

# MONOSCREEN<sup>®</sup> Ab ELISA

## BOHV-4

***Bicupule ELISA kit for serodiagnosis of  
Bovine herpes virus type 4 (BoHV-4)  
Indirect test for blood sera, plasma and milk  
Diagnostic test for cattle  
Double wells***

### BIO K 263

The BoHV-4 (Bovine herpesvirus-4) is considered as a probable pathogen of cattle. This virus was isolated from animals showing various clinical signs. It is often associated with pathologies affecting the genital tract (orchitis or metritis). It has also been isolated from cattle suffering from ocular, respiratory, or digestive disorders or even skin lesions. Its presence was also demonstrated in animals apparently healthy. In order to diagnose an infection caused by BoHV-4, it is necessary to subject coupled blood samples to an ELISA test. In the event of a clear seroconversion between the sample collected during the acute phase of infection and that collected during the convalescent phase (i.e. 2 to 3 weeks after the first sample), one can conclude to a contamination by BoHV-4. It is also possible to diagnose an infection caused by BoHV-4 by isolating the virus on a susceptible cell line. The growth of the virus in this cell line can be shown by the use of a specific antibody coupled to a fluoro-chrome.

#### Test Procedure

- 1- The purified BoHV-4 virus is fixed on the microplate.
- 2- Add samples and positive and negative controls.  
Incubate for 1 hour at 21°C+/-3°C  
Wash the plate
- 3- Add the conjugate  
Incubate for 1 hour at 21°C+/-3°C  
Wash the plate
- 4- Add TMB  
Wait 10 minutes  
Add the stop solution. Read at 450 nm

#### Use of Kit

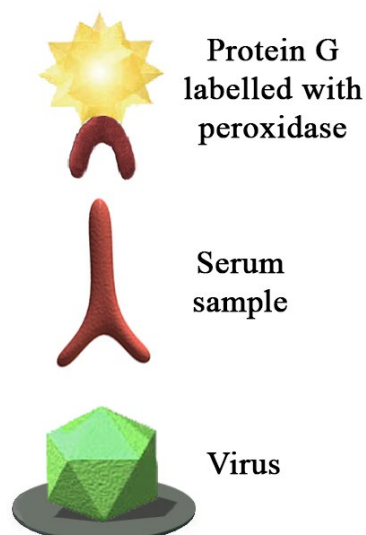
The kit is intended for the detection of bovine Herpesvirus type 4 in bovine serum.

#### Reliability of results

The virus purification ensures an excellent specificity and very reliable results. The G protein used as conjugate detects most isotypes of mammals.

#### Ease of Use

Only a few steps are required  
Incubation at room temperature  
Results obtained in 140 minutes maximum



