

EVALUATION OF PT RESULTS FOR TRICHINELLA DETECTION FROM 2015 TO 2019 IN POLAND



Korpysa-Dzirba W. MSc, PhD, Różycki M. DVM, PhD., Bełcik A. MSc, Bilka – Zając E. DVM, PhD
National Veterinary Research Institute
Department of Parasitology and Invasive Diseases
Partyznatów 57, 24-100 Pulawy, Poland

Introduction

The Commission Implementing Regulation (EU) 2015/1375 of 10 August 2015 laying down specific rules on official controls for *Trichinella* spp. in meat, states that all samples collected from animals susceptible for *Trichinella* spp. should be examined for *Trichinella* spp. in a laboratory designated by the competent authority using the reference method of detection or equivalent method. The minimum requirements for all official laboratories were laid down in Regulation (EU) 2017/625 (official control Regulation). Such requirements include that in principle the official laboratory operates following the standard ISO/IEC 17025 and is accredited under that standard. To avoid a disproportionate burden, official laboratories only carrying out *Trichinella* spp. controls can be derogated from such accreditation under certain conditions. The conditions laid down in Regulation (EU) 2017/625 include: Sole activity is the detection of *Trichinella* spp. in meat. The only use of methods laid down in Regulation (EU) 2015/1375. Supervision by competent authorities or accredited official laboratory. Regular participation and satisfactory performance in inter-laboratory comparative tests or proficiency tests organized by the National Reference Laboratories. Compliance with all other obligations for official laboratories. Proficiency tests (PT) are one of the tools to control the correctness of routine investigations. They are an essential component for accreditation bodies (ISO 17025) which require PT complement to prove competence of a laboratory. Such test are organised by NRL in Pulawy since 2005.

Goal

The present study describes the results of the proficiency tests organized in 2015-2019 throughout Poland, obtained from participating field laboratories testing meat for *Trichinella* spp.



Table 1. Qualitative results of PT from 2015 to 2018 (contamination levels 0, 3 and 5 larvae)

Year	Number of laboratories participating in the study	Number of sent samples (contamination level 0, 3, 5)	Results: consistent/ non-consistent			
			Samples		Laboratories	
			Number consistent/non-consistent	% consistent/non-consistent	Number consistent/non-consistent	% consistent/non-consistent
2015	394	1182	1129/52	96/4	349/45	89/11
2016	374	1122	1055/66	94/6	318/56	85/15
2017	384	1152	1098/53	95/5	343/41	89/11
2018	347	1041	992/49	95/5	302/45	87/13
2019	361	1444	1377/67	95/5	304/57	84/16

