

## Final Report PT-08: EcMol 1/2023

### PT-08: “Molecular identification of *Echinococcus* at the species level”

#### Design

Purpose	Evaluation of laboratories competence in molecular identification of <i>Echinococcus granulosus sensu lato</i> and <i>Echinococcus multilocularis</i> .	
Scheme type	Single, simultaneous	
Participants	National reference laboratories for parasites. Public and private 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	19	PT items	Volume of DNA (for each sample)	10µl (DNA concentration: <i>E. multilocularis</i> , 12ng/µl; <i>E. granulosus</i> 10ng/µl)
Public laboratories	0			
Private laboratories	0		PT panel composition	3 samples: 1 containing DNA of <i>E. multilocularis</i> , 1 containing DNA of <i>E. granulosus</i> and 1 negative

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NRL	19		Shipping	DHL
Shipping dates	13/03/2023			

## 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
Ed1	3	0	Positive
Ed2	3	0	Positive
Ed3	3	0	Positive
Ed4	3	0	Positive
Ed5	3	0	Positive
Ed6	3	0	Positive
Ed7	3	0	Positive
Ed8	3	0	Positive
Ed9	3	0	Positive
Ed10	3	0	Positive
Ed11	3	0	Positive
Ed12	3	0	Positive
Ed13	3	0	Positive
Ed14	3	0	Positive
Ed15	3	0	Positive
Ed16	3	0	Positive
Ed17	3	0	Positive
Ed18	3	0	Positive
Ed19	3	0	Positive

## Summary of results:

Number of participant laboratories	19
Number of participants that passed the PT	19
Number of participants that failed the PT	0

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### Comments:

The experience derived from the fifth PT carried out in 2023 on the molecular detection of *Echinococcus* spp. showed that the personnel of NRLs are highly skilled to detect this parasite in a qualitative test. In particular 100% of participants correctly identified the sample with DNA of *Echinococcus granulosus sensu lato*, 100% succeeded in the identification of the sample with DNA of *Echinococcus multilocularis* and 100% detected the negative sample.

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PTP person in charge

Dr. A. Casulli

The Director

Dr. S.M. Cacciò

**Date** 30/05/2023

**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 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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