL1	positive	negative	negative	positive	positive
NRL2	-	-	positive	positive	positive
NRL3	positive	positive	negative	positive	negative
NRL4	-	positive	-	-	-
NRL6	negative	positive	positive	positive	positive
NRL7	positive	positive	positive	positive	positive
NRL8	positive	positive	positive	positive	positive
NRL10	positive	positive	positive	positive	positive
NRL12	positive	positive	positive	positive	positive
NRL13	-	-	-	-	positive
NRL14	-	negative	negative	negative	negative
NRL16	positive	positive	negative	positive	positive
NRL17	positive	negative	positive	positive	positive
NRL18	-	NA*	positive	NA*	positive
NRL20	-	-	-	negative	positive
NRL21	positive	negative	positive	positive	positive
NRL22	positive	positive	positive	negative	positive
NRL23	positive	positive	positive	positive	positive
NRL24	positive	positive	positive	positive	positive
NRL25	positive	negative	positive	positive	positive
NRL34	positive	negative	-	-	-
NRL35	positive	negative	positive	positive	positive
NRL40	-	-	positive	positive	negative
NRL42	-	NA*	negative	NA*	-
NRL45	negative	-	-	-	-
NRL46	-	-	positive	-	-
NRL47					positive
TLE6	-	positive	-	negative	positive

*results not submitted

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Comments: The laboratories NRL3 and NRL40 failed the correct identification of one of the species included in the PT panel because of the presence of PCR non-specific products and because of incorrect sequencing respectively. NRL14 reported difficulties with PCR amplification of the target regions.

The Director
Dr. S.M. Cacciò

Simonella Cacciò

Date 03/06/2019

Notes:

1. To guarantee confidentiality, participant laboratories are identified by alphanumeric codes. PT participant identity is kept confidential and bound by professional secrecy. If PT results have to be provided directly to a competent authority, the organizer shall send a written notice to inform the involved participants.
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

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