

## Final Report PT-EcMol 1/2020

### PT **“Molecular identification of *Echinococcus* at the species level”**

#### Design

Purpose	Correctly identify <i>Echinococcus granulosus sensu lato</i> and <i>Echinococcus multilocularis</i> by a molecular method.	
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	Elution buffer
	Item	DNA
	N. of samples	3 vials for each participant
	Distribution	Preparation and packaging can be performed before shipment
Subcontracted activities	NA	
Results evaluation	Qualitative	

#### Implementation

N. of participants	16		DNA suspended in the matrix	10 µl
Public laboratories	16			
Private laboratories	0	PT items	PT panel composition	3 samples: 1 negative, 1 containing DNA of <i>E. granulosus</i> and 1 containing

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			DNA of <i>E. multilocularis</i>
NRL	16	Shipping	DHL
Shipping dates	09/03/2020		

## 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	2	1	Negative
E4	3	0	Positive
E5	3	0	Positive
E6	3	0	Positive
E7*	NA	NA	NA
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

Legend:

\* due to Covid-19 pandemic the laboratory could not test the samples.

NA: not applicable

### Summary of results:

Total number of PT panels	16
Number of participant laboratories	15 (1 laboratory withdrawn)
Number of participants that passed the PT	14
Number of participants that failed the PT	1

### Comments:

The experience derived from the third PT carried out in 2020 on the molecular detection of *Echinococcus* spp. showed that the personnel of NRLs are skill to detect this parasite in a qualitative test.

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In particular 100% of participants correctly identified the sample with DNA of *Echinococcus granulosus sensu lato*, 93.3% (14 out of 15 labs) succeeded in the identification of the sample with DNA of *Echinococcus multilocularis*, while 100% detected the negative sample.

The Director  
Dr. S.M. Cacciò

Date 16/11/2020

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 a tube, containing DNA extracted from *Echinococcus granulosus sensu lato* (s.l.) or *Echinococcus multilocularis*. A third tube contains molecular grade deionized water and serve as a negative control. The stability of the samples in the package was evaluated by ad hoc experiments carried out by EURLP. Larvae preserved in 96% ethanol, and stored between -20 and +30°C maintain their stability up to 5 years after the date of preparation. DNA material stored below 15°C is stable for many years.
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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