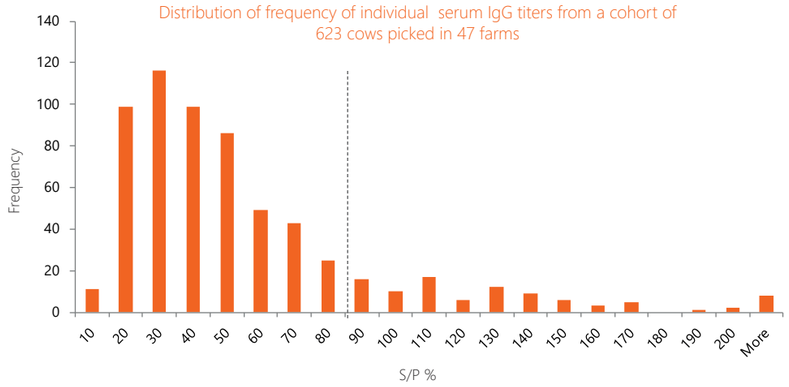
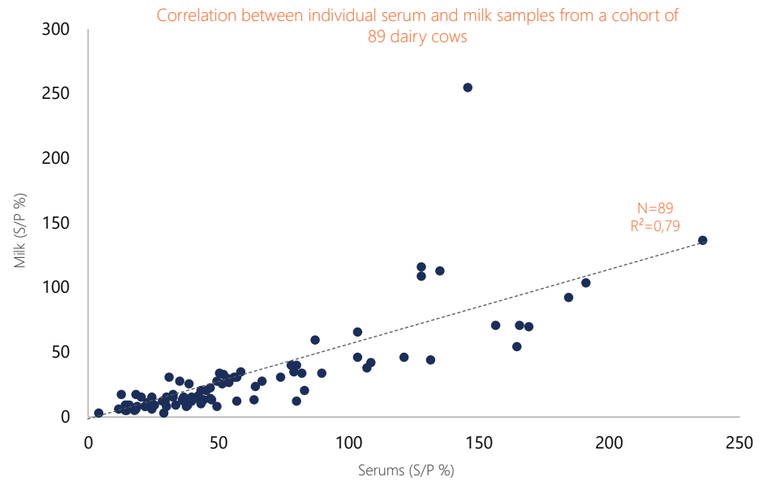
■ MONOSCREEN AbELISA *M.bovis* HS is equally very relevant to monitor herd-level serological status, thanks to its high specificity.

Recommended cut-off on animals over 6 months of age is set at 80% E/P ratio for sera samples.



■ MONOSCREEN AbELISA *M.bovis* HS is usable from serum as well as from milk samples.

Recommended cut-off on animals over 6 months of age is set at 40% E/P ratio for milk samples.



M.BOVIS	SERUMS			
MILK		+	-	
	+	17	2	19
	-	4	66	70
		21	68	89

Se relative	80,95 %	PPV	89,47 %
Sp relative	97,06%	NPV	94,29 %
Kappa	0,81	EXCELLENT	

ORDERING INFORMATION

Reference	Description	Method	Format
BIO K 432/2	Monoscreen AbELISA Mycoplasma bovis HS	Indirect, monowell	2 plates / 192 tests
BIO K 432/5			5 plates / 480 tests

Instructions for use and handling conditions: see instructions and MSDS (available on www.biox.com)

