

Adia^X - PARATB Lyo

ADL04Y1_PARATB_PP01_(EN)_V01
13/05/2024

CONTEXT OF PARATUBERCULOSIS DIAGNOSTIC

Mycobacterium avium subspecies paratuberculosis (MAP) is the cause of a fatal enteric infectious disease called Johne's disease in ruminants.

- Johne's disease is transmitted by the **oro-faecal** route.
- The disease has a **high economic impact** on dairy farming as it causes reduced milk production, increased mortality and premature culling of sick animals.
- **Control programs** are taking place in many countries.

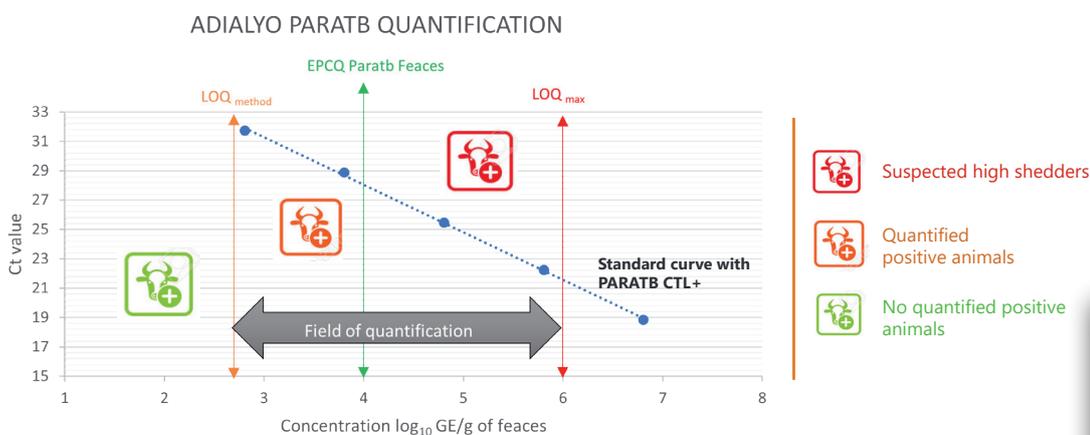
Key points about a PCR approach on Paratuberculosis

- ✓ Sensitive molecular assays like PCR have greatly improved the diagnosis of *Paratuberculosis*.
- ✓ The proper preparation of faecal samples for *Paratuberculosis* is a key success factor.
- ✓ Quantitative qPCR can be used to quantify positive samples and identify heavy shedders.

ADIALYO™ PARATB: FOR A QUANTITATIVE APPROACH

Reliable and validated qPCR methods on faeces samples

- **Quantification CTL+ : A standard DNA for quantification.**
- **Paratuberculosis PCR quantification.**
 - LOQ max: $6 \log_{10}$ GE/g (Genom Equivalent).
 - EPCQ: $4 \log_{10}$ GE/g = Quantified Extraction Positive Control for Paratuberculosis (Kralik *et al.**)
 - LOQ min: $2 \log_{10}$ GE/g.



- ADIAPREP™ procedure combined to faeces quantification allows simple and fast preparation of large series of samples in a single day.
- The new data produced for the validation confirms this innovative and easier approach of faeces preparation to characterize the Paratuberculosis infectious status of bovine on a large scale.

Works with

Adia^X
Prep

+

Adia^X
Pure

+

Adia^X
Mag

« Sensitive molecular assays like PCR have greatly improved the MAP diagnosis. However, the proper preparation of faecal samples for MAP remained an issue. With ADIAPREP™, a path has been found towards a reproducible and easy solution. »

METHOD FOR ADIALYO™ PARATB

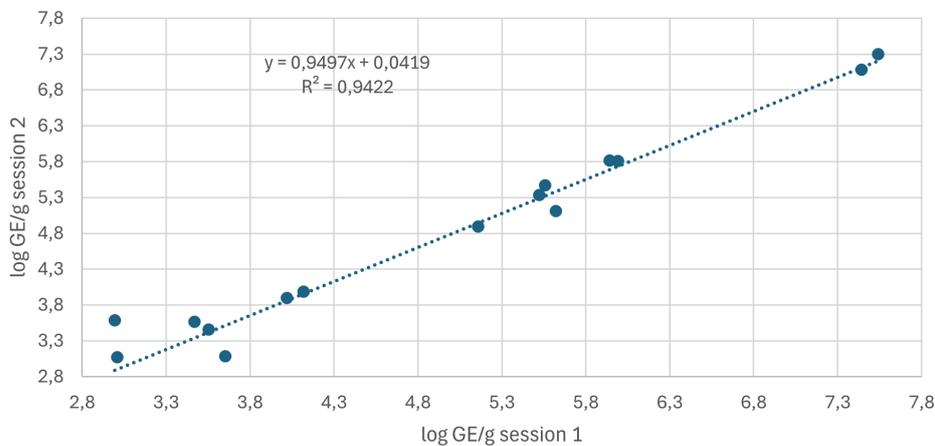
- **Optimized sample preparation with ADIAPREP™** 
- **Reduced test time**
 - Adapted to a standard 96-format — allowing the analysis of **200 samples a day!**
 - Less waiting time
 - No incubation time
- **Reliable and validated methods on faeces samples:**

Validation data for Bio-X Diagnostics Paratuberculosis PCR methods

	Protocol ADIAPREP + ADIAMAG
LOD method	625 GE/g
LOQ method	625 GE/g
High quantification method reproductibility	R ² =94,2%
Results analysis	PCR Qualitative PCR Quantitative

Reproducible new process

Quantification reproducibility protocol with ADIAPREP



- Performed on 22 positive samples of different infection levels.
- Each sample is extracted on 2 independent sessions with each of the quantitative methods.

TO PLACE AN ORDER :

Code	Description	Nb. of reactions
ADL04Y1-100	ADIALYO™ PARATB	100 R
ADPBIAR-4x96	ADIAPURE™ GLASS BEADS RACK 4x96	384 R
NADI003	ADIAMAG™ (magnetic beads extraction kit)	200 R
ADPREP-100	ADIAPREP™	100 R

ADDITIONAL KITS FOR METHOD ADOPTION AND QPCR :

Code	Description	Nb. of reactions
ADC04SQ01	Quantified Extraction Positive Control PARATB faeces	40 R
ADC04YLD	LD/LQ _{PCR} Positive Control - PARATB	80 R

« Bio-X Diagnostics protocol delivers quick and reliable MAP PCR results leading to a new approach of herd monitoring. »

Sample preparation with ADIAPREP™



5 min 3000 g



resuspend pellet

5 min - 30 Hz



5 min 3000 g



21 min



PCR



Smart solutions for sharp decisions

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