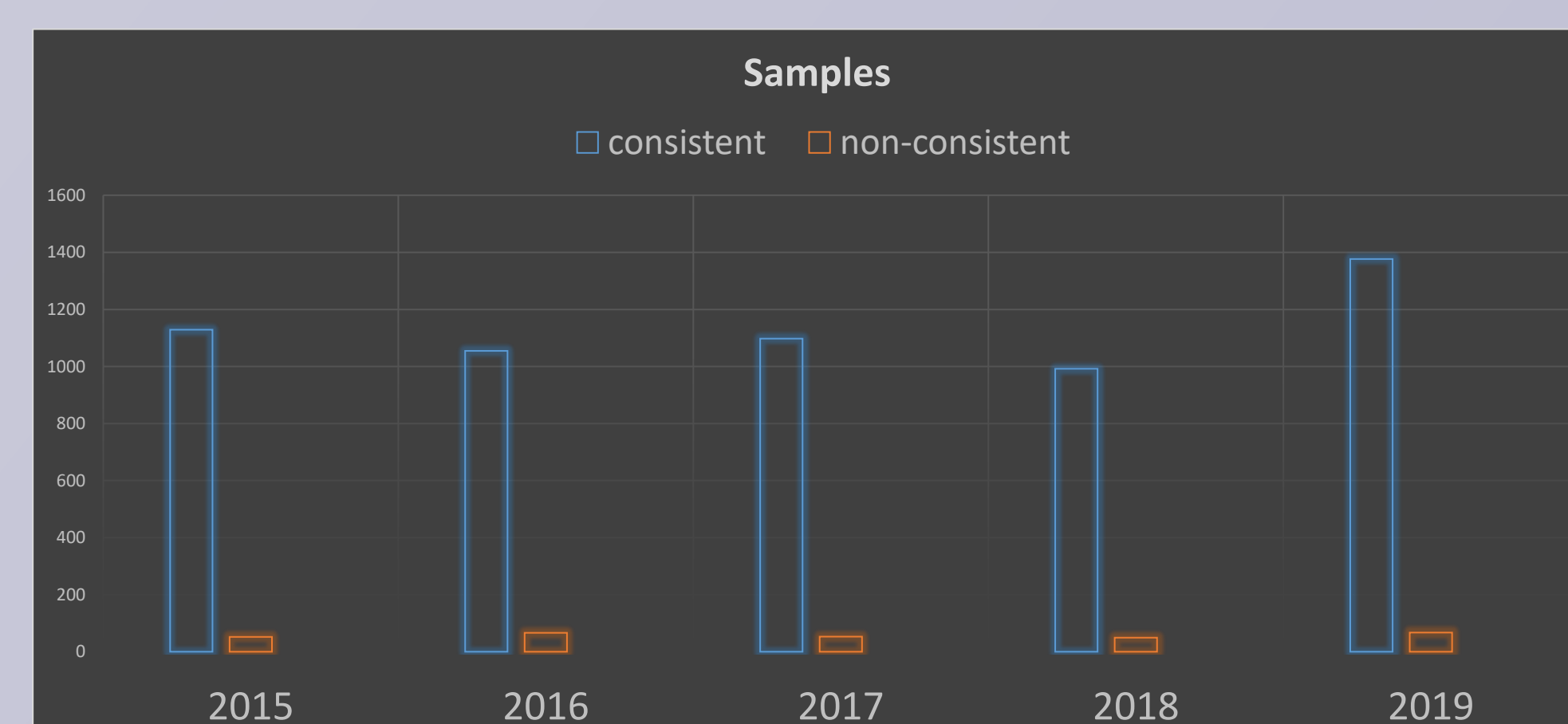


Figure 2. Qualitative results of PT samples sent to participants between 2015 and 2019

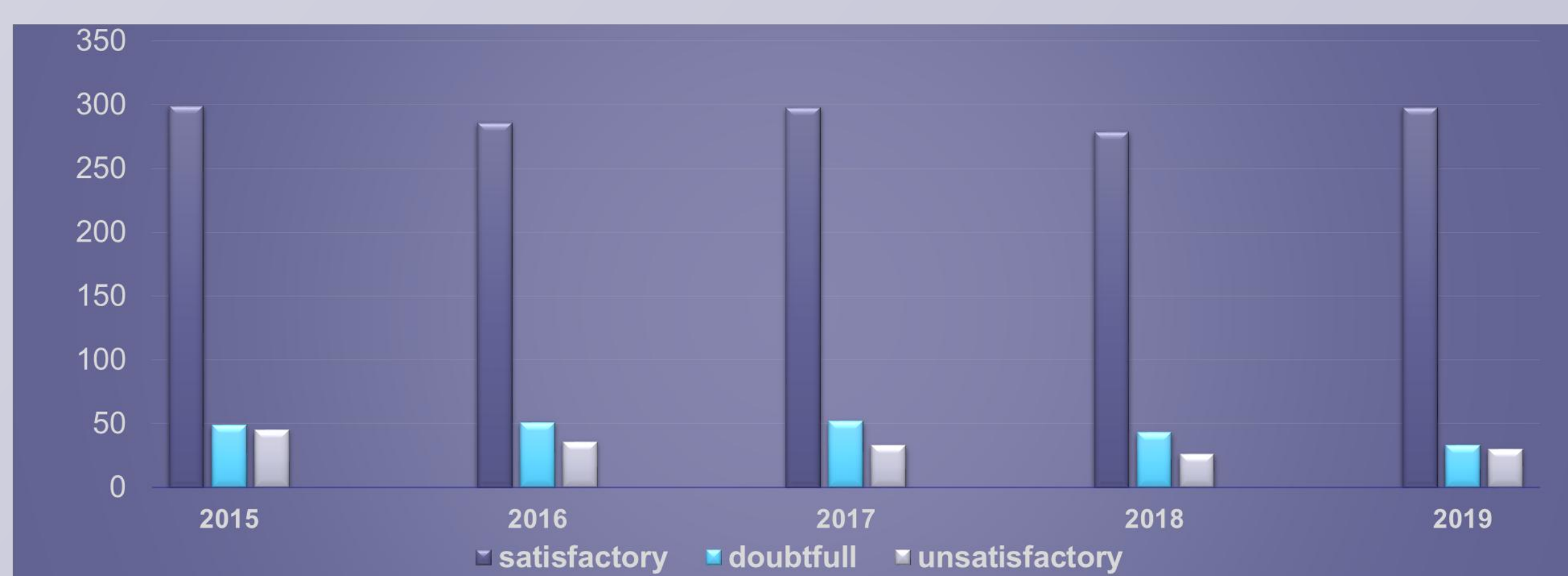


Figure 2. Quantitative results of PT test between 2015 and 2019 – contamination level of 5 larvae