Bio-X Diagnostics
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5580 Rochefort • BELGIUM
T. +32(0)84 32 23 77 • F. +32(0)84 31 52 63
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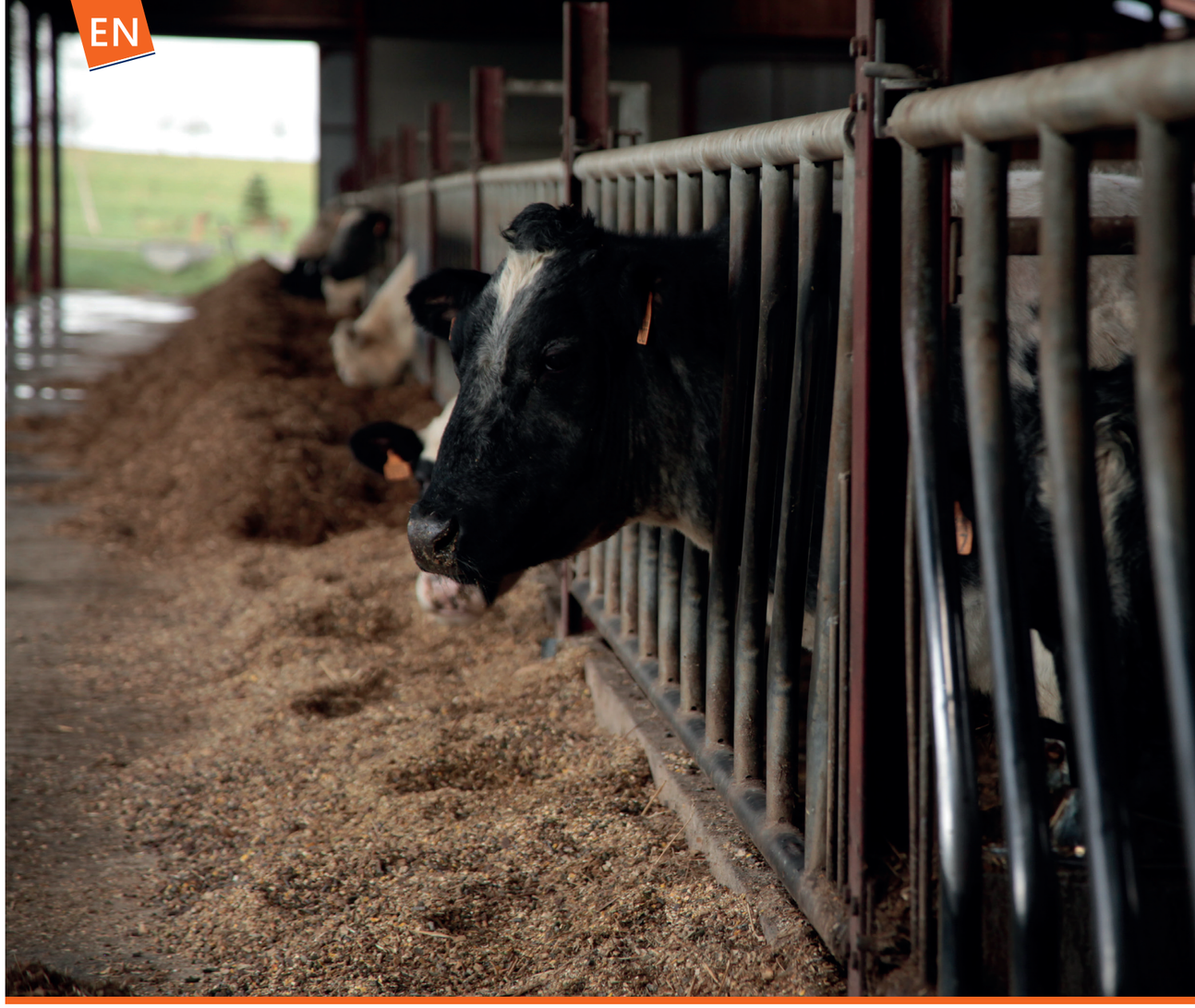
EN



MONOSCREEN AbELISA

NEW *BIO K 432 - MYCOPLASMA BOVIS HS*

Bio-X Diagnostics

NEW

MONOSCREEN AbELISA *MYCOPLASMA BOVIS HS*

MONITORING THE DISEASE

Mycoplasma bovis is a pathogen causing respiratory disease, otitis media, arthritis, mastitis, and a variety of other diseases in cattle worldwide. It is increasingly recognized by the veterinary and livestock communities as having an important impact on the health, welfare, and productivity of dairy and beef cattle. *M. bovis* diseases can be difficult to diagnose and control because of inconsistent disease expression and response to treatments.

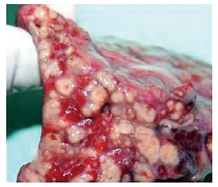
Costs of *mycoplasma* disease include reduced production, drugs and labor for treatment, death and culling losses, implementation of diagnostic and control measures, and a portion of the cost of non-pathogen-specific preventive measures. Because *M. bovis* -associated disease tends to be chronic, costs per case are typically high relative to other pathogens. In addition to economic costs, there are important animal welfare consequences of *M. bovis* infections, given that the associated disease is often chronic and poorly responsive to treatment.

