

TSE EURL EQA round 2019

Torino, Italy

16th September 2020

Rapid Tests

Results of the 2019 round of EQAs

and

the forthcoming 2020 round of EQAs

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Results of the 2019 round of EQAs

BSE



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Results of the 2019 round of EQAs

BSE

25 Participating MS:

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Estonia

Finland

France

Germany

Greece

Hungary

Italy

Latvia

Lithuania

Netherlands

Norway

Poland

Portugal

Romania

Slovakia

Slovenia

Spain

Sweden

Switzerland



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Methods of the 2019 round of EQAs

BSE

Samples included in the study

SampleID	Gold Standard	Dilution	Description
RB1901	POS	1:4	POSITIVE C-Bovine Tissue Homogenate - Dilution 1:4
RB1902	POS	1:2	C-POSITIVE Bovine Tissue Homogenate - Dilution 1:2
RB1903	NEG		NEGATIVE Bovine Tissue Homogenate
RB1904	NEG		NEGATIVE Bovine Tissue Homogenate
RB1905	POS	1:4	C-POSITIVE Bovine Tissue Homogenate - Dilution 1:4
RB1906	POS	1:2	C- POSITIVE Bovine Tissue Homogenate - Dilution 1:2
RB1907	NEG		NEGATIVE Bovine Tissue Homogenate



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Methods of the 2019 round of EQAs-BSE

During preparation the samples were tested using:

TeSeE SAP Combi Kit

Batch 8M0072 EXP 10/10/2019

1/2	D.O.	3.983	4.053
1/4	D.O.	3.116	3.268
1/8	D.O.	1.443	1.324
1/16	D.O.	1.447	1.526

CUT OFF 0.218

Idexx metodo ultrashort

Batch ER361 EXP 17/05/2020

1/2	D.O.	3.999	3.999
1/4	D.O.	3.999	3.999
1/8	D.O.	2.993	3.351
1/16	D.O.	3.577	3.743

CUT OFF 0.152

Distribution date: 08-09-15 Oct 2019

Deadline 6 and 13 December 2019



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All laboratories successfully passed the PT



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Results of the 2019 round of EQAs-BSE

BioRad-Sap Combi: 14 of the participating labs

Three batches used:

Batch #	# of MS per batch
8M0072	1
9C0073	4
9F0074	9



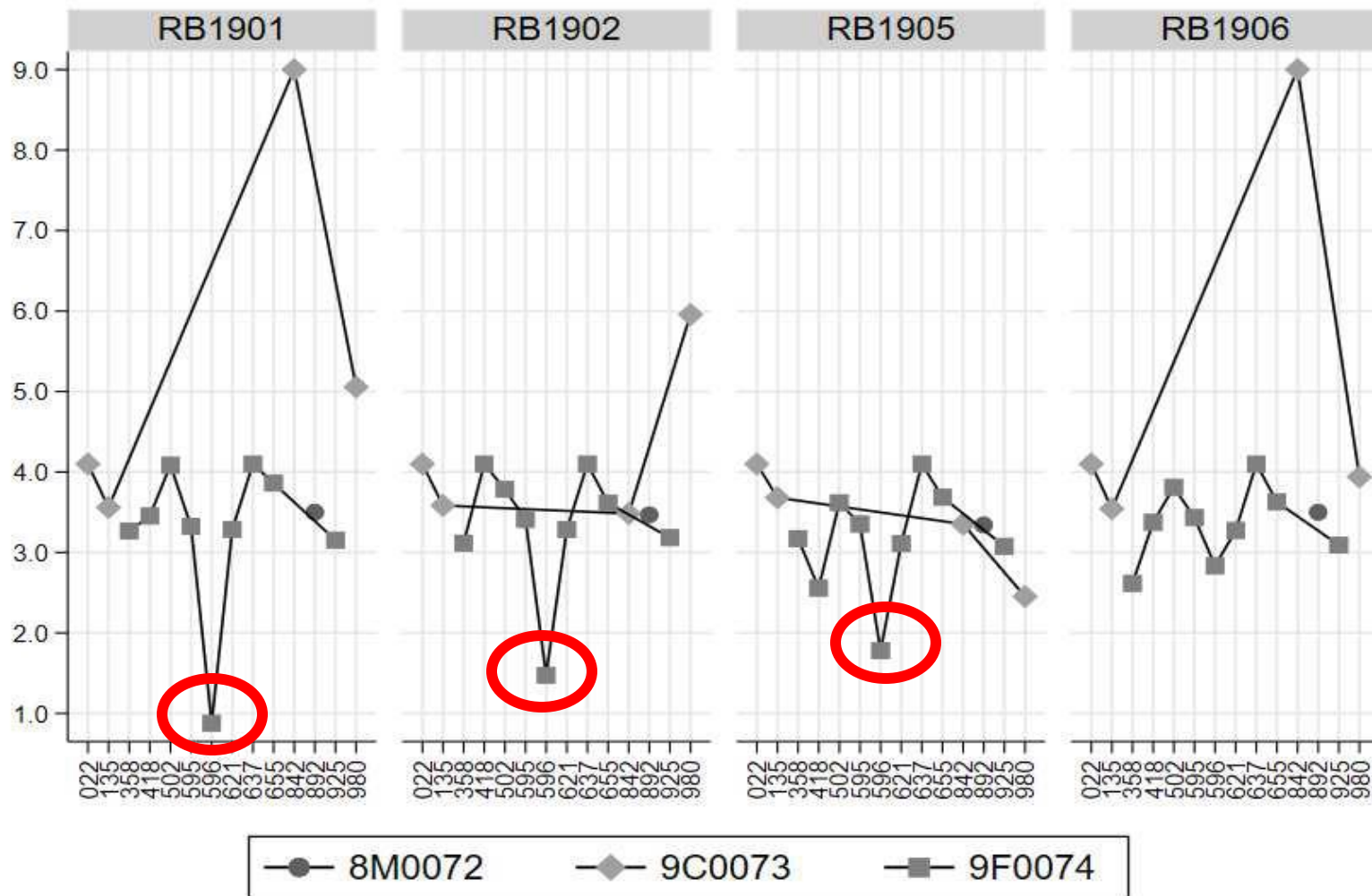
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Results of the 2019 round of EQAs-BSE

