



RESPIRATORY ELISA KIT

For serum (Bovine) - Multiplexed - Double well -

BIO K 284/2 - BIO K 284/5

Respiratory disorders are of major concern for bovidae, given the frequency of such infections and the high number of animals affected. These infections occur in all countries that practice intensive livestock farming in which large numbers of animals are confined to small areas. Treatment and diagnosis are both complicated due to the multifactorial character of these diseases etiology. Viruses and bacteria combined with stress due either to transport in overcrowded vans or dirty or poorly ventilated stabling, for instance, play a key role in triggering acute respiratory infections. These infections are particularly common among young animals, although they also affect adult animals. In most cases the animals that show signs of respiratory ailments harbour several pathogens, some of which may act synergistically. So, it is generally recognised that viruses are the first pathogens to intervene, whereas bacteria act as second invaders to worsen the animal's condition. Shipping fever is a good example of the synergism that can exist between a virus (PI3) and a bacterium, such as *Mannheimia haemolytica*, in the respiratory tract. The BIO-X RESPIRATORY ELISA kit consequently enables one to evaluate the humoral immune response of cattle to five pathogens commonly implicated in bovine respiratory infections. These are the BoHV-1 virus causing infectious bovine rhinotracheitis (IBR), bovine virus diarrhoea virus (BVDV), which is also responsible for mucosal disease, bovine respiratory syncytial virus (BRSV), parainfluenza 3 virus (PI3) and *Mycoplasma bovis*.

EIA Procedure

- 1- Microplate coated with monoclonal antibodies and inactivated viruses
Microplate coated with recombinant protein.
- 2- Add samples and positive control.
Incubate 1 hour at 21°C+/-3°C.
Wash
- 3- Add conjugate.
Incubate 1 hour at 21°C+/-3°C.
Wash
- 4- Add TMB.
Wait 10 minutes
Add stop solution. Read at 450 nm

Use of the kit

The kit is designed to follow seroconversion on paired sera

Reliable Results

The use of monoclonal antibody as conjugate ensures excellent specificity and very reliable results.

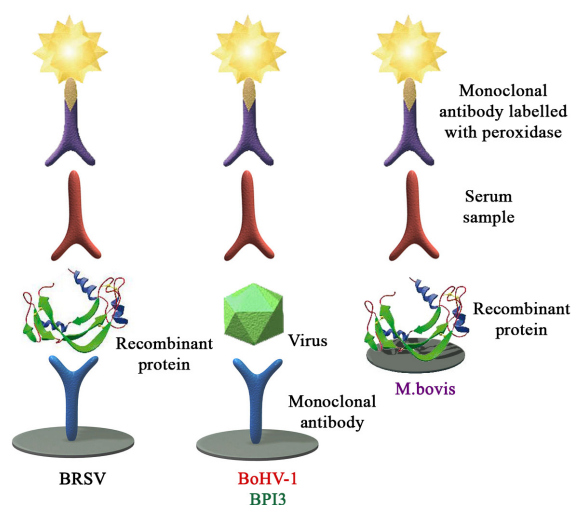
The use of monoclonal antibodies to purify the virus on the plate also makes it possible to obtain an excellent specificity. The use of recombinant protein on the plate also makes it possible to obtain an excellent specificity

Ease-of-Use

Minimal hands-on-time

Room temperature incubation

Results available in 140 minutes for single or batch testing.

