

Final report PT-01: Td 2/2025

PT-01: Artificial digestion to detect *Trichinella* larvae in meat samples according to the Regulation EU 2020/1478 and Annex III Regulation EU 2015/1375

Design

Purpose	Evaluation of laboratories competence 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	ISO 18743:2015/Amd.1:2023 and Reg EU 2015/1375 (Ann III)	
PT items	Matrix	Pork/horse meat
	Item	<i>Trichinella</i> live larvae
	N. of samples	Three for each participant
	Distribution	Immediate shipment after preparation
Subcontracted activities	NA	
Results evaluation	Qualitative, as stated in the ISO 18743:2015/Amd.1:2023	

Implementation

N. of participants	35	PT items	Pork meat	90
Public laboratories	35		Horse meat	15
Private laboratories	0		PT panel composition	3 positive samples spiked with 4 larvae
			Shipping	DHL
Shipping date	March 17, 2025			

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Analysis of the results

As stated in the ISO 18743:2015, cited in the Regulation EU 2020/1478, and in the Amd.1:2023 of the cited ISO, 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 the participant correctly identified all positive and negative samples.

Laboratory code	Item type	N° of “false positive”	N° of “false negative”	Final evaluation
NRL56	100g pork	0	0	positive
NRL80	100g horse	0	0	positive
NRL76	100g horse	0	0	positive
NRL70	100g pork	0	0	positive
NRL64	100g pork	0	0	positive
NRL61	100g pork	0	0	positive
NRL65	100g pork	0	0	positive
NRL58	100g pork	0	0	positive
NRL66	100g pork	0	0	positive
NRL74	100g pork	0	0	positive
NRL50	100g pork	0	0	positive
NRL53	100g horse	0	0	positive
NRL62	100g pork	0	0	positive
NRL82	100g pork	0	0	positive
NRL79	100g pork	0	0	positive
TLE32	100g pork	0	1	negative
NRL83	100g pork	0	0	positive
NRL51	100g horse	0	0	positive
NRL68	100g pork	0	0	positive
NRL84	100g pork	0	0	positive
NRL63	100g pork	0	0	positive
NRL67	100g pork	0	0	positive
NRL55	100g pork	0	0	positive
NRL72	100g pork	0	0	positive
NRL60	100g pork	0	0	positive
NRL57	100g pork	0	0	positive
NRL69	100g pork	0	0	positive
NRL78	100g pork	0	0	positive
NRL73	100g horse	0	0	positive
NRL71	100g pork	0	0	positive
NRL59	100g pork	0	0	positive
TLE7	100g pork	0	0	positive
NRL52	100g pork	0	0	positive
NRL77	35g pork	0	0	positive
NRL75	100g pork	0	0	positive

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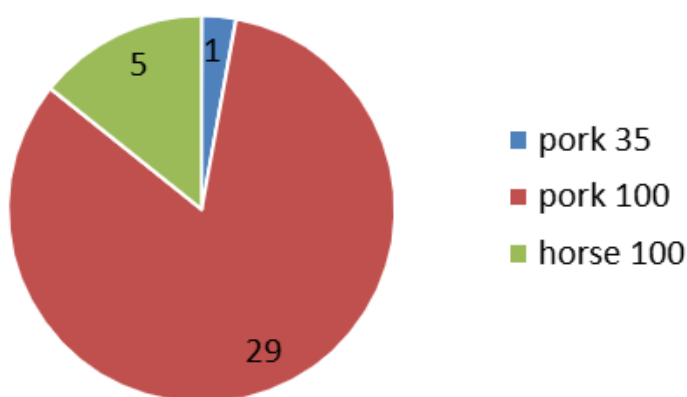
Legenda:

- Laboratories that failed the PT are highlighted in red.

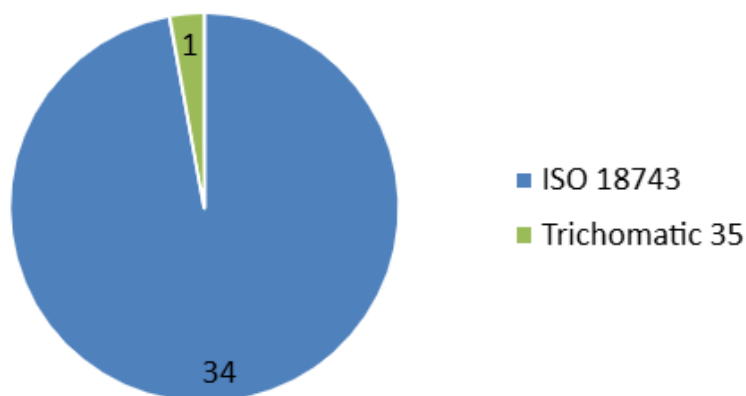
Summary of results:

Number of participant laboratories	35
Number of participants that passed the PT	34
Number of participants that failed the PT	1

Sample type



Method used



Overtime comparison of results

Laboratory code	2020	2021	2022	2023	2024	2025
NRL56	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL80	Pos E-100	Pos E-100	Pos S-100	Pos E-100	Pos E-100	Pos E-100
NRL76	NP	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos E-100
NRL70	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL64	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL61	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL65	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-35	Pos S-100
NRL58	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL66	Pos E-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL74	Pos S-35	Pos S-35	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL50	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL53	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos E-100
NRL62	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL82	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL79	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
TLE32	NP	NP	NP	Pos S-100	Neg S-100	Neg S-100
NRL83	NP	Pos S-35	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL51	Pos S-35	Pos E-100	Pos S-100	Pos E-100	Pos S-100	Pos E-100
NRL68	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL84	NP	NP	NP	NP	Pos S-100	Pos S-100
NRL63	NP	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL67	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL55	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL72	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL60	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL57	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL69	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL78	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL73	Pos S-100	Pos E-100	Pos S-100	Pos S-100	Pos S-100	Pos E-100
NRL71	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL59	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
TLE7	NP	NP	NP	NP	NP	Pos S-100
NRL52	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100	Pos S-100
NRL77	Pos S-35	Pos S-35	Pos S-100	Pos S-35	Pos S-35	Pos S-35
NRL75	Pos S-100	Pos E-100	Pos S-100	Pos E-100	Pos S-100	Pos S-100

NP= no participation. Pos= positive. Neg= negative.

N.B. Information on the type of samples analyzed is reported according to the following codes:
 S-100 (swine 100g), S-35 (swine 35g), E-100 (equine 100g), E-35 (equine 35g).

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Comments

All but one the participating laboratories successfully passed the PT demonstrating their competence in detecting *Trichinella* larvae in meat samples. The laboratory that did not pass reported that a large portion of the meat remained undigested, likely causing the larvae to remain trapped in the sieve. If the laboratory is interested in repeating the test, a new sample panel (EQA scheme) will be arranged for shipment.

Date 14/04/2025

Written and elaborated by
PTP person in charge

Dr. G. Marucci

Verified and issued by
The Director

Dr. A. Casulli

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 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.
4. 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).
5. The final report issue of each PT round shows the PT program implementation.

End of the report

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