EXPERTISE AND SERVICE PROVISION
QUALITY OF LABORATORIES

EXTERNAL QUALITY ASSESSMENT
IN VETERINARY DIAGNOSIS

DEFINITIVE GLOBAL REPORT

Proficiency Testing in Veterinary Diagnosis
Scrapie genotyping

SURVEY 2021/7

Sciensano/PT VET Scrapie genotyping/1-E

Expertise and service provision
Quality of laboratories
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A preliminary version of this report was submitted to the National reference laboratory: 06/12/2021

Authorization to release the report: By Bernard China, scheme coordinator,15/12/2021.

Bernard China

All the reports are also available on our webpage:
https://www.wiv-isp.be/QML/activities/PT%20VET/fr/originaux/rapports_annee.htm
https://www.wiv-isp.be/QML/activities/PT%20VET/nl/originaux/rapports_annee.htm

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Introduction

This survey was dedicated to the genotyping of the scrapie gene in ovine tissue.

The samples

The samples were prepared by the National Reference Laboratory for PRNP genotyping, Enzootic, vector-borne and bee diseases, Infectious diseases in animals Directorate, Sciensano.

Homogeneity

The homogeneity of the samples was tested once for each of the three used methods by the NRL before the survey (PCR-RFLP-DGGE, real time PCR, sequencing). The samples were considered as homogeneous.

Target Values

The target value was determined by the NRL based on the homogeneity tests.

Sample ID	Genotype 3 codons	Genotype 4 codons
18038	ARQ/ARH	**ALRQ/ALRH**
18068	ARQ/ARQ	**ALRQ/ALRQ**
18215	ARH/VRQ	**ALRH/VLRQ**
18243	ARR/VRQ	**ALRR/VLRQ**
18111	ARQ/ARQ	**ALRQ/AFRQ**
18330	ARH/AHQ	**ALRH/ALHQ**
18379	ARR/ARQ	**ALRR/ALRQ**
18400	ARQ/AHQ	**ALRQ/ALHQ**
18405	ARR/ARR	**ALRR/ALRR**
18049	ARR/AHQ	**ALRR/ALHQ**

Stability

The stability was determined by comparison of the pre-survey results with the results obtained by the NRL during and after the survey. The samples were considered as stable.

The participants

2 laboratories participated to this survey:
Sciensano, and ARSIA

Randomisation and panel composition

Since a specific number has been assigned to each laboratory, the randomisation has been performed as follows:

Laboratory	97505	97507
Sample ID		
GENSCR21-1	18215	18049
GENSCR 21-2	18111	18400
GENSCR 21-3	18049	18243
GENSCR 21-4	18379	18215
GENSCR 21-5	18405	18330
GENSCR 21-6	18400	18379
GENSCR 21-7	18243	18405
GENSCR 21-8	18068	18068
GENSCR 21-9	18330	18038
GENSCR 21-10	18038	18111

Survey Timeline

Transfer of the samples from NRL to QL: not done (the randomisation was done in the NRL facilities)
Randomization of the samples by QL: 18/05/2021
sending samples to participants: 31/05/2021 (Frozen)
Deadline for the results encoding: 21/06/2021
Preliminary report: 16/08/2021

Results

The panel consisted of 10 different samples.

Results per sample

2 laboratories encoded results giving 2 datasets (20 results).

Table R1. Results per sample

Interne sample ID	Expected Genotype (4 codons)	Encoded results
18038	**ALRQ/ALRH**	**2 x (ALRQ/ALRH)**
18068	**ALRQ/ALRQ**	**2 x(ALRQ/ALRQ)**
18215	**ALRH/VLRQ**	**2 x(ALRH/VLRQ)**
18243	**ALRR/VLRQ**	**2x (ALRR/VLRQ)**
18111	**ALRQ/AFRQ**	**2x (ALRQ/AFRQ)**
18330	**ALRH/ALHQ**	**2 x((ALRH/ALHQ)**
18379	**ALRR/ALRQ**	**2x (ALRR/ALRQ)**
18400	**ALRQ/ALHQ**	**2 x (ALRQ/ALHQ)**
18405	**ALRR/ALRR**	**2 x (ALRR/ALRR)**
18049	**ALRR/ALHQ**	**2 x (ALRR/ALHQ)**

100% of the encoded results were correct.

1.1. Used methods

Table R2. Results per method

Method 1	Method 2
DNA extraction	DNA Extraction
Classical PCR –RFLP - DGGE	ARMS-PCR (codons 136, 154, 171) + PCR (codon 141)
Real time PCR	
Sequencing	

1.2. Conclusion

All the participants gave the correct results independently of the used methods.

Annex: additional information

PRELIMINARY REPORT

The preliminary report of this survey is available on our website via the following link:

https://www.wiv-isp.be/QML/activities/PT%20VET/fr/originaux/rapports_annee.htm

The calendar for Proficiency Testing in Veterinary diagnosis is available on our website:

The link is:

https://www.wiv-isp.be/QML/activities/external_quality/calendar/calender_PT%20VET/_fr/Calendrier_2021-PT%20VET.htm

END