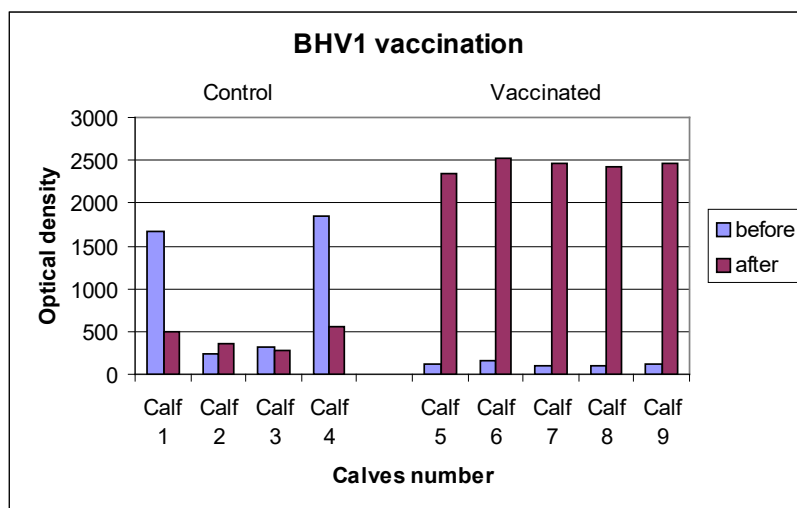




Example of results - BoHV1

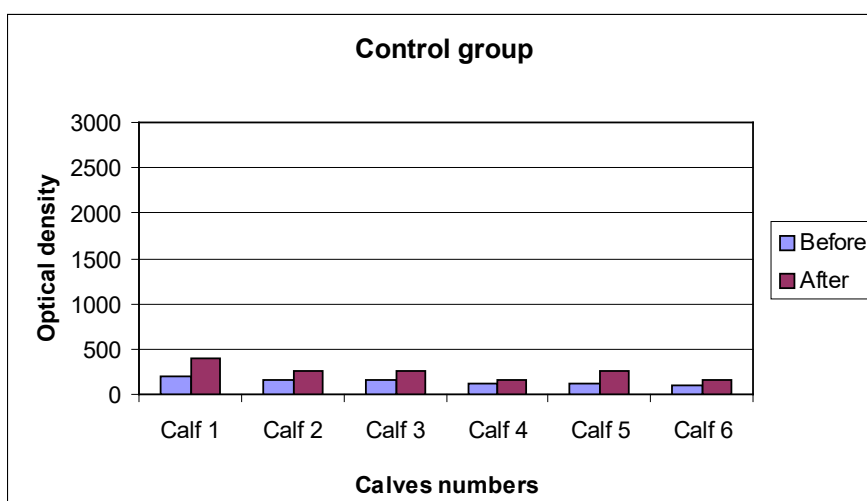
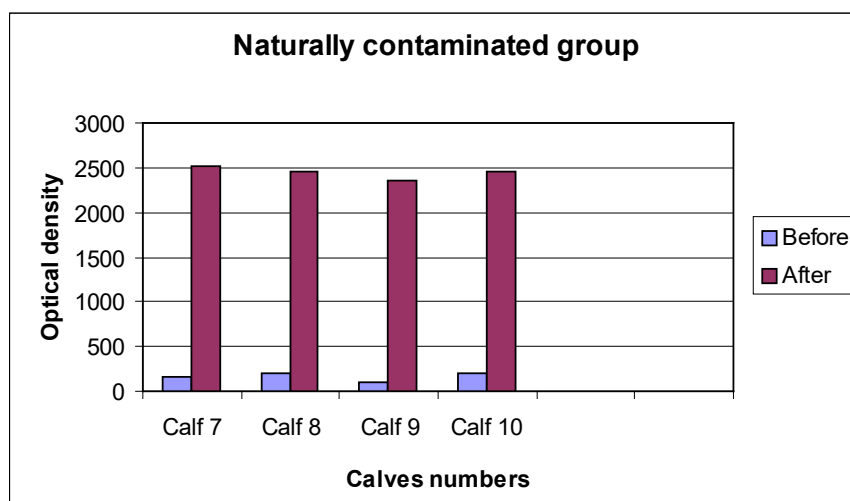
A batch of 9 calves of approximately 5 months was divided into two groups. The first group (n = 4) was not vaccinated. The second group (n = 5) was vaccinated with an inactivated commercial vaccine. Before vaccination, the 9 calves were blood sampled. After the second vaccination, the 9 calves underwent a blood sampling.

The paired sera were tested with the Bio K 284 kit of Bio-X Diagnostics.



Example of results - BVDV

Following a contact with a persistently infected animal, a group of 4 calves from 3 to 5 months showed a natural seroconversion. A reference group of 6 animals from 3 to 9 months was used as control. The serums of these 10 calves were taken at 3 weeks of interval. The serums were tested with the BIO K 284 ELISA kit from Bio-X Diagnostics.

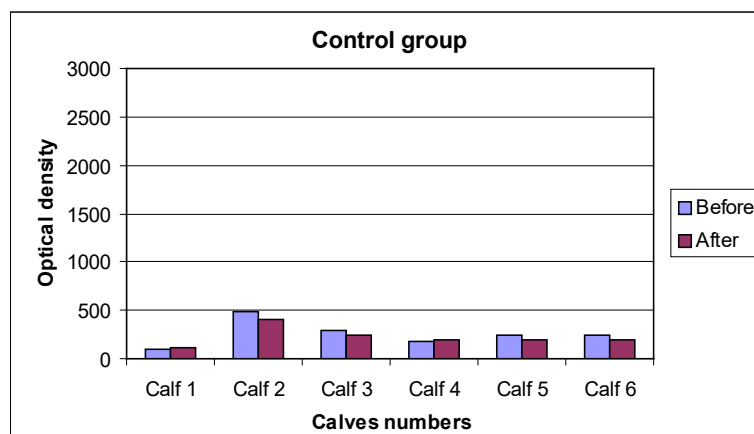
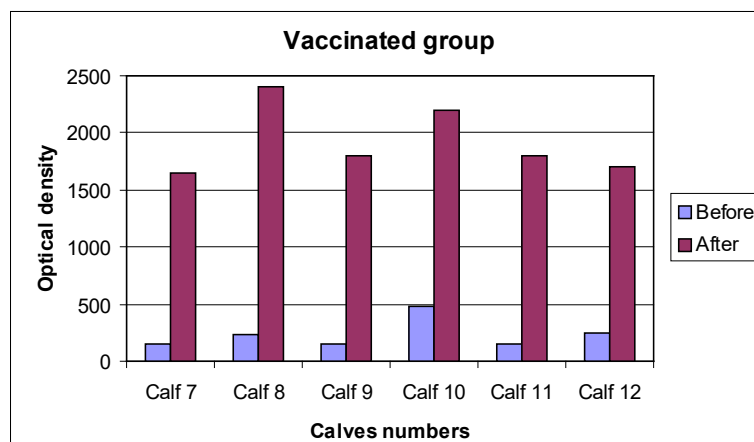




Example of results - BRSV

A batch of 12 calves of approximately 8 months was divided into two groups. The first group was vaccinated with an inactivated commercial vaccine. The second group was not vaccinated.