Due to non-specific clinical symptoms and great variations in genotypes and pathogenesis, each disease caused by *M.bovis* requires a specific diagnostic approach and control measures (table below).

Chronic asymptomatic infection with intermittent shedding of *M.bovis* appear critical to the epidemiology of infection, especially the maintenance of *M. bovis* within a herd and exposure of naive populations.
From epidemiologic point of view, *M. bovis* specific serum antibodies can be detected by indirect ELISA, usually by 6–10 days after experimental infection. However, in natural infections, individual animal titers are poorly correlated with infection or disease; not all diseased animals develop high titers, and the dynamics of antibody response may also depend from the age of the animals and the nature of the targeted antigen.
On a group level, however, seroconversion or high titers are predictive of active *M. bovis* infection. Serology is therefore best applied in surveillance or as part of a biosecurity program. Antibody titers in milk are used to identify *M. bovis* infected mammary glands.
Therefore, two types of herd-level antibody monitoring schemes can be determined:

- Confirmation of sero-negative status, for which a high sensitivity level is required;
- Confirmation / follow up of an infectious process in a herd, where cut-off value will adequately discriminate low titers vs high titers.

Disease	Control	Diagnosis	Diagnostic methods
Mastitis	Culling of shedders	**Individual detection** of cows shedding the pathogen via milk	Isolation and culture Antigen capture ELISA PCR
Pneumoniae / arthritis	Herd entry restrictions (no culling of shedders)	Screening and monitoring **(herd detection)**	Antibody ELISA
Genital infections	Decontamination of semen	**Individual detection** of cows shedding the pathogen via semen	Isolation and culture Antigen capture ELISA PCR

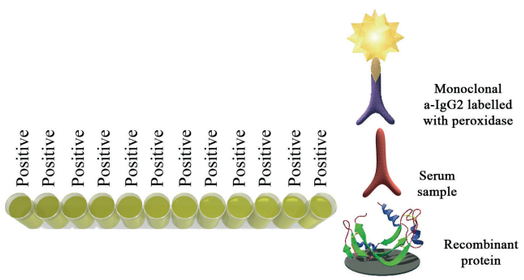


MiLA IgG2: A BRAND NEW APPROACH IN MONITORING *M.Bovis* SEROLOGY

Our new Monoscreen AbELISA *M.bovis* High Sensitivity (BIO k 432) features a unique recombinant MiLA / anti IgG2 combination which enables a high level of sensitivity as well as remarkable capacity to discriminate negative vs positive animals.

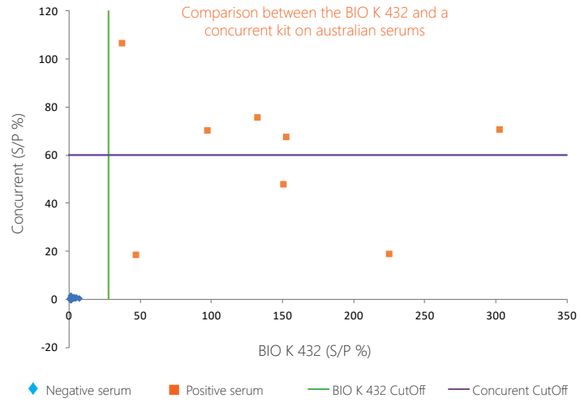
- MONOSCREEN AbELISA *M.bovis* HS is a monocupule indirect ELISA type.

This assay is intended for the detection of antibodies against *M.bovis*; based on MiLA (Mycoplasma Immunogenic Lipase A) it shows a very low threshold detectability and thus allows for her-level negative status as part of biosecurity schemes.



- MONOSCREEN AbELISA *M.bovis* HS has been particularly designed for serodiagnosis of *Mycoplasma bovis* infections in young calves.

