

Final report PT-01: Td 2/2021

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

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	Reg EU 2020/1478 and Reg EU 2015/1375 (Ann III)	
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, as stated in the ISO 18743:2015 cited in the Reg EU 2020/1478	

Implementation

N. of participants	32	PT items	Pork	87
Public laboratories	32		Horse meat	9
Private laboratories	0		PT panel composition	3 positive samples with 4 larvae each
			Shipping	DHL
Shipping date	March 15, 2021			

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

viale Regina Elena, 299 – 00161 Rome, Italy

Person in charge of PT: Dr Gianluca Marucci
 e-mail: gianluca.marucci@iss.it; tel: +39 0649902310



PTP N° 0005 P
 Membro degli Accordi di Mutuo Riconoscimento
 EA, IAF e ILAC
 Signatory of EA, IAF and ILAC
 Mutual Recognition Agreements

Analysis of the results

As stated in the ISO 18743:2015, cited in the Regulation EU 2020/1478, 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
NRL50	100g pork	0	0	positive
NRL51	100g horse	0	0	positive
NRL52	100g pork	0	0	positive
NRL53	100g pork	0	0	positive
NRL55	100g pork	0	0	positive
NRL56	100g pork	0	0	positive
NRL57	100g pork	0	0	positive
NRL58	100g pork	0	0	positive
NRL59	100g pork	0	0	positive
NRL60	100g pork	0	0	positive
NRL61	100g pork	0	0	positive
NRL62	100g pork	0	0	positive
NRL63	100g pork	0	0	positive
NRL64	100g pork	0	0	positive
NRL65	100g pork	0	0	positive
NRL66	100g pork	0	0	positive
NRL67	100g pork	0	1	negative
NRL68	100g pork	0	0	positive
NRL69	100g pork	0	0	positive
NRL70	100g pork	0	0	positive
NRL71	100g pork	0	0	positive
NRL72	100g pork	0	0	positive
NRL73	100g horse	0	0	positive
NRL74	35g pork	0	0	positive
NRL75	100g pork	0	0	positive
NRL76	100g pork	0	0	positive
NRL77	35g pork	0	0	positive
NRL78	100g pork	0	0	positive
NRL79	100g pork	0	0	positive
NRL80	100g horse	0	0	positive
NRL82	100g pork	0	0	positive
NRL83	35g pork	0	0	positive

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

viale Regina Elena, 299 – 00161 Rome, Italy

Person in charge of PT: Dr Gianluca Marucci
 e-mail: gianluca.marucci@iss.it; tel: +39 0649902310

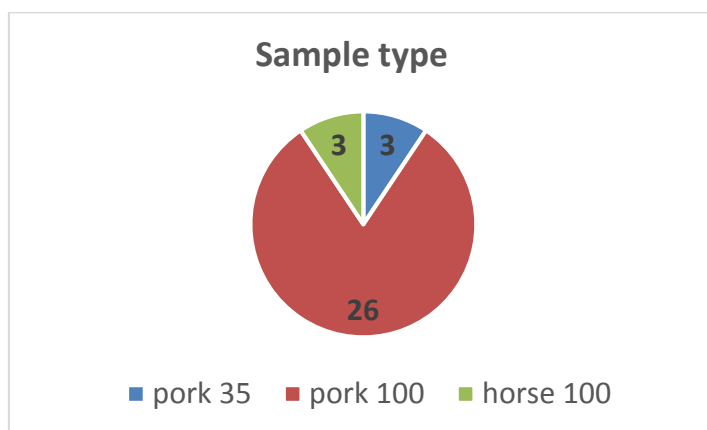


PTP N° 0005 P
 Membro degli Accordi di Mutuo Riconoscimento
 EA, IAF e ILAC
 Signatory of EA, IAF and ILAC
 Mutual Recognition Agreements