Before vaccination, the 12 calves were blood sampled. After the second vaccination, the 12 calves underwent a blood sampling. The paired sera were tested with the Bio K 284 kit of Bio-X Diagnostics.





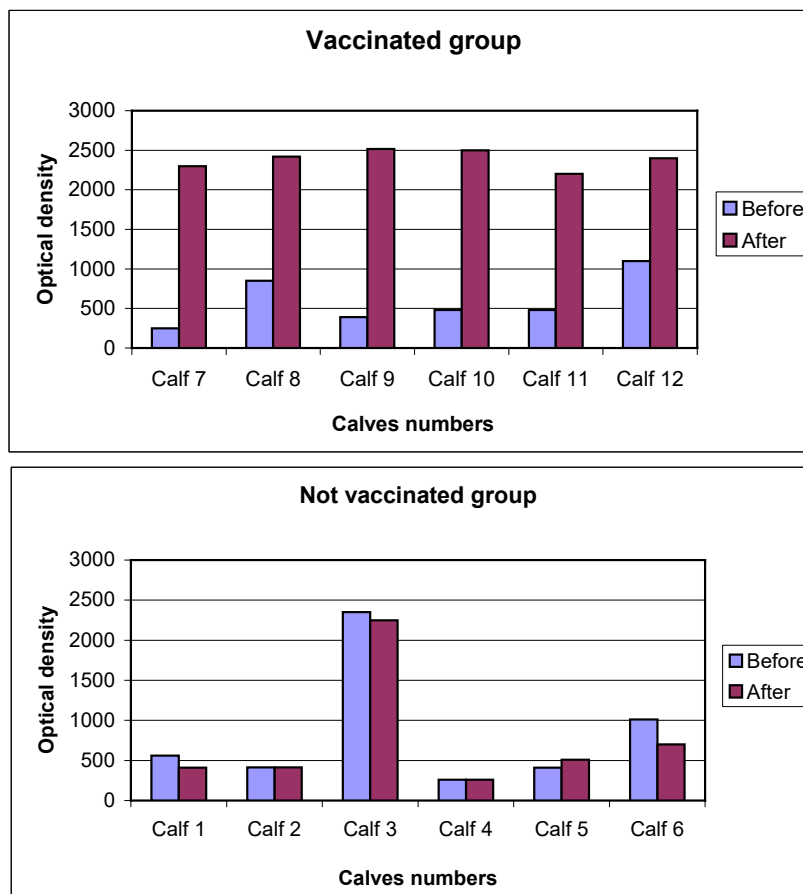
Example of results - PI3

A batch of 12 calves of approximately 6 months was divided into two groups.

The first group was vaccinated with an inactivated commercial vaccine. The second group was not vaccinated.

Before vaccination, the 12 calves were blood sampled. After the second vaccination, the 12 calves underwent a blood sampling.

The paired sera were tested with the Bio K 284 kit of Bio-X Diagnostics.



Example of results - *Mycoplasma bovis*

Five cows were inoculated experimentally with a *Mycoplasma bovis* culture. Serum samples were then taken from these animals at regular intervals and tested using the BIO K 284 kit. At the end of the trial the animals were sacrificed and their lungs removed to be tested for the bacterium's presence.

Day of experimental infection											
		Infect									
Days	-3	0	3	5	7	10	14	17	21	28	35
Animal 1	0	0	0	0	0	0	0	0	++		
Animal 2	0	0	0	0	0	0	0	0	0		
Animal 3	0	0	0	0	0	+	+				
Animal 4	0	0	0	0	0	++	+	++	++	++	++
Animal 5	0	0	0	0	0	0	+	++	++	++	++

Mycoplasma bovis was isolated from the lungs of four of the five artificially infected animals. The bacterium was not isolated from the lungs of Subject 2. It is worthwhile noting that this subject was the only one that did not show seroconversion following the infection.



Composition of the kit

	BIO K 284/2	BIO K 284/5
Microplate	2 (32 tests)	5 (80 tests)
Washing solution	1 X 100 ml (20 X)	1 X 250 ml (20 X)
Dilution buffer	1 X 50 ml (5 X)	1 X 100 ml (5 X)
Conjugate	1 X 0.5 ml (50 X)	1 X 1.4 ml (50 X)
Positive serum	1 X 0.5 ml (1 X)	1 X 0.5 ml (1 X)
Single component TMB	1 X 25 ml (1 X)	1 X 55 ml (1 X)
Stopping solution	1 X 15 ml (1 X)	1 X 30 ml (1 X)

Stability : One year between +2°C and +8°C.