BioRad-Sap Combi: 14 of the participating labs

OD reported from the Labs for each batch applied and positive sample



Results of the 2019 round of EQAs-BSE

IDEXXSHORT: 8 of the participating labs

Three batches used:

Batch #	# of MS per batch
AR368	1
CR046	5
ER361	2



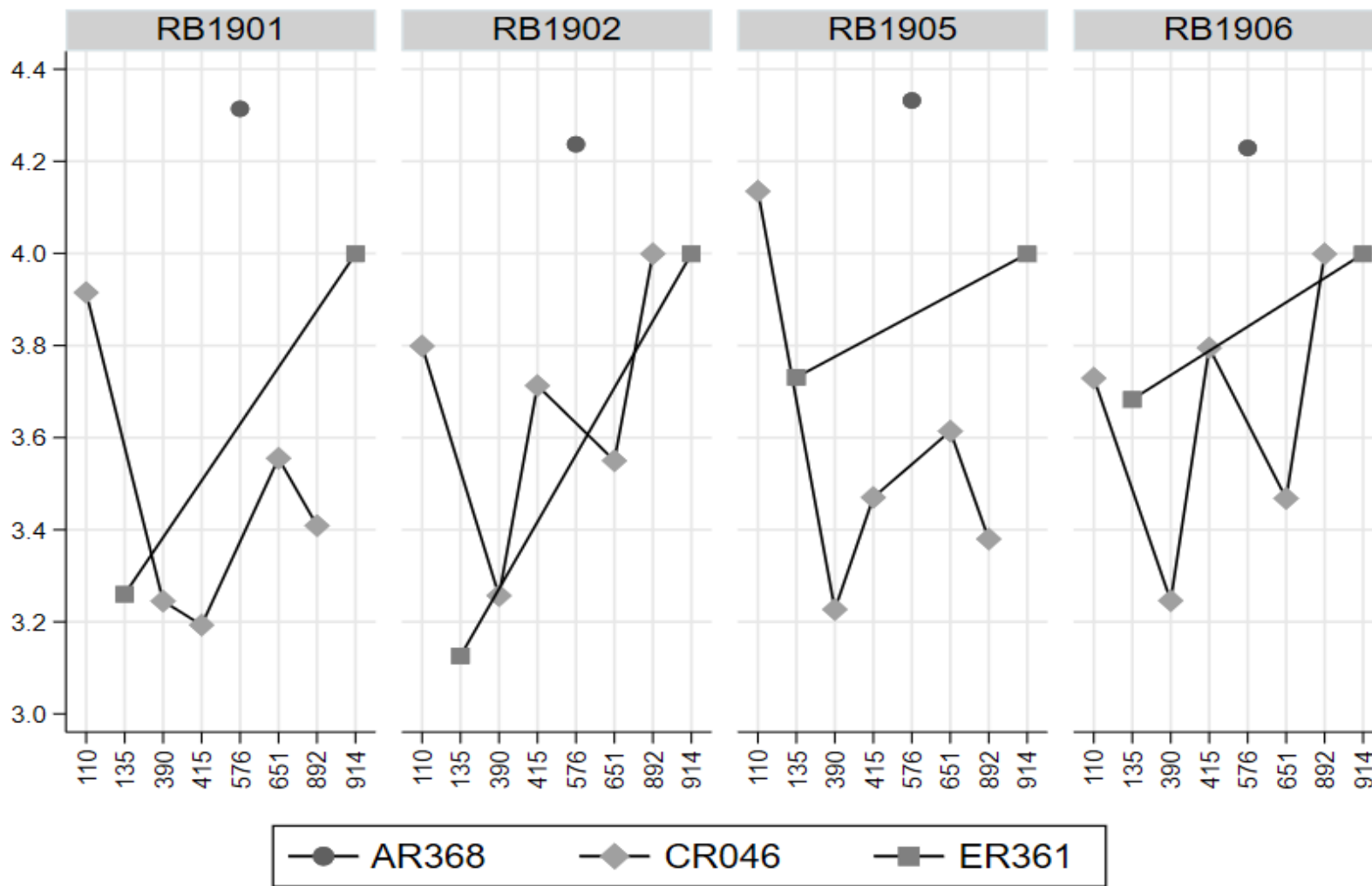
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Results of the 2019 round of EQAs-BSE