Hence the conjugate only recognizes IgG2. This will result in the detection of IgG2 generated by the calf in response to a *Mycoplasma bovis* infection where IgG1 possibly coming from the colostrum of a cow previously exposed to *M.bovis* will not be recognized.
Recommended cut off on calves under 6 months of age is set at 30% E/P ratio.



Cohorte n°1

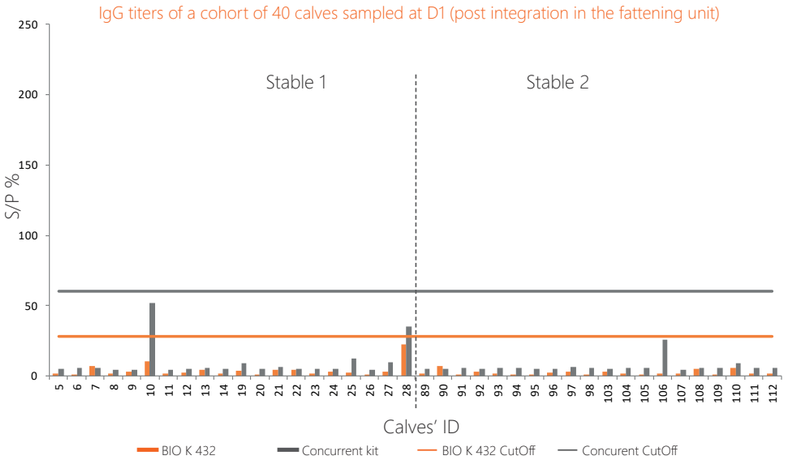
31 Australian serums with a known status for *M.bovis* were tested with BIO K 432 and concurrent kit.

		Statut +	Statut -	
BIO K 432	+	8	0	8
	-	0	23	23
		8	23	31

Relative Se	100 %	PPV	100 %
Relative Sp	100 %	NPV	100 %
Kappa	1,00	EXCELLENT	

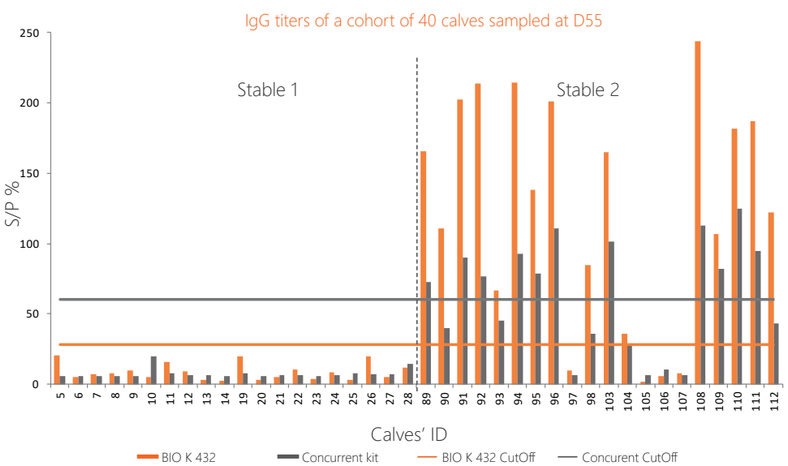
		Statut +	Statut -	
Concurrent kit	+	5	0	8
	-	3	23	23
		8	23	31

Relative Se	62,5 %	PPV	100 %
Relative Sp	100 %	NPV	88,5 %
Kappa	0,63	GOOD	



Cohorte n°2

The serums from the 40 French calves were sampled at day 1 and 55 using our BIO K 432 and were tested using the concurrent kit. The status of the animals are not defined, but given the results obtained using the first cohort presented here above, we decided to compare the two kits using BIO K 432 as the reference one.
No animals were found seropositive at day 1 with the two kits. The seroconversion at day 55 in stable 2 was observed also with the concurrent kit, nevertheless less animals were identified as being positive. This is exemplified again by a relative sensitivity of only 68.75% when compared to BIO K 432. Hence while both kits present a high relative specificity, BIO K 432 displays a **higher sensitivity** in both cohorts tested.



		Statut +	Statut -	
Concurrent kit	+	11	0	11
	-	5	24	29
		16	24	40

Relative Se	68,75 %	PPV	100 %
Relative Sp	100 %	NPV	82,76 %
Kappa	0,73	GOOD	