

Final Report PT-Ec 1/2019

PT “Detection of *Echinococcus* sp. worms in the intestinal mucosa of the definitive host”

Design

Purpose	Correctly identify the presence of worms of <i>Echinococcus</i> sp. in a matrix made by intestinal mucosa.	
Scheme type	Single	
Participants	Public and private, European laboratories	
N. of participants	Depending on request	
Method	Not regulated	
Test method	Sedimentation and counting technique (SCT)	
PT items	Matrix	intestinal mucosa + Ethanol 70% (ratio 2:1)
	Item	worms of <i>Echinococcus</i> spp.
	N. of samples	3 for each participant
	Distribution	Immediate shipment after preparation
Subcontracted activities	NA	
Results evaluation	Qualitative	

Implementation

N. of participants	27	PT items	intestinal mucosa + Ethanol 70% (ratio 2:1)	351 mL
Public laboratories	27		PT panel composition	3 samples (0,25,12 worms)
Private laboratories	0		Shipping	TNT Express
NLR	27			
Shipping dates	11/03/2019			

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

Viale Regina Elena, 299 – 00161 Rome, Italy

PT person in charge: Dr. Adriano Casulli
 e-mail: adriano.casulli@iss.it; tel: +39 06 4990 2896



PTP N° 0005

Membro degli Accordi di Mutuo Riconoscimento
 EA, IAF e ILAC

Signatory of EA, IAF and ILAC
 Mutual Recognition Agreements

Results

The final evaluation is only based on qualitative evaluation and is expressed as “positive” if the results of all samples are correct or “negative” if at least one result is incorrect.

Laboratory code	N° of samples correctly identified	N° of samples NOT correctly identified	Final evaluation
E1	3	0	Positive
E2	3	0	Positive
E3	3	0	Positive
E4	3	0	Positive
E5	3	0	Positive
E6	3	0	Positive
E7	3	0	Positive
E8	3	0	Positive
E9	3	0	Positive
E10	3	0	Positive
E11	3	0	Positive
E12	3	0	Positive
E13	3	0	Positive
E14	3	0	Positive
E15	3	0	Positive
E16	3	0	Positive
E17	3	0	Positive
E18	3	0	Positive
E19	3	0	Positive
E20	3	0	Positive
E21	3	0	Positive
E22	3	0	Positive
E23	3	0	Positive
E24	3	0	Positive
E25	3	0	Positive
E27	2	1	Negative
E28	3	0	Positive

Summary of results:

Number of participant laboratories	27
Number of participants that passed the PT	26
Number of participants that failed the PT	1