IDEXXSHORT: 8 of the participating labs

OD reported from the Labs for each batch applied and positive sample



Results of the 2019 round of EQAs-BSE

IdexxUltrashort: 5 of the participating labs

Four batches used:

Batch #	# of MS per batch
AR368	1
CR046	2
ER361	1
JR907	1



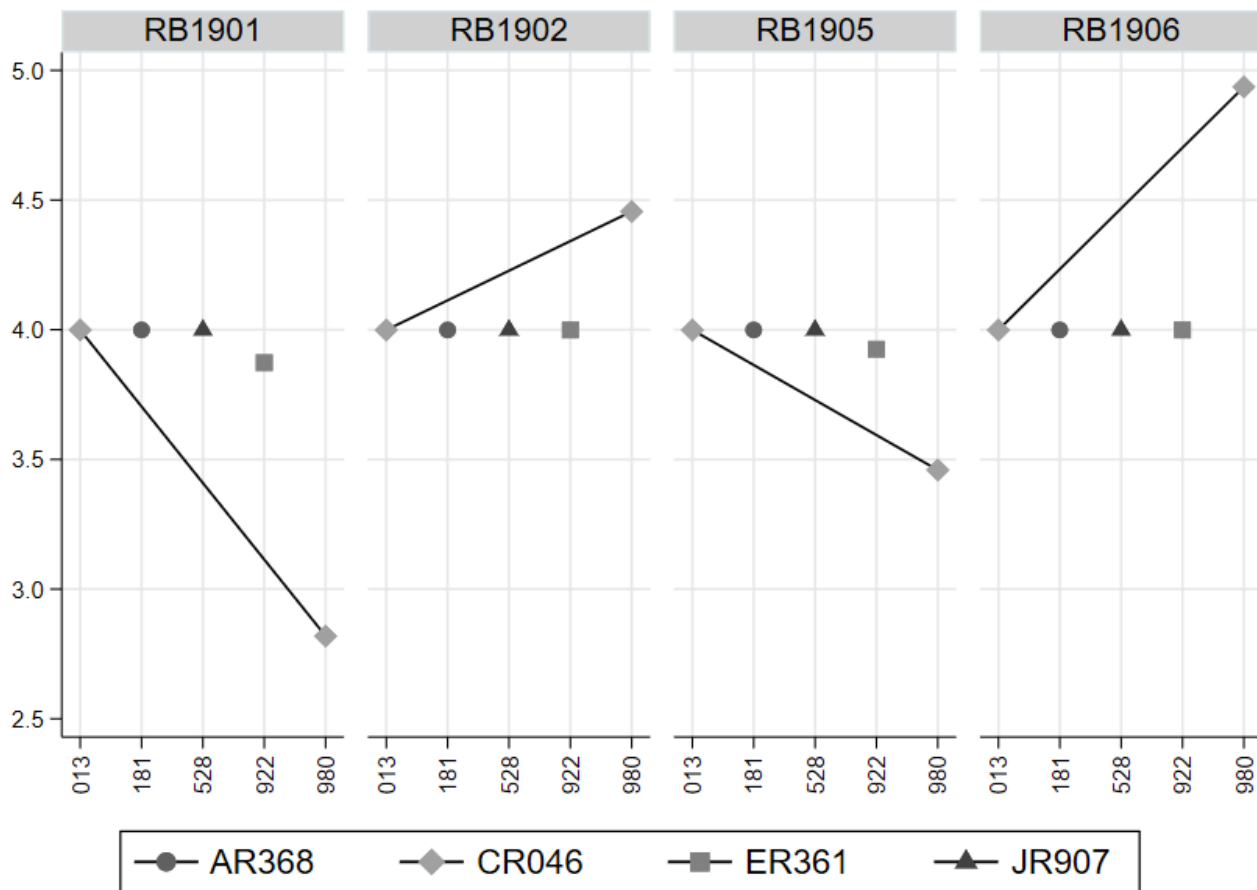
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Results of the 2019 round of EQAs-BSE

