Final report PT-An 1/2019

PT report on "Detection of Anisakidae L3 larvae in fish fillets"

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	fresh water farmed fish fillet
	Item	Anisakidae live larvae
	N. of samples	3 for each participant
	Distribution	Immediate shipment after preparation
Subcontracted activities	NA	
Results evaluation	Qualitative	

Implementation

N. of participants	26	PT items	fish fillet sandwiches	78
Public laboratories	3			
Private laboratories			PT panel composition	3 fish fillet sandwiches: one spiked with 2 larvae, one spiked with 1 larva and, one spiked with 0 larva
NRL	23		Shipping	TNT Express
Shipping dates	11/03/2019			

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Results

The PT final evaluation was qualitative only. The PT was considered passed if all positive and all negative samples were correctly identified by the participant.

Laboratory code	N° of samples correctly identified	N° of samples NOT correctly identified	Final evaluation
A1	3	0	Positive
A2	3	0	Positive
A3	3	0	Positive
A5	3	0	Positive
A6	3	0	Positive
A7	3	0	Positive
A10	3	0	Positive
A11	3	0	Positive
A12	3	0	Positive
A13	3	0	Positive
A15	3	0	Positive
A16	3	0	Positive
A17	3	0	Positive
A18	3	0	Positive
A19	**2**	**1**	**Negative**
A20	3	0	Positive
A21	3	0	Positive
A25	3	0	Positive
A26	3	0	Positive
A28	3	0	Positive
A29	3	0	Positive
A30	3	0	Positive
A31	3	0	Positive
A35	**2**	**1**	**Negative**
A36	3	0	Positive
A39	3	0	Positive

Legend:

- Laboratories that failed the PT are marked in bold.

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Summary of results:

Total number of PT panels	26
Number of participant laboratories	26
Number of participants that passed the PT	24
Number of participants that failed the PT	2

Overtime comparison of results

Laboratory code	2014	2015	2016	2017	2018	2019
A1	P	P	P	P	P	P
A2	P	P	P	**N**	P	P
A3	**N**	P	P	P	P	P
A5	P	P	P	P	P	P
A6	P	P	P	P	P	P
A7	P	P	P	P	P	P
A8	P	P	P		P	
A9	P		P	**N**	P	
A10	P	P	**N**	P	P	P
A11	P	**N**	P	**N**	P	P
A12	P	**N**	P	P	P	P
A13	P	P	P	**N**	P	P
A15	P	P	P	P	P	P
A16	**N**	P	P	**N**	P	P
A17	*NR*		P	P	P	P
A18	P	P	P	P	P	P
A19	P	P	P	P	P	**N**
A20	P	P	P	P	P	P
A21	P	P	P	P	P	P
A23/A33/A25*	**N**	P	P	**N**	P	P
A25	P	P	P	**N**		
A26	P	P	P	P	P	P
A28	P		P	P	P	P
A29			P		P	P
A30		P	P	P	P	P
A31		P	P	P	P	P
A35					P	**N**
A36				P	P	P
A37					**N**	
A38					P	
A39						P

Note: *Lab code A25 re assigned in 2018 and 2019**;** P, positive; N, negative; NR, no result received; gray boxed, no participation

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Comments:

This PT round resulted in 92% of the laboratories (24/26) that passed the PT. Two laboratories failed the PT reporting as negative the sample spiked with 1 larva. likely due to new unexperienced analysts. Noteworthy, one laboratory overestimated the number of spiked larvae, reporting 3 larvae instead of 2. Three laboratories underestimated the number of larvae reporting 1 larva in the sample spiked with 2 larvae. In these cases artificial digestion was used as detection procedure and likely over-digestion or accidental breaking of the larvae during the sample manipulation (e.g. sample mincing) could explain the discrepancy. Since the PT is only qualitative, presence/absence of the larvae, the PT results were considered positive but the laboratories were invited to take into consideration the under- overestimation and take appropriate actions including further training of the analyst on morphological identification of the larvae. No further corrective action was required, and laboratories that failed the PT informed the EURLP about their plan to improve further train the analysts.
A moderate decrease in the performance of the participant laboratories was highlighted by this PT round due to the involvement of new technical personnel in some of the labs.
Over the last years, the number of PT participants decreasing in comparison to the previous years (28 in 2018, 27 in 2017 and 30 in 2016) as well as the relative percentage of detection methods adopted. Artificial digestion is still the prevalent method applied, largely because it does not require any special equipment. Only in laboratory with a high number of fish samples to be routinely inspected applied the UV-press method. Candling, and in 1 lab the compressorium, were used exclusively combined with artificial digestion or UV-press method.

The Director
Dr. S.M. Cacciò

Date 02/05/2019

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 a fish fillet sandwich spiked or not with live Anisakidae 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. PT items are stable for 7 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 sending an email to the NRLs
5. The final report issue of each PT round shows the PT program implementation.

End of the report

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