

Final Report PT-Ec 1/2018

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 |
| | 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 (ml)/ sample | 6 |
| Public laboratories | 26 | | Ethanol 70% (ml) | 6 |
| Private laboratories | 0 | | PT panel composition | 3 samples (0,30,10 worms) |
| NLR | 26 | | Shipping | TNT Express |
| Shipping dates | 12/03/18 | | | |

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Membro degli Accordi di Mutuo Riconoscimento
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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 |
|-----------------|------------------------------------|--|------------------|
| E1 | 3 | 0 | Positive |
| E2 | 3 | 0 | Positive |
| E3 | 3 | 0 | Positive |
| E4 | 2 | 1 | Negative |
| 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 |
| E26 | 3 | 0 | Positive |

Summary of results:

| | |
|---|----|
| Number of participant laboratories | 26 |
| Number of participants that passed the PT | 25 |
| Number of participants that failed the PT | 1 |

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Overtime comparison of results

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------|------|------|------|------|------|------|------|
| Laboratory 1 | P | P | P | P | P | P | P |
| Laboratory 2 | P | P | P | P | P | P | P |
| Laboratory 3 | N | P | P | P | P | P | P |
| Laboratory 4 | | | | P | | | N |
| Laboratory 5 | P | P | P | P | P | P | P |
| Laboratory 6 | P | P | P | P | P | P | P |
| Laboratory 7 | N | P | P | P | P | P | P |
| Laboratory 8 | P | P | | P | P | P | P |
| Laboratory 9 | P | P | P | P | P | P | P |
| Laboratory 10 | P | P | P | P | P | P | P |
| Laboratory 11 | | | P | P | P | P | P |
| Laboratory 12 | P | P | P | P | P | P | P |
| Laboratory 13 | P | P | P | P | P | P | P |
| Laboratory 14 | N | P | P | P | P | P | P |
| Laboratory 15 | P | P | P | P | P | P | P |
| Laboratory 16 | P | N | P | P | P | P | P |
| Laboratory 17 | P | P | P | P | P | P | P |
| Laboratory 18 | P | P | P | P | P | P | P |
| Laboratory 19 | | | P | P | P | N | P |
| Laboratory 20 | P | P | P | P | P | P | P |
| Laboratory 21 | P | | P | P | P | P | P |
| Laboratory 22 | P | P | | P | P | P | P |
| Laboratory 23 | N | | | | P | P | P |
| Laboratory 24 | P | P | | | | P | P |
| Laboratory 25 | | | | | | P | P |
| Laboratory 26 | | | | P | P | | P |
| Laboratory 27 | P | P | P | P | P | P | |
| Laboratory 28 | P | P | P | P | P | P | |
| Laboratory 29 | | | P | | | | |
| Laboratory 30 | N | P | P | P | P | P | |
| Laboratory 31 | P | | | P | | | |

Note: P, positive; N, negative; grey box, not participated.

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Comments:

The experience derived from the PT carried out in 2018, showed that the personnel of NRLs are skill to detect this parasite in a qualitative test. The comparison of the results during the last 7 years, demonstrates that the detection capabilities of the personnel is increasing over time.

The laboratory E4, which failed the PT, requested a new panel of samples to be analysed in order to implement a corrective action. A panel of samples, considered as an External quality assessment (EQA) scheme, will be sent to the laboratory, which will receive an Individual Report.

The Director
Dr. E. Pozio



Date 08/05/2018

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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