IdexxUltrashort: 5 of the participating labs

OD reported from the Labs for each batch applied and positive sample



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Results of the 2019 round of EQAs-BSE

ThermofisherPriostrip: 3 of the participating labs

Three batches used:

Batch #	# of MS per batch
S180101G	1
S80101G	1
S190101G	1



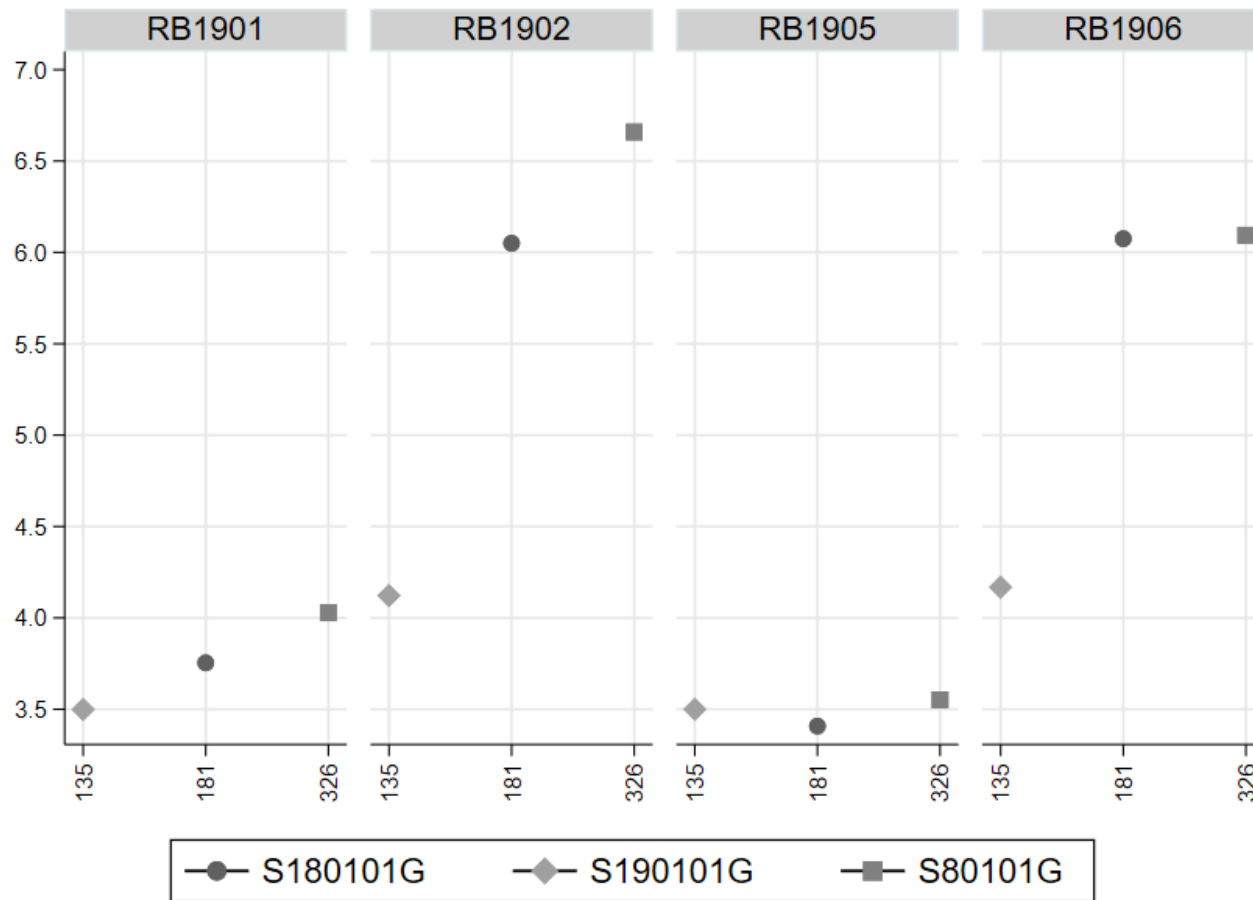
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Results of the 2019 round of EQAs-BSE

ThermofisherPriostrip: 3 participating labs

Results from the Labs for each batch applied and positive sample



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SHORT CONCLUSIONS: PT BSE

BIORAD-SAP COMBI

- It is the first most used test in routine: 52% (13/25) of the laboratories applies TeSeE SAP Combi Kit in routine. Only one lab applies this test as alternative test;
- Lab 596 reports ODs lower than others for all positive samples, excepted RB1906;

IDEXXSHORT

- It is the second most used test in routine: 24% (6/25) of the laboratories applies IdexxShort test in routine. Two labs apply this test as alternative test
- Lab 390 usually reports low ODs



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SHORT CONCLUSIONS: PT BSE

IDEXXULTRASHORT

- Five labs (5/25 = 20%) use it in routine and none as alternative test;
- Since the small number of labs that use IdexxUltrashort test, comparing batches is very difficult: none relevant difference appears

THERMOFISHERPRIOSTRIP

- Two lab uses it as alternative test;
- It is not possible compare the batches since the number of labs that use ThermofisherPriostrip test is too small.