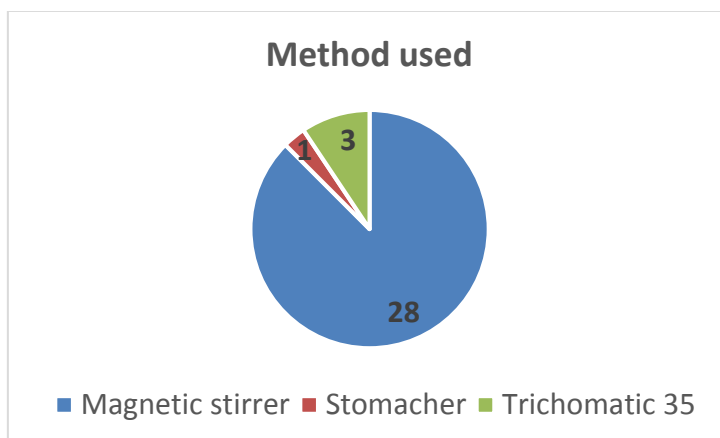
Summary of results:

Number of participant laboratories	32
Number of participants that passed the PT	31
Number of participants that failed the PT	1

Most participants (26) analyzed samples consisting of 100g pork, three laboratories analyzed 35g pork samples and three laboratories analyzed 100g horse meat samples.



The magnetic stirrer (reference method) was the prevalent method applied (28 labs), followed by Trichomatic (3 labs) and by Stomacher (1 lab).



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

viale Regina Elena, 299 – 00161 Rome, Italy

Person in charge of PT: Dr Gianluca Marucci
 e-mail: gianluca.marucci@iss.it; tel: +39 0649902310



PTP N° 0005 P
 Membro degli Accordi di Mutuo Riconoscimento
 EA, IAF e ILAC
 Signatory of EA, IAF and ILAC
 Mutual Recognition Agreements

Overtime comparison of results

Laboratory code	2017	2018	2019	2020	2021
NRL50	positive	positive	positive	positive	positive
NRL51	positive	positive	positive	positive	positive
NRL52	positive	positive	positive	positive	positive
NRL53	positive	positive	positive	positive	positive
NRL55	positive	positive	positive	positive	positive
NRL56	positive	positive	positive	positive	positive
NRL57	positive	positive	positive	positive	positive
NRL58	positive	positive	positive	positive	positive
NRL59	positive	positive	positive	positive	positive
NRL60	positive	positive	positive	positive	positive
NRL61	positive	positive	positive	positive	positive
NRL62	positive	positive	positive	positive	positive
NRL63	positive	positive	positive	-	positive
NRL64	positive	positive	positive	positive	positive
NRL65	positive	positive	positive	positive	positive
NRL66	positive	positive	positive	positive	positive
NRL67	positive	positive	positive	positive	negative
NRL68	positive	positive	positive	positive	positive
NRL69	positive	positive	positive	positive	positive
NRL70	positive	positive	positive	positive	positive
NRL71	positive	positive	positive	positive	positive
NRL72	positive	negative	positive	positive	positive
NRL73	positive	positive	positive	positive	positive
NRL74	positive	positive	positive	positive	positive
NRL75	positive	positive	negative	positive	positive
NRL76	positive	positive	positive	-	positive
NRL77	positive	positive	positive	positive	positive
NRL78	positive	positive	positive	positive	positive
NRL79	positive	positive	positive	positive	positive
NRL80	positive	positive	positive	positive	positive
NRL82	positive	positive	positive	positive	positive
NRL83	-	-	positive	-	positive

The overtime comparison of PT results obtained in the last five years shows the occasionally failure of no more than one laboratory.

Comments

The laboratory NRL67 was invited to investigate the causes of the failure and to implement the appropriate corrective actions. In case the lab was interested in repeating the test, the shipment of a new sample panel (EQA scheme) will be arranged.

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

viale Regina Elena, 299 – 00161 Rome, Italy

Person in charge of PT: Dr Gianluca Marucci
 e-mail: gianluca.marucci@iss.it; tel: +39 0649902310



PTP N° 0005 P
 Membro degli Accordi di Mutuo Riconoscimento
 EA, IAF e ILAC
 Signatory of EA, IAF and ILAC
 Mutual Recognition Agreements

Date 25/03/2021

PTP person in charge

Dr. G. Marucci



The Director

Dr. S.M. Cacciò



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

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

viale Regina Elena, 299 – 00161 Rome, Italy

Person in charge of PT: Dr Gianluca Marucci
e-mail: gianluca.marucci@iss.it; tel: +39 0649902310



PTP N° 0005 P

Membro degli Accordi di Mutuo Riconoscimento
EA, IAF e ILAC

Signatory of EA, IAF and ILAC
Mutual Recognition Agreements