Overtime comparison of results

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

Viale Regina Elena, 299 – 00161 Rome, Italy

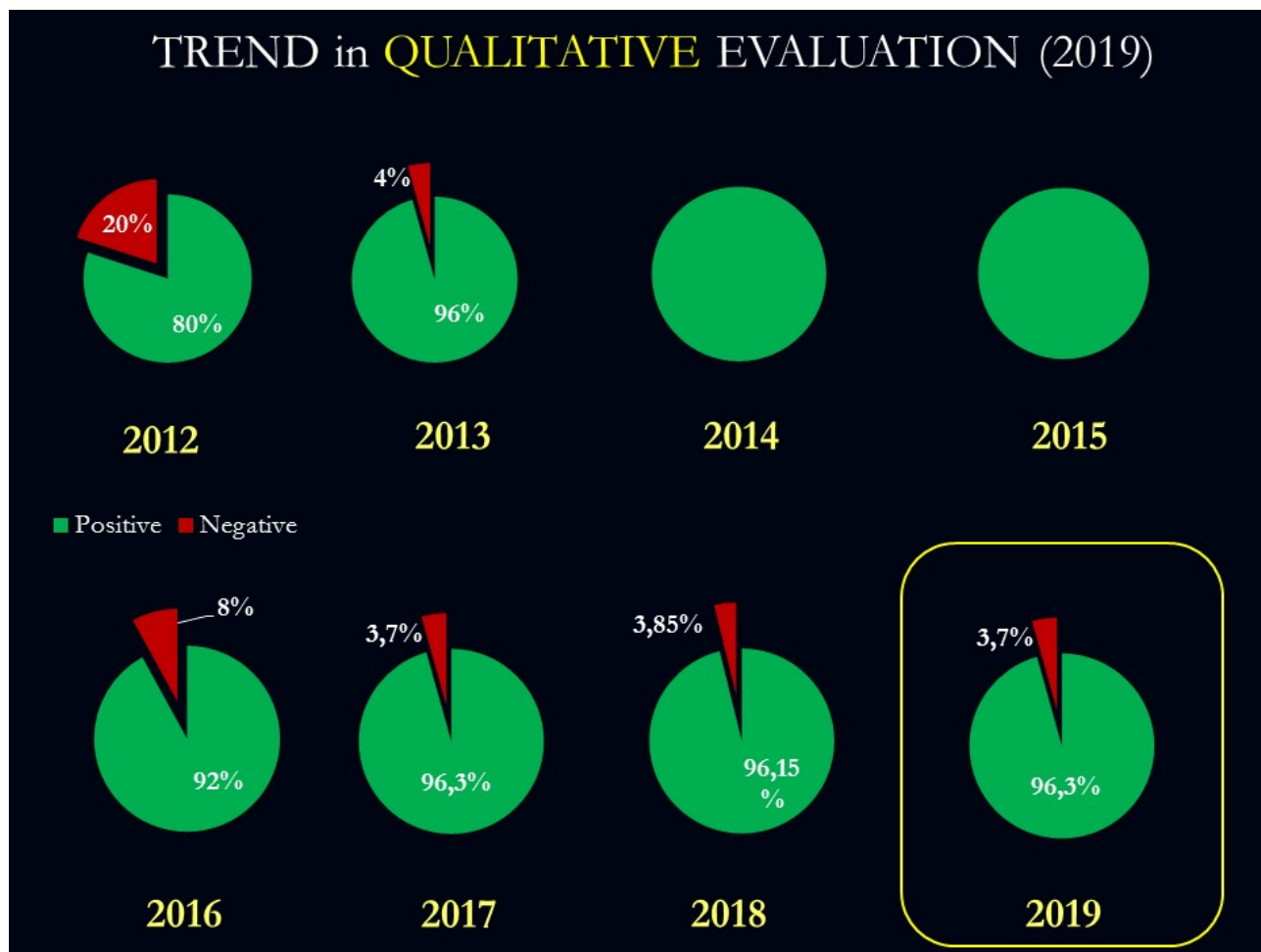
PT person in charge: Dr. Adriano Casulli
 e-mail: adriano.casulli@iss.it; tel: +39 06 4990 2896



PTP N° 0005

Membro degli Accordi di Mutuo Riconoscimento
 EA, IAF e ILAC

Signatory of EA, IAF and ILAC
 Mutual Recognition Agreements



Comments:

The experience derived from the PT carried out in 2019, showed that the personnel of NRLs are skill to detect this parasite in a qualitative test. In particular 100% of participants detected the negative samples, 100% detected the sample with low high worm burden (N=25), while 93% (26 out of 27 labs) succeed in the identification of the sample with low worm burden (N=12).

For as concern the recovery rate, the participants detected an arithmetic mean of 10 worms (range 0-19) in the samples spiked with low worm burden (N=12), while they detected 20 worms (range 2-47) in the samples spiked with high worm burden (N=25).

As for the past years, the lower capability detection of the samples could be due to eye focus softening, while an overestimation could be due to the natural condition of adult worms which separate proglottids.

The comparison of the results during the last 8 years, demonstrates that the detection capabilities of the personnel is increasing over time reaching a plateau of high standard of quality.

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

Viale Regina Elena, 299 – 00161 Rome, Italy

PT person in charge: Dr. Adriano Casulli
 e-mail: adriano.casulli@iss.it; tel: +39 06 4990 2896



PTP N° 0005

Membro degli Accordi di Mutuo Riconoscimento
 EA, IAF e ILAC

Signatory of EA, IAF and ILAC
 Mutual Recognition Agreements

The Director
Dr. S.M. Cacciò

Simonella Cacciò

Date 07/05/2019

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 intestinal mucosa, fixed in 70% ethanol, spiked or not with *Echinococcus* spp. adult worms. The homogeneity of PT items is ensured by an accurate control of the number of worms spiked into each sample (item), made by two operators using a stereo microscope. PT items are stable for 21 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, Rome, Italy

Viale Regina Elena, 299 – 00161 Rome, Italy

PT person in charge: Dr. Adriano Casulli
e-mail: adriano.casulli@iss.it; tel: +39 06 4990 2896



PTP N° 0005

Membro degli Accordi di Mutuo Riconoscimento
EA, IAF e ILAC

Signatory of EA, IAF and ILAC
Mutual Recognition Agreements