THERMOFISHERWESTERN

- three labs use it as alternative test
- All the bands appear strong



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Results of the 2019 round of EQAs

Scrapie



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Results of the 2019 round of EQAs- Scrapie

26 Participating MS:

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Estonia

Finland

France

Germany

Greece

Hungary

Iceland

Italy

Latvia

Lithuania

Netherlands

Norway

Poland

Portugal

Romania

Slovakia

Slovenia

Spain

Sweden

Switzerland



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Methods of the 2019 round of EQAs-Scrapie

Samples included in the study

SampleID	Gold standard	Dilution	Description
RS1901	POS	1:10	Classical SCRAPIE Caprine Tissue Homogenate - Dilution 1:10
RS1902	NEG		TSE Negative caprine Tissue Homogenate
RS1903	POS	1:10	Classical SCRAPIE Caprine Tissue Homogenate - Dilution 1:10
RS1904	NEG		TSE Negative caprine Tissue Homogenate
RS1905	POS	1:5	Classical SCRAPIE POSITIVE Caprine Tissue Homogenate - Dilution 1:5
RS1906	POS	1:5	Classical SCRAPIE POSITIVE Caprine Tissue Homogenate - Dilution 1:5
RS1907	NEG		TSE Negative caprine Tissue Homogenate



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Methods of the 2019 round of EQAs-Scrapie

During preparation the samples were teste using:

TeSeE SAP Combi Kit

batch 8M0072 EXP 10/10/2019

1/5 D.O. 2.071 2.098

1/10 D.O. 1.529 1.574

1/20 D.O. 1.109 1.052

1/40 D.O. 0.977 0.921

CUT-OFF 0.216

Idexx ultrashort

Batch AR368 EXP 26/12/2019

1/5 D.O. 3.999 3.999

1/10 D.O. 3.999 3.999

1/20 D.O. 3.999 3.999

1/40 D.O. 3.999 3.999

CUT-OFF 0.204

Distribution date: 08-09-15 Oct 2019

Deadline 6 and13 December 2019



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Results of the 2019 round of EQAs- Scrapie

TeSeE SAP Combi Kit : 15 of the participating labs

Three batches used:

