#### Istituto Superiore di Sanità



Department of Infectious Parasitic and Immunomediated Diseases
Unit of Gastroenteric and Tissue Parasitic Diseases
European Union Reference Laboratory for Parasites



## Final PT report n. 2/2014

## 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	PT item transport and delivery		
Results evaluation	Qualitative		

### Implementation

N. of participants	28	PT items	fish fillet sandwiches	84
Public laboratories	1			
Private laboratories	0		PT panel composition	1 fish fillet sandwich with 0 larva 1 fish fillet sandwich with 1 larva 1 fish fillet sandwich with 3 larvae
NRL	27		Subcontractor	TNT Express
Shipping dates	17/03/2014			

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MO/MAQPVI/04.04 rev. 0 pagina 1 di 3

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#### **Qualitative 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. The PT was considered negative if at least one sample was not correctly identified (false positive or false negative).

Laboratory code	N° False positives	N° False negatives	Final evaluation
A1	0	0	Positive
A2	0	0	Positive
А3	0	1	Negative
A4	0	0	Positive
A5	0	0	Positive
A6	0	0	Positive
A7	0	0	Positive
A8	0	0	Positive
A9	0	0	Positive
A10	0	0	Positive
A11	0	0	Positive
A12	0	0	Positive
A13	0	0	Positive
A14	1	0	Negative
A15	0	0	Positive
A16	0	1	Negative
A17	0	0	Positive
A18	0	0	Positive
A19	N/A	N/A	N/A
A20	0	0	Positive
A21	0	0	Positive
A22	0	0	Positive
A23	0	1	Negative
A24	0	1	Negative
A25	0	0	Positive
A26	0	0	Positive
A27	0	0	Positive
A28	0	0	Positive

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MO/MAQPVI/04.04 rev. 0 pagina 2 di 3

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#### Legend:

- Laboratories that failed the PT are marked in bold.
- Laboratories that didn't send the PT result are indicated by N/A (not applicable)

#### Summary of qualitative results:

Total number of PT items	84
Number of participant laboratories	28
Number of participants that passed the PT	22
Number of participants that failed the PT	6

#### **Comments:**

The causes of laboratories' failure have been analyzed and can be attributed to: i) use of the sole "compression method", that has a low sensitivity, without further analysis by "artificial digestion method"; ii) limited experience of either the laboratory or the single analyst in performing the methods, and/or in morphological identification of Anisakidae larvae.

The Director Dr. E. Pozio

**Date** 10.04.14

#### 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 subcontracts PT item transport and delivery to a qualified transportation company.
- 3. Each participating laboratory receive 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 using a stereo microscope. 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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