

Final Report PT-Ec 1/2020

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	26	PT items	Intestinal mucosa + Ethanol 70% (ratio 2:1)	338 mL
Public laboratories	26		PT panel composition	3 samples (0, 0, 25 worms)
Private laboratories	0		Shipping	TNT Express
NLR	26			
Shipping dates	09/03/2020			

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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
Em1	3	0	Positive
Em2	3	0	Positive
Em3	3	0	Positive
Em4	3	0	Positive
Em5	3	0	Positive
Em6	3	0	Positive
Em7	3	0	Positive
Em8	3	0	Positive
Em9	3	0	Positive
Em10	3	0	Positive
Em11	3	0	Positive
Em12	3	0	Positive
Em13	3	0	Positive
Em14	3	0	Positive
Em15	3	0	Positive
Em16	3	0	Positive
Em17	3	0	Positive
Em18	3	0	Positive
Em19	3	0	Positive
Em20	/	/	/
Em21	3	0	Positive
Em22	3	0	Positive
Em23	2	1	Negative
Em24	/	/	/
Em25	3	0	Positive
Em26	1	2	Negative

Note: The laboratories Em20 and Em24 did not send results due to Covid-19 pandemic.

Summary of results:

Number of participant laboratories	26
Number of participants that passed the PT	22
Number of participants that failed the PT	2

Note: The laboratories Em20 and Em24 did not send results due to Covid-19 pandemic.

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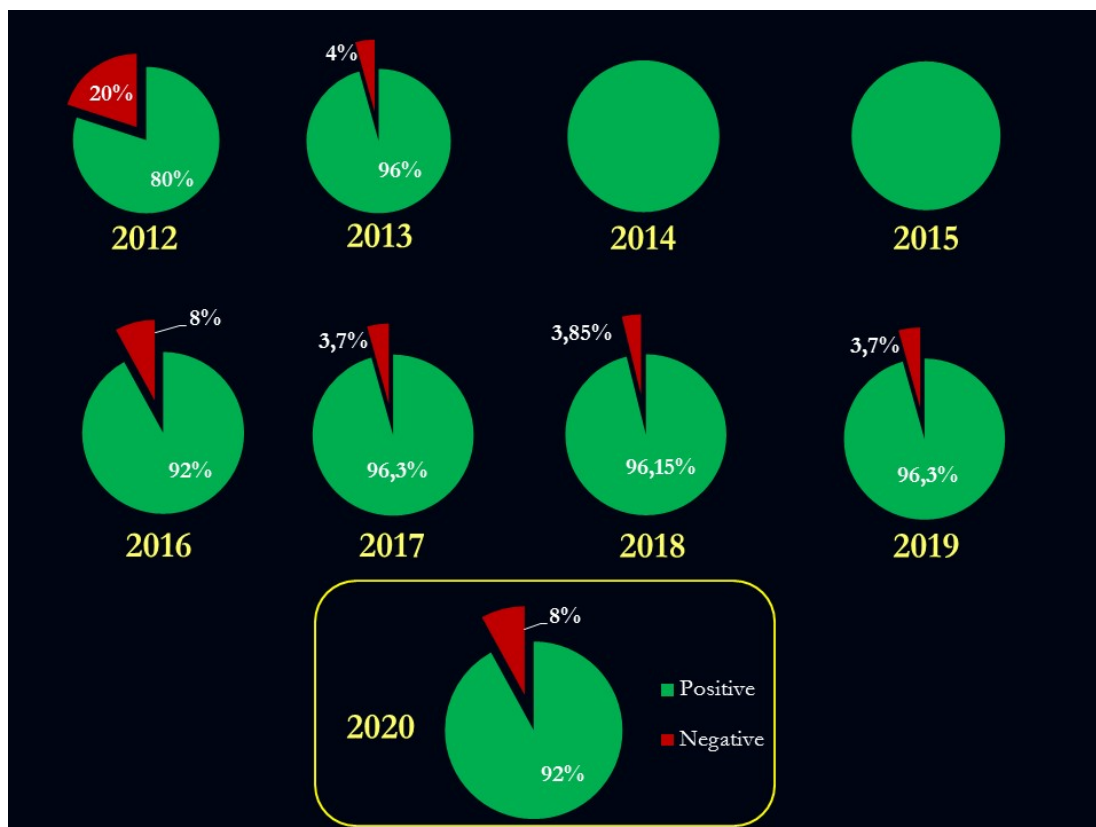


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Overtime comparison of results



Comments:

The experience derived from the PT carried out in 2020, showed that the personnel of NRLs are skilled to detect this parasite in a qualitative test. In particular 92% (22/24) of participants detected the negative samples, and 96% (23/24) detected the positive sample with high worm burden (N=25).

For as concerns the recovery rate, the participants detected an arithmetic mean of 15 worms (range 0-29) 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 separate proglottids detached from adult worms.

The comparison of the results during the last 9 years demonstrates that the detection capabilities of the personnel is increasing over time reaching a plateau of high standard of quality.

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The Director
Dr. S.M. Cacciò



Date 18/05/2020

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

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