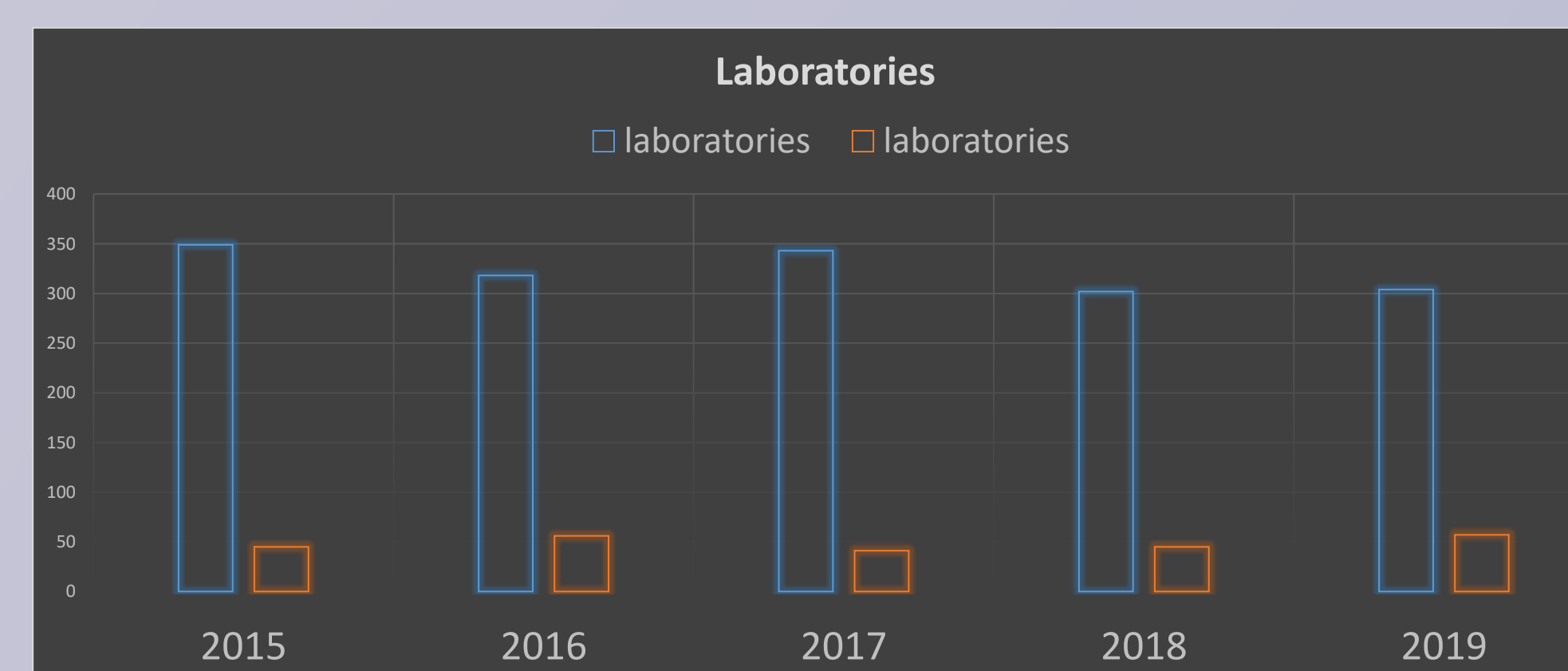
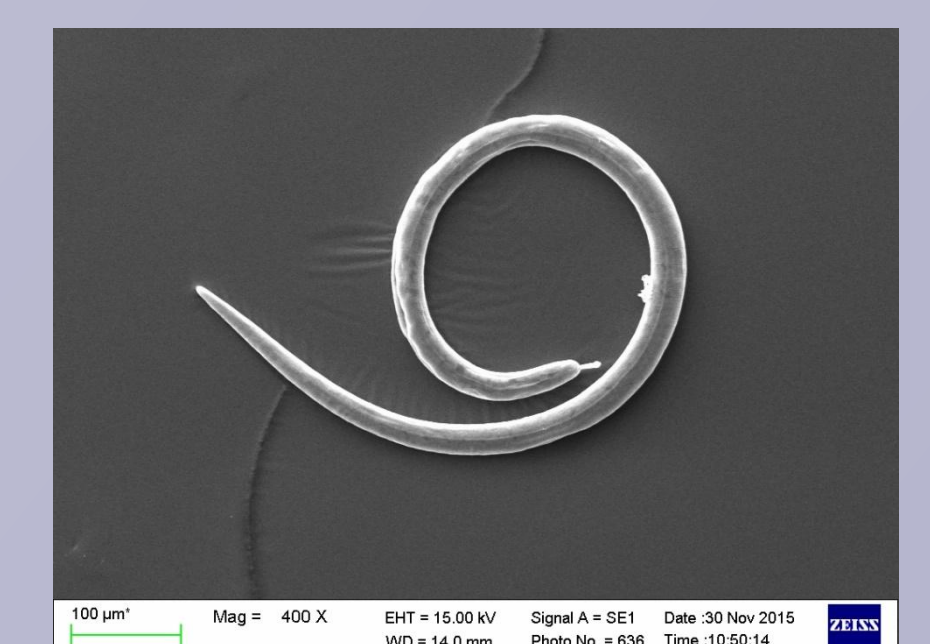
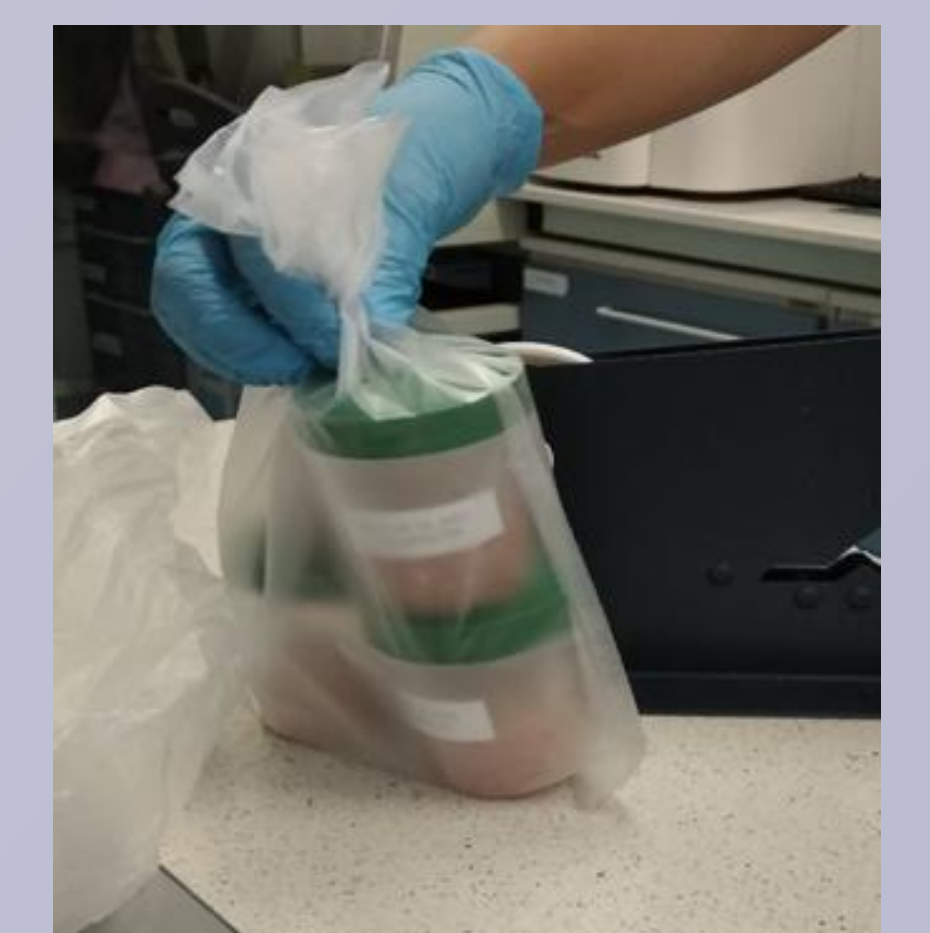


Figure 3. Qualitative results of laboratories participating in PT between 2015 and 2019



Methods

Each year, the organizer prepares 4 sets of samples for each laboratory. The samples contain minced pork meat and the addition of a specified number of *Trichinella* spp. larvae placed in a special patented gelatin base allowing to detect of living parasites in the samples. Usually, the participants also receive one blank sample, in the patented medium (P.428256) that does not contain the *Trichinella* spp. larvae. The samples are ready to analyse as a routine sample by the laboratories without any additional steps. Results. The results are sent to the organizer via the dedicated portal and are analysed by the Organiser. From 2015 to 2019, 1860 laboratories participated in the PT, and 5941 samples in total were sent to them. The laboratories obtained 95.3% following the reported qualitative results.

Conclusions

These results indicate the high quality of analyses performed by the laboratories designated to detect *Trichinella* spp. in meat.