Batch #	# of MS per batch
8M0072	1
9C0073	5
9F0074	9

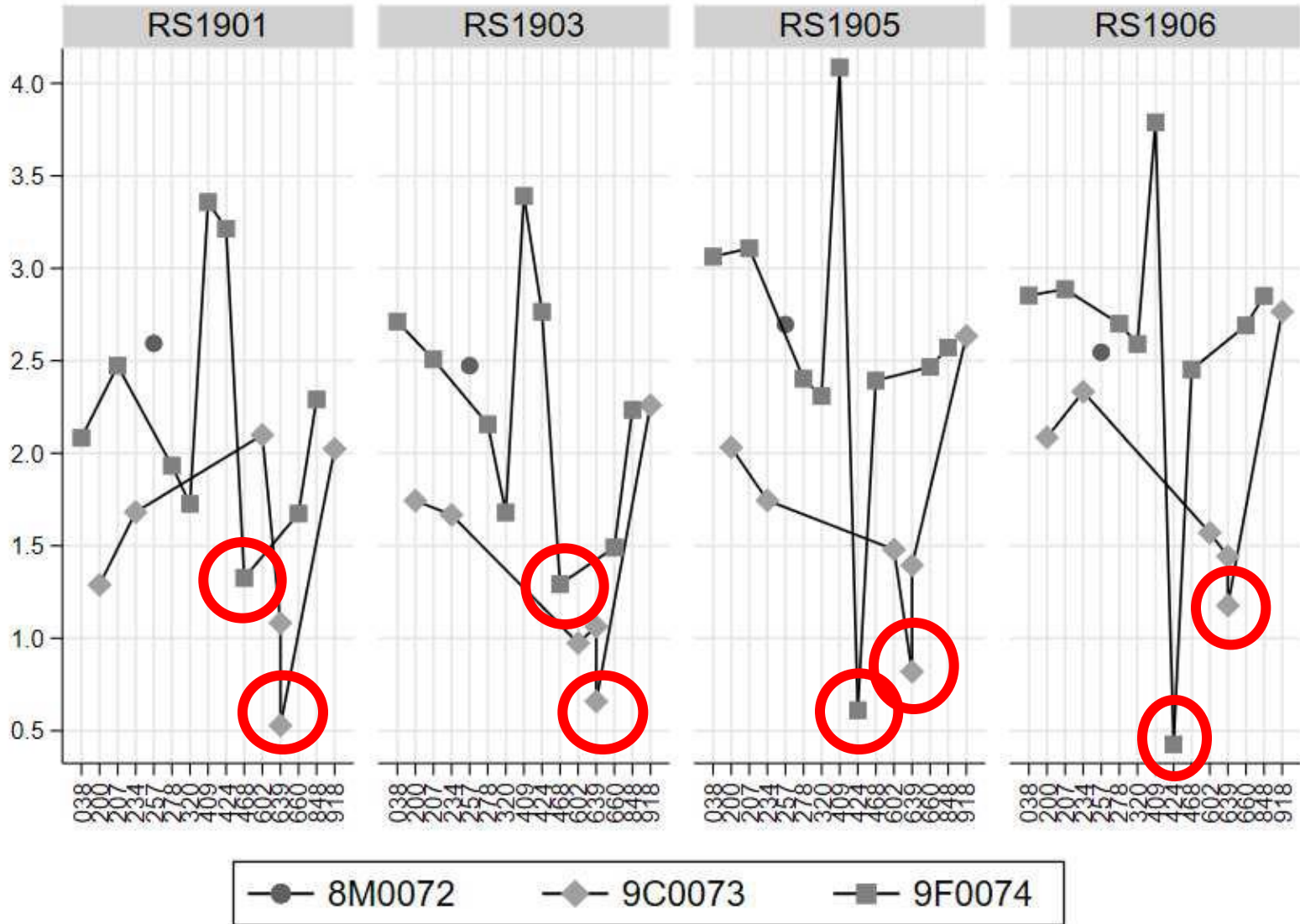


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Results of the 2019 round of EQAs- Scrapie

TeSeE SAP Combi Kit : 15 of the participating labs



Results of the 2019 round of EQAs- Scrapie

BIORAD-SHEEP/GOAT: only 1 of the participating labs

Batch #	# of MS per batch
9C0041	1

IDEXXSHORT: 11 of the participating labs

Three batches used:

Batch #	# of MS per batch
AR368	2
CR046	6
ER361	3



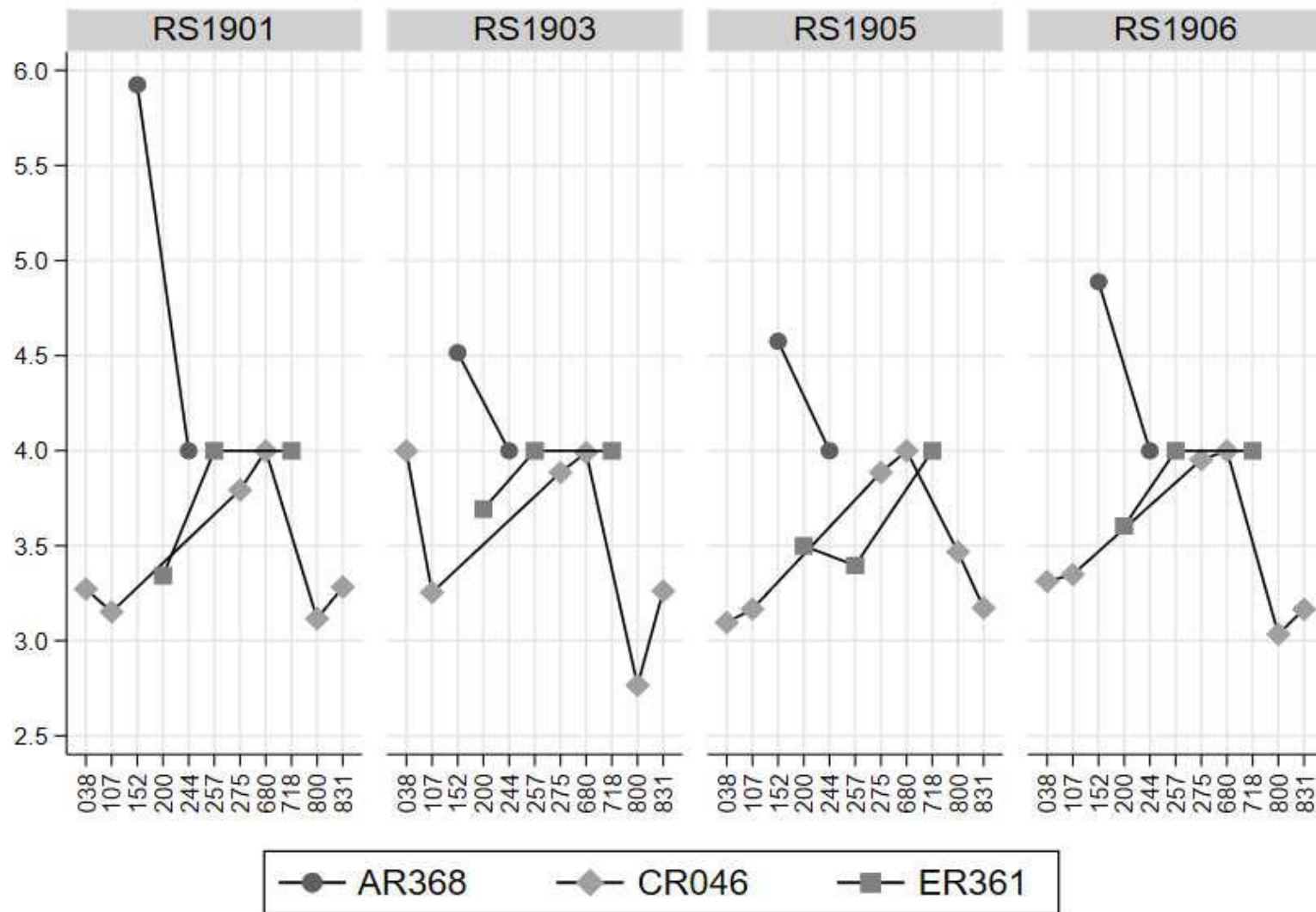
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Results of the 2019 round of EQAs- Scrapie