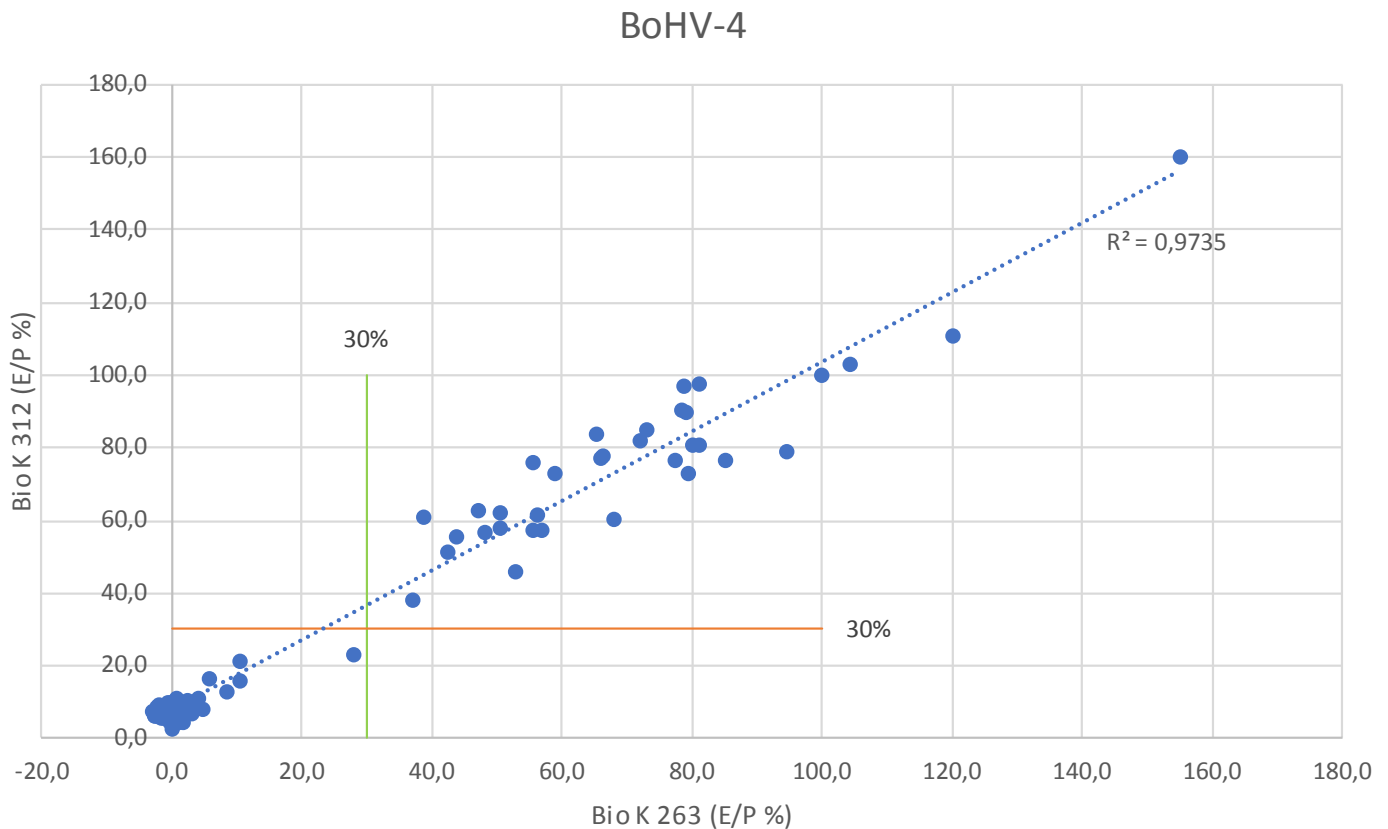
## Result examples

96 blood sera were used to compare the BIO K 263 Monoscreen AbELISA BoHV-4 / indirect, double wells and the Bio K 312 Monoscreen AbELISA BoHV-4 / indirect, monowell.

Results from these comparisons are shown on graph 1.

On the abscissa and ordinate axes, 100 indicates the value obtained with the reference positive serum of the kit (E/P).

Graph n°1



<b>BOHV-4</b>		<b>BIO K 263</b>		
<b>BIO K 312</b>		+	-	
	+	34	0	34
	-	0	62	62
		34	62	96

RELATIVE SE	100,00 %	PPV	100,00 %
RELATIVE SP	100,00 %	PNV	100,00 %
KAPPA	1,00	EXCELLENT	

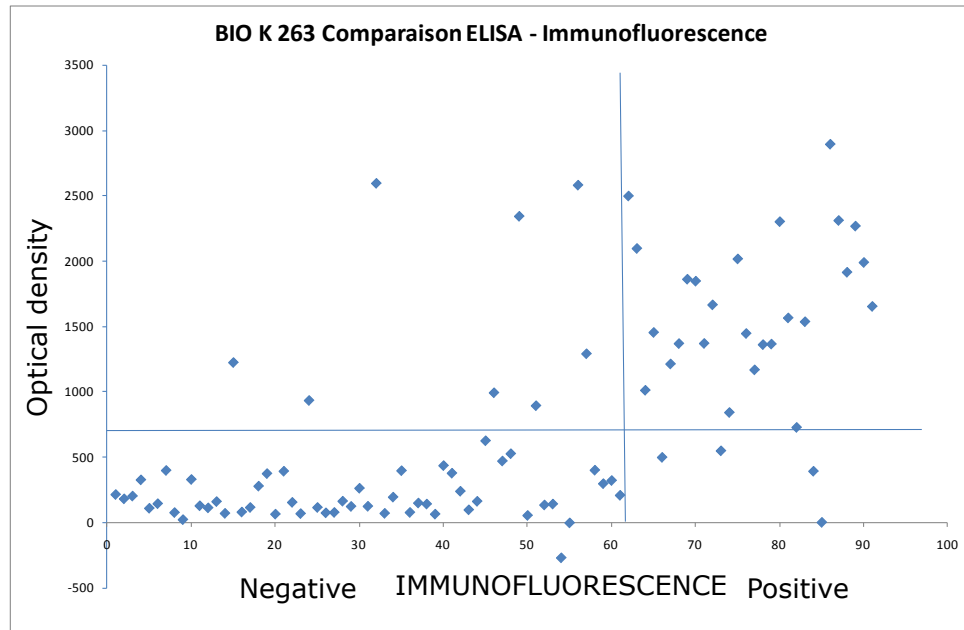
Agreement between the two tests : Kappa = 1.00

