

Final report PT-Td 2/2016

PT report on “Digestion method to detect *Trichinella* larvae in meat samples according to the regulation EU 2015/1375”

Design

Purpose	Evaluation of laboratories in charge for official inspection to detect <i>Trichinella</i> spp. larvae in meat	
Scheme type	Single, simultaneous	
Participants	Public and private, national and international laboratories	
N. of participants	Depending on requests	
Method	Regulation EU 2015/1375 (annex 1)	
Test method	Regulation EU 2015/1375 (annex 1)	
PT items	Matrix	Pork/horse meat
	Item	<i>Trichinella</i> live larvae
	N. of samples	
	Distribution	Immediate shipment after preparation
Subcontracted activities	NA	
Results evaluation	Qualitative	

Implementation

N. of participants	32	PT items	Pork	84
Public laboratories	32		Horse meat	12
Private laboratories	0		PT panel composition	3 positive samples, 2 with 3 larvae and 1 with 5 larvae
			Shipping	TNT Express
Shipping dates	March 14, 2016			

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PTP N° 0005

Membro di MLA EA per gli schemi di accreditamento SGQ, SGA, PRD, PRS, ISP, GHG, LAB e LAT, di MLA IAF per gli schemi di accreditamento SGQ, SGA, SSI, FSM e PRD e di MRA ILAC per gli schemi di accreditamento LAB, MED, LAT e ISP

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Analysis of the results

According to regulation EU 2015/1375 of August 10, 2015, laying down specific rules on official controls for *Trichinella* in meat, the results of artificial digestion methods have to be expressed only qualitatively (i.e. as positive if *Trichinella* spp. larvae are found in the sample, or negative if no larvae are present in the sample). Then the PT is considered passed if all positive and negative samples were correctly identified by the participant.

Laboratory code	N° of samples correctly identified	N° of samples NOT correctly identified	Final evaluation
NRL1	2	1	negative
NRL2	3	0	positive
NRL3	3	0	positive
NRL4	3	0	positive
NRL5	3	0	positive
NRL6	3	0	positive
NRL7	3	0	positive
NRL8	3	0	positive
NRL9	3	0	positive
NRL10	3	0	positive
NRL11	3	0	positive
NRL12	3	0	positive
NRL13	3	0	positive
NRL14	3	0	positive
NRL15	1	2	negative
NRL16	3	0	positive
NRL17	3	0	positive
NRL18	3	0	positive
NRL19	3	0	positive
NRL20	3	0	positive
NRL21	3	0	positive
NRL22	3	0	positive
NRL23	3	0	positive
NRL24	3	0	positive
NRL25	3	0	positive
NRL26	2	1	negative
NRL34	3	0	positive
NRL35	3	0	positive
NRL40	3	0	positive
NRL41	3	0	positive
NRL42	3	0	positive
TLE6	3	0	positive

Legend: Laboratories, which failed the PT, are marked in bold.

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Summary of results:

Number of participant laboratories	31
Number of participant laboratories which passed the PT	28
Number of participant laboratories which failed the PT	3

Overtime comparison of results

NRL code	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	positive	positive	positive	positive	positive	positive	positive	positive	positive	negative
2	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
3	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
4	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
5	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
6	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
7	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
8	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
9	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
10	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
11	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
12	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
13	negative	positive	positive	positive	positive	positive	positive	positive	positive	positive
14	positive	positive	positive	positive	positive	positive	positive	positive	positive	positive
15	negative	positive	negative	positive	positive	positive	negative	positive	positive	negative
16	positive	positive	positive	positive	negative	positive	negative	positive	positive	positive
17	negative	positive	positive	positive	positive	positive	positive	positive	positive	positive
18	positive	positive	positive	positive	negative	positive	negative	positive	positive	positive
19	positive	positive	positive	positive	positive	positive	positive	positive	negative	positive
20	-	positive	positive	positive	positive	positive	positive	positive	positive	positive
21	positive	positive	positive	positive	negative	positive	positive	positive	positive	positive
22	negative	negative	positive	positive	positive	positive	positive	positive	positive	positive
23	positive	positive	positive	positive	positive	positive	positive	positive	negative	positive
24	positive	positive	negative	positive	positive	positive	positive	positive	positive	positive
25	positive	negative	negative	positive	negative	positive	positive	-	negative	positive
26	-	-	-	positive	positive	positive	positive	positive	positive	negative
34	-	-	positive	positive	positive	positive	positive	positive	positive	positive
35	-	-	-	negative	positive	positive	-	positive	negative	positive
36	-	-	-	positive	positive	-	-	-	positive	-
40	-	-	-	-	-	positive	positive	positive	positive	positive
41	-	-	-	-	-	-	positive	positive	positive	-
42	-	-	-	-	-	-	negative	positive	positive	positive
43	-	-	-	-	-	-	-	positive	-	-
44	-	-	-	-	-	-	-	positive	-	-
TLE6	-	-	-	-	-	-	-	positive	positive	positive

Legend: During the 2007-2011 period, the PT final evaluation had not been done because the acceptability rule to pass the PT had not been established yet. In 2012, it had been established that more than one false negative would have led to a negative final evaluation. To allow the overtime comparison of the qualitative results obtained by participants, the 2012 PT rule has been used to evaluate the results of the previous years. From 2013, due to the reduction of the number of samples (see the PT panel composition table reported below), all the spiked samples have to be recognized as positive.

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PT panel composition

Year	Number of sample	Minimum n. of larvae per sample	Maximum n. of larvae per sample
2007	10	3	50
2008	10	3	20
2009	10	1	15
2010	10	1 (35g samples), 2 (100g samples)	3 (35g samples), 9 (100g samples)
2011	10	1 (35g samples), 2 (100g samples)	3 (35g samples), 10 (100g samples)
2012	5	3	8
2013	3	3	5
2014	3	4	4
2015	3	3	3
2016	3	3	5

Comments

The percentage of laboratories that every year pass the PT is generally quite high, the lower registered value was 86.2 %, not considering the 2007.

Few laboratories need to improve a little more their skill to guarantee stable positive results over time.

Some labs, which usually obtained good results, occasionally reported as false negative samples spiked with 3 larvae. The use of samples spiked with very low number of larvae over a long period of time seems to increase the probability of an accidental failure

The three laboratories, which failed the PT, were invited to investigate the causes of the failure and to implement the appropriate corrective actions. Labs that failed the PT asked to analyse a new set of samples.

The Director

Dr. E. Pozio



Data 19/05/2016

Notes:

- 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.
- The organizer designates a qualified company for the transport and delivery of PT items.
- Each participating laboratory receive a PT panel according to the PT scheme. Each PT item consists of minced pork or horse meat spiked or not with live *Trichinella spiralis* muscle larvae. The homogeneity of PT items is ensured by an accurate control of the number of larvae spiked into each sample (item), made by two operators using a stereo microscope. PT items are stable for 5 days from the date of preparation (corresponding to the shipping date), provided that they are maintained in suitable conditions.
- At the beginning of each year, the organizer draws up a PT program and makes it known by publishing it on the EURLP website (for national, international, public and private laboratories) or by email (NRLs).
- The final report issue of each PT round shows the PT program implementation.

End of the report

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