IDEXXSHORT: 11 of the participating labs

OD reported from the Labs for each batch applied and positive sample



Results of the 2019 round of EQAs- Scrapie

IdexxUltrashort: 5 of the participating labs

Four batches used:

Batch #	# of MS per batch
AR368	1
CR046	2
ER361	1
JR907	1



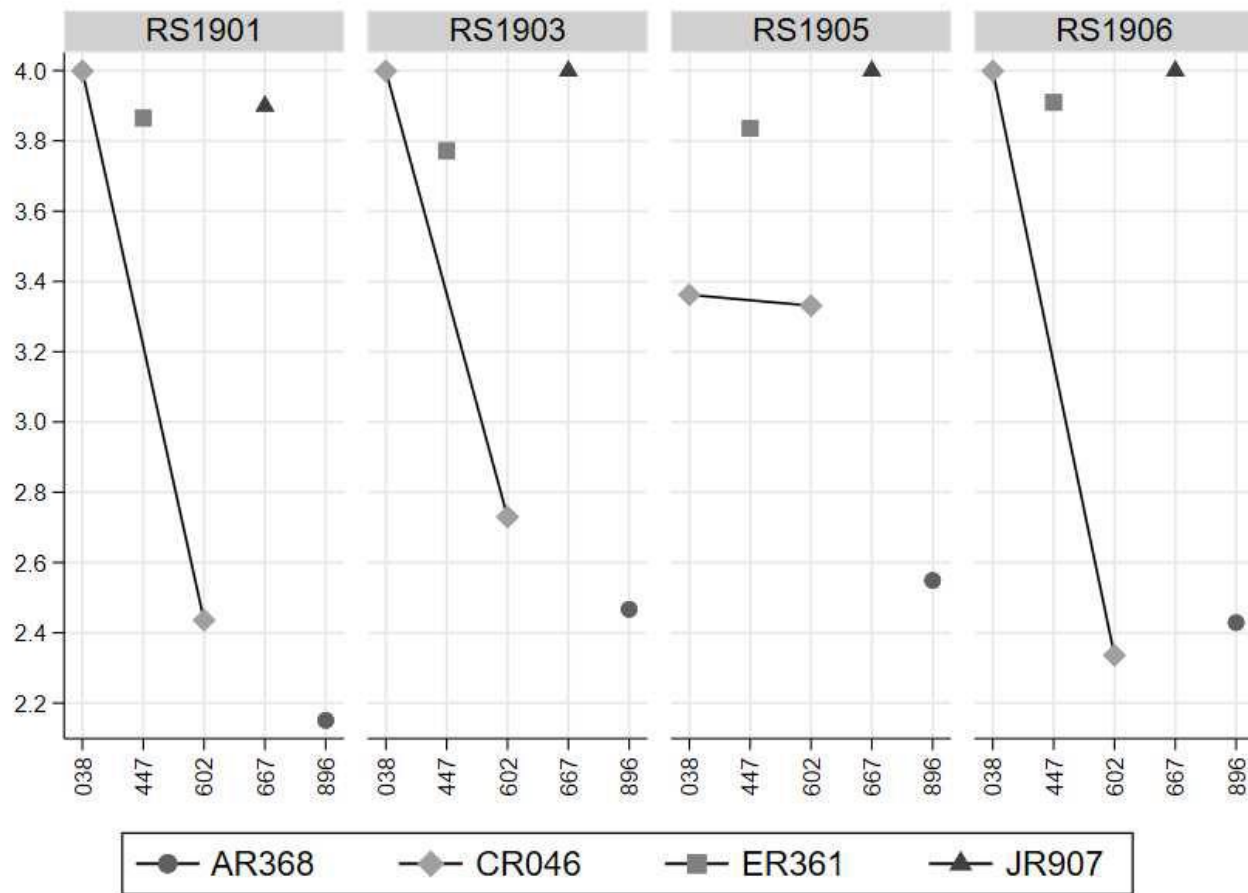
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Results of the 2019 round of EQAs- Scrapie