The agreement between the two tests is considered excellent.

## Result examples

91 blood sera were used to compare the BIO K 263 test kit and a immunofluorescent test on MDBK cells infected with BoHV4 virus.  
Results are shown on graph n° 2

Graph n° 2



### IMMUNOFLUORESCENCE

BIO K 263		-	+	
	-	53	4	57
	+	8	26	34
		61	30	91

Agreement between the two tests : Kappa = 0.71

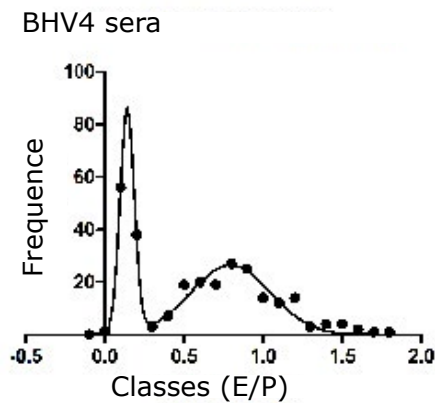
The agreement between the two tests is considered good.

Landis et Koch, The measurement of observer agreement for categorical data  
Biometrics 1977, 33, 159-74

## Result examples

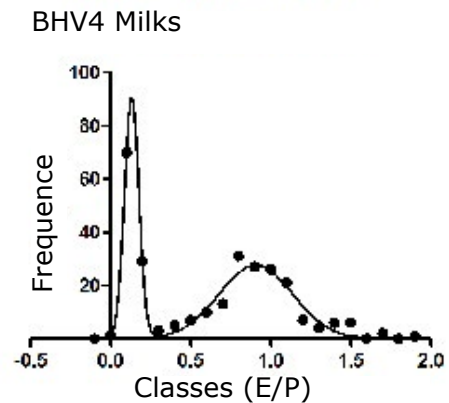
270 sera collected from adult cows were tested with the BIO K 263 kit. These samples come from 27 Belgian farms. The obtained optical densities were divided by the optical density provided by the reference serum of the kit (E/P). A frequency histogram was drawn for the blood sera (graph n°3).

