

Final Report PT-08: EcMol 1/2024

PT-08: "Molecular identification of *Echinococcus* at the species level"

Design

Purpose	Evaluation of laboratories competence in molecular identification of <i>Echinococcus granulosus</i> sensu lato 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	20	PT items	Volume of DNA (for each sample)	10µl
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
NRL	20		Shipping	DHL

PT Provider
Unit of Foodborne and Neglected Parasitic Diseases
Istituto Superiore di Sanità, Rome, Italy
Viale Regina Elena, 299 – 00161 Rome, Italy

PT person in charge: Dr. Adriano Casulli
e-mail: adriano.casulli@iss.it; tel: +39 06 4990 2304

Shipping dates	11/03/2024
----------------	------------

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
ED3	3	0	POSITIVE
ED7	3	0	POSITIVE
ED8	3	0	POSITIVE
ED12	3	0	POSITIVE
ED16	3	0	POSITIVE
ED21	3	0	POSITIVE
ED29	2	1	NEGATIVE
ED30	3	0	POSITIVE
ED31	3	0	POSITIVE
ED32	3	0	POSITIVE
ED33	1	2	NEGATIVE
ED34	3	0	POSITIVE
ED36	2	1	NEGATIVE
ED39	3	0	POSITIVE
ED40	3	0	POSITIVE
ED41	3	0	POSITIVE
ED43	3	0	POSITIVE
ED44	3	0	POSITIVE
ED50	3	0	POSITIVE
ED54	3	0	POSITIVE

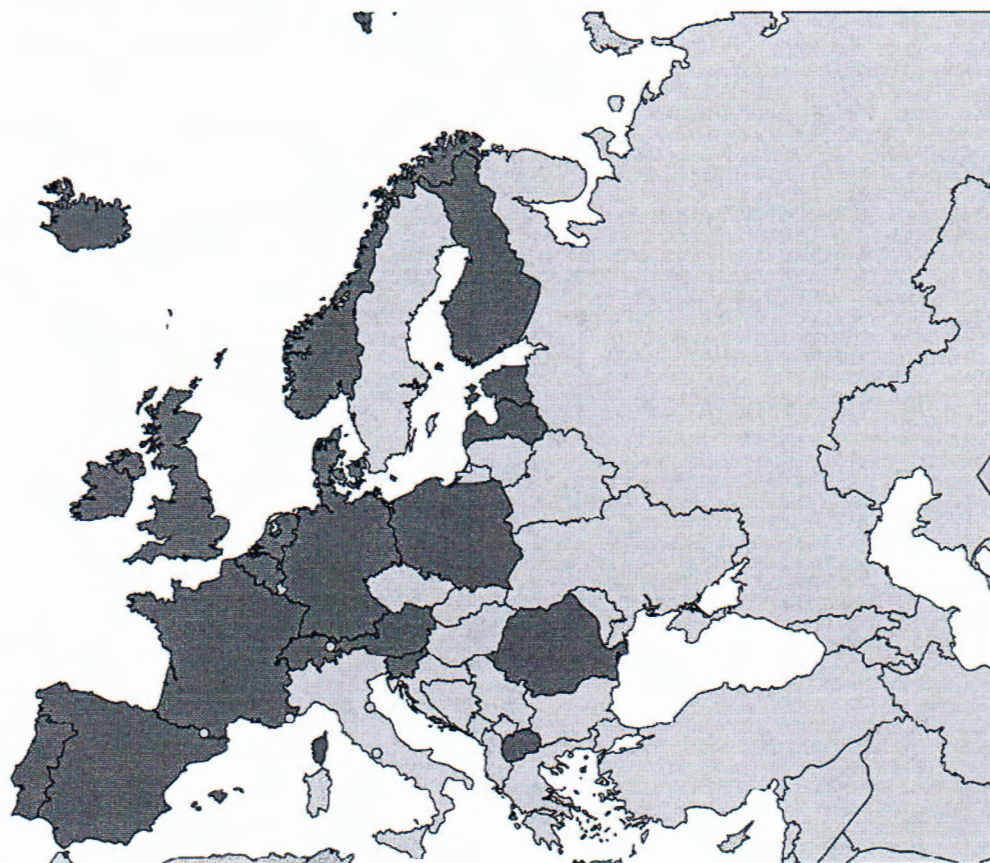
Summary of results:

Number of participant laboratories	20
Number of participants that passed the PT	17
Number of participants that failed the PT	3

PT Provider
 Unit of Foodborne and Neglected Parasitic Diseases
 Istituto Superiore di Sanità, Rome, Italy
 Viale Regina Elena, 299 – 00161 Rome, Italy

PT person in charge: Dr. Adriano Casulli
 e-mail: adriano.casulli@iss.it; tel: +39 06 4990 2304

■ PT-08
participants



Comments:

The experience derived from the fifth PT carried out in 2024 on the molecular detection of *Echinococcus* spp. showed that the personnel of NRLs is highly skilled to detect this parasite in a qualitative test. In particular, 95% (19/20) of participants correctly identified the sample with DNA of *Echinococcus granulosus sensu lato*, 90% (18/20) succeeded in the identification of the sample with DNA of *Echinococcus multilocularis* and 95% (19/20) detected the NEGATIVE sample.

Written and elaborated by
PTP person in charge

Dr. A. Santoro



Verified and issued by
The Director

Dr. A. Casulli



PT Provider
Unit of Foodborne and Neglected Parasitic Diseases
Istituto Superiore di Sanità, Rome, Italy
Viale Regina Elena, 299 – 00161 Rome, Italy

PT person in charge: Dr. Adriano Casulli
e-mail: adriano.casulli@iss.it; tel: +39 06 4990 2304

Date 28-5-2024

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. The PT panel consists of three tubes containing: DNA extracted from faecal material contaminated with *Echinococcus granulosus* sensu lato (s.l.), DNA extracted from faecal material contaminated with *Echinococcus multilocularis* and a negative control. The stability of the samples in the package was evaluated by ad hoc experiments carried out by EURLP. 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

PT Provider
Unit of Foodborne and Neglected Parasitic Diseases
Istituto Superiore di Sanità, Rome, Italy
Viale Regina Elena, 299 – 00161 Rome, Italy

PT person in charge: Dr. Adriano Casulli
e-mail: adriano.casulli@iss.it; tel: +39 06 4990 2304