IdexxUltrashort: 5 of the participating labs

OD reported from the Labs for each batch applied and positive sample



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Results of the 2019 round of EQAs- Scrapie

PrioWESTERN BSE: modified protocol1 of the participating labs

Batch #	# of MS per batch
W190101G	1

PrioWESTERN BSE: 2 of the participating labs

One batch used:

Batch #	# of MS per batch
W190101G	2



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SHORT CONCLUSIONS: PT SCRAPIE

TeSeE SAP Combi Kit

- It is the first most used test in routine: 46% (12/26) of the laboratories applies TeSeE SAP Combi Kit in routine. Four labs apply this test as alternative test;
- Lab 409 reports ODs higher than others for all samples; lab 639 reports ODs lower than others for RS1901 and RS1903. Lab 424 lowest ODs for RS1905 and RS1906;



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SHORT CONCLUSIONS: PT SCRAPIE

IDEXX SHORT

- It is the second most used test in routine: 31% (8/26) of the laboratories applies idexxShort test in routine. Three labs apply this test as alternative test;
- Lab 800 usually reports low ODs;
- The ODs related to all 3 batches appear quite overlapping
- Short Idexx protocol is more sensitive than the ultrashort protocol for the same batch

IDEXX ULTRASHORT

- Five labs (5/26 = 19%) use it in routine and none as alternative test;
- Since the small number of labs that use IdexxUltrashort test, comparing batches is very difficult: no relevant difference appears



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SHORT CONCLUSIONS: PT SCRAPIE

TERMOFISHER PrioWESTERN BSE- modified protocol

- One lab uses PrioWESTERN BSE as alternative test;

TERMOFISHER PrioWESTERN

- Two labs use PrioWESTERN BSE as alternative test;

The bands of all the labs resulted strong



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PT 2019 BSE AND SCRAPIE

GENERAL CONCLUSIONS

- All participating laboratories correctly identified all samples
- Some differences in reported OD and in laboratory performance may be due to the batch in use (for example batch 9F0074 for BSE performed better than the others)
- All samples sent in 2019 PT were highly positive: problems may arise in some laboratories when borderline samples are tested in routine analysis



importance of the batch testing (Scrapie??)

Importance of high performance of the laboratory



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QUESTIONS

How many and which NRLs that usually perform rapid test in routine activity?

How many laboratories carrying out Rapid Test are present in each MS?

How many test methods are commonly used in each MS and which test is used in routine analysis?



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The forthcoming 2020 round of EQAs Rapid Tests

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Proficiency Testing – 1 PARTICIPANTS

- Spain
- Slovenia
- Switzerland
- France
- Portugal
- Ireland
- Austria



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Proficiency Testing - 2

- Homogenisation, dilution and creation of aliquots of brain tissue for preparation of Proficiency Samples;
- Analysis by Rapid Tests (Idexx and Biorad combi Sap) and confirmatory Western Blot;
- Interpretation of the results;
- Homogeneity and Stability assessment



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Proficiency Testing - 3

- Packaging and dispatch (dry ice - UN3373 – Import permit);
- Scrapie and BSE Rapid Test and Confirmatory Western Blot schemes: same package (delivery);
- Documenting of results: EURL web site still not available, a web repository folder will be available;



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Proficiency Testing - 4

Timescale

- Dispatch of PT samples: end of October;
- More time to perform the PTs and send back the results to EURL than the last PT
- Time to perform the PTs and send back the results to EURL: one month
- Results obtained twice by the same operator will be required



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Atypical scrapie:prospective composition of the PT scheme

- Atypical scrapie will not be included in the 2020 PT scheme
- Availability of atypical scrapie tissue for the PT scheme ?
- Current PT scheme in MS includes an atypical scrapie homogenate as an additional sample to the PT round ?



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Rapid Tests EQA rounds

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