

Final Report PT-05: Ec 1/2021

PT-05: “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	30	PT items	intestinal mucosa (gr)	868
Public laboratories	30		Ethanol 70% (ml)	434
Private laboratories	0		PT panel composition	3 samples (0, 15, 15 worms)
NLR	30		Shipping	DHL
Shipping dates	15/03/2021			

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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 +	2	1	Negative
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	3	0	Positive
Em21	3	0	Positive
Em22	3	0	Positive
Em23	3	0	Positive
Em24	3	0	Positive
Em25	2	1	Negative
Em26	3	0	Positive
Em27	3	0	Positive
Em28	3	0	Positive
Em29	3	0	Positive
Em30	3	0	Positive

Note: Due to technical reasons, laboratory Em6 requested a second submission of PT panel before the deadline for results submission. Final evaluation of Em6 was based on the second submission.

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Summary of results:

Number of participant laboratories	30
Number of participants that passed the PT	29
Number of participants that failed the PT	1

Countries participating to PT 2021



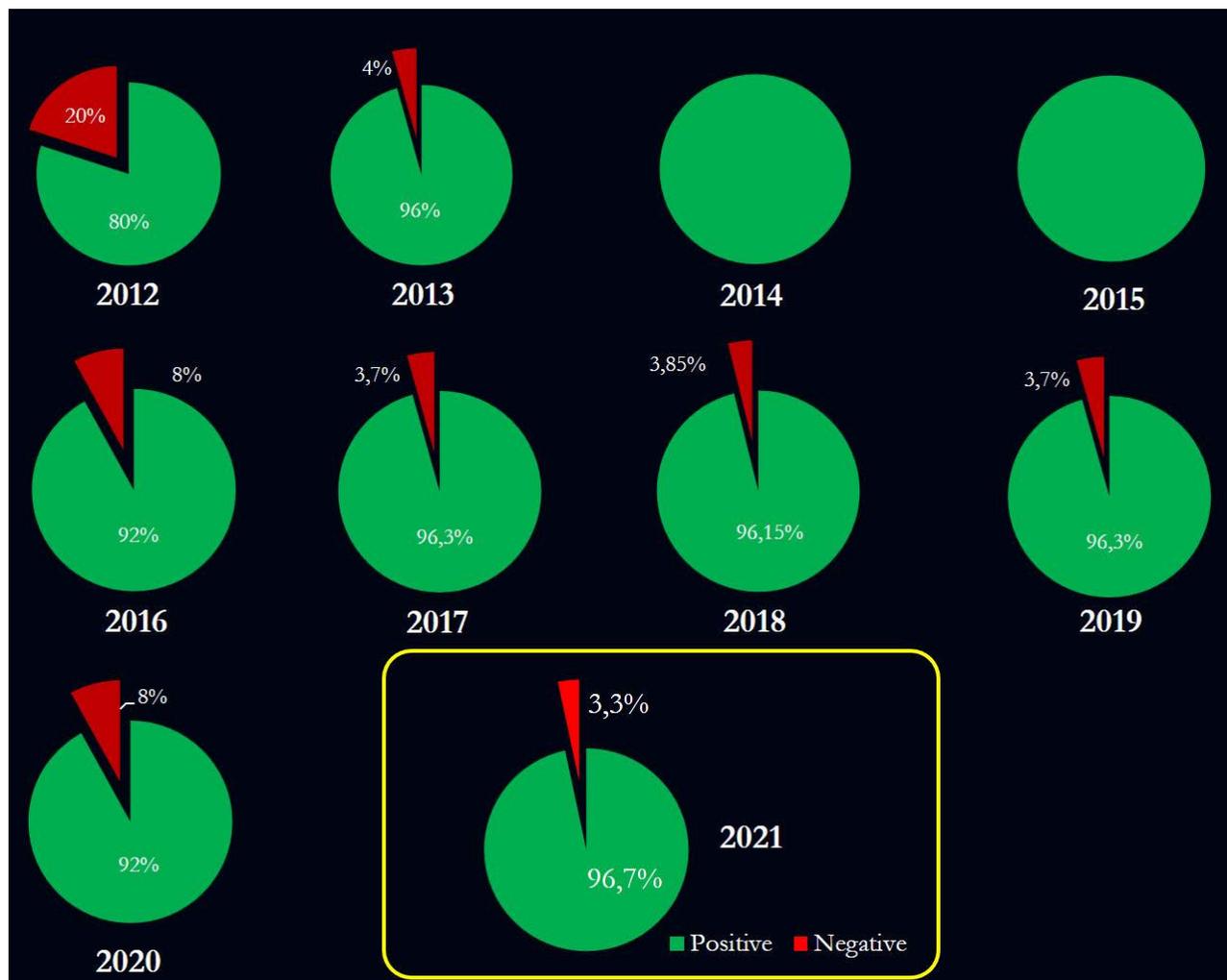
Overtime comparison of results

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Comments:

The experience derived from the PT carried out in 2021, showed that the personnel of NRLs are skilled to detect *Echinococcus* spp. parasite in a qualitative test. In particular, 100% (30/30) of participants detected the negative samples, and 99.7% (29/30) detected the positive samples. For as concerns the recovery rate, the participants detected an arithmetic mean of 9 worms (range 0-17) in the samples spiked with 15 worms. 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 proglottides detached from adult worms.

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The comparison of the results during the last 10 years demonstrates that the detection capabilities of the personnel is stable with high standard of quality.

PT person in charge

Dr. A. Casulli



The Director

Dr. S.M. Cacciò



Date

6/5/2021

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 intestinal mucosa, fixed in 70% ethanol, spiked or not with *Echinococcus* spp. 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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