Graph n° 3

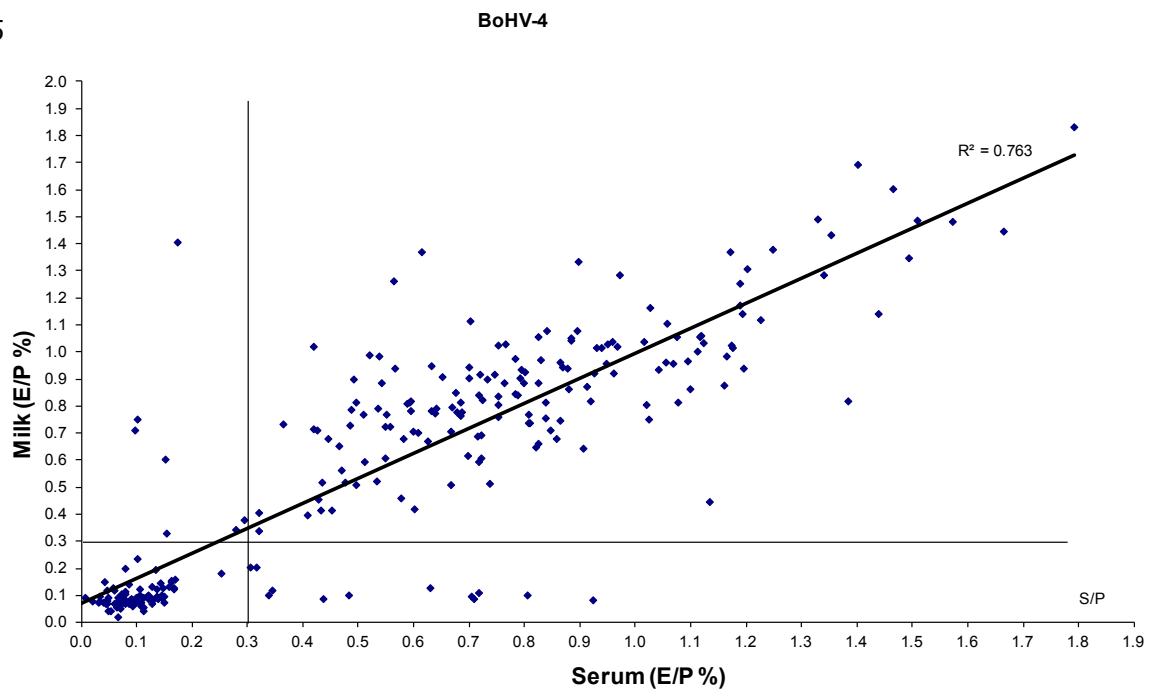


270 milk samples collected from adult cows were tested with the BIO K 263 kit. These samples come from 27 Belgian farms. The obtained optical densities were divided by the optical density provided by the reference serum of the kit (E/P). A frequency histogram was drawn for the milks (graph n°4).

Graph n° 4



Graph n° 5



BOHV-4	SERA			
MILKS		+	-	
	+	159	7	166
	-	12	92	104
		171	99	270

RELATIVE SE	92,98 %	PPV	95,78 %
RELATIVE SP	92,93 %	PNV	88,46 %
KAPPA	0,85	EXCELLENT	

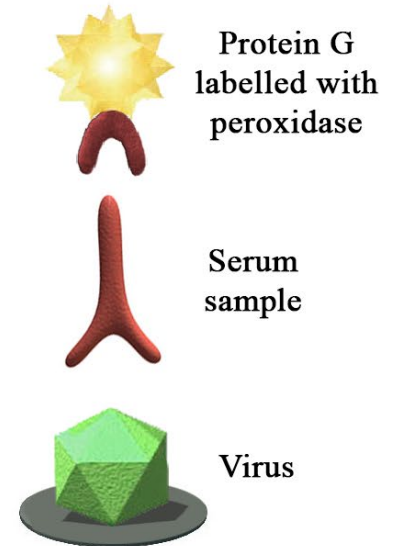
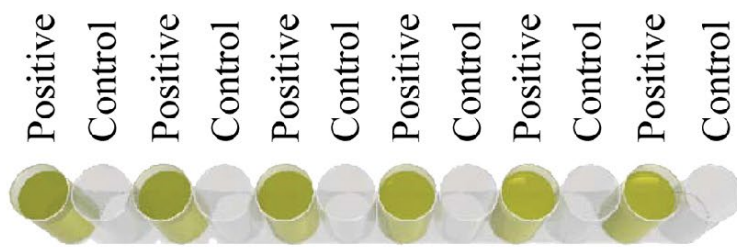
Agreement between the two tests : Kappa = 0.85  
The agreement between the two tests is considered excellent.

## Composition of the kit

### *Monoscreen AbELISA BoHV-4 / indirect, double wells*

	BIO K 263/2
Microplates	2 (96 tests)
Washing solution	1 X 100 ml (20 X)
Dilution buffer	1 X 30 ml (5 X)
Conjugate	1 X 0.5 ml (50 X)
Positive serum	1 X 0.5 ml (1 X)
Negative serum	1 X 0.5 ml (1 X)
Tracer	1 X 0.5 ml (freeze-dried)
Single component TMB	1 X 25 ml (1 X)
Stopping solution	1 X 15 ml (1 X)

One year stability between +2°C et + 8°C



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