FASCIOLA HEPATICA ELISA KIT

For serum or milk (Bovine, Ovine) - Double wells -

BIO K 211/2 - BIO K 211/5

Bovine fasciolosis caused by the digenic trematode *Fasciola hepatica* is a worldwide parasitic disease common in ruminants. This two-host life cycle parasite is classically found in farms where all conditions for the survival and the multiplication of the snail intermediate host (*Lymnea truncatula*) are fulfilled. This snail is mainly found in damp meadows (watering-places, brooks, springs,...). Fasciola egg shedding occurs with faeces. Hatching follows in water and gives rise to the *miracidium* which infests the snail. After multiplication in this host, cercariae are eliminated and give rise to infectious metacercariae fixed on a plant holder. Once ingested by a ruminant, young flukes migrate through the liver to reach bile ducts. The prepatent period is 8 to 10 weeks. Adults appear in the bile ducts and start to lay eggs. Liver damage and acute disease (especially in sheep) are caused by migrating immature parasites. Chronic disease occurs in cattle during the biliary phase. Zootechnical characteristics are hampered by the disease. Decrease in milk yield (-10%), weight loss, intermittent diarrhoea, anemia and fertility problems. Diagnosis of *Fasciola hepatica* in cattle can only be made after 8 to 10 weeks by coprological examination of faecal material. However, sometimes even repeated fecal examination cannot indentify any *Fasciola hepatica* infection due to the lack of sensitivity of this method. Acute distomatosis of the sheep is characterized by anemia and sometimes sudden mortality and chronic distomatosis by anemia, reduction of the dairy production, reduction of the average daily profit and oedemas

Use of the kit

The kit is designed to follow serological status of sera or milks

Reliable Results

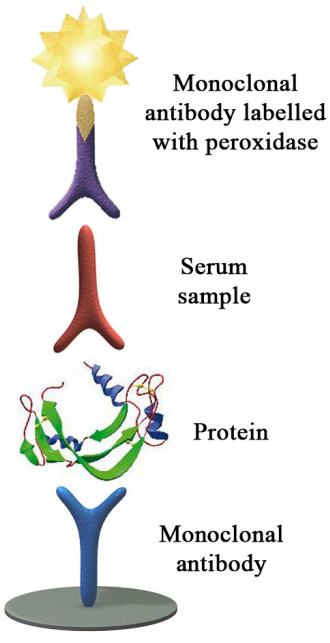
The use of monoclonal antibody as conjugate ensures excellent specificity and very reliable results.
The use of monoclonal antibodies to purify one Fasciola hepatica protein on the plate also makes it possible to obtain an excellent specificity

Ease-of-Use

Minimal hands-on-time
Room temperature incubation
Results available in 140 minutes for single or batch testing

EIA Procedure

1- Microplate coated with monoclonal antibody and *Fasciola hepatica* purified 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 chromogen (TMB).
Wait 10 minutes
Add stop solution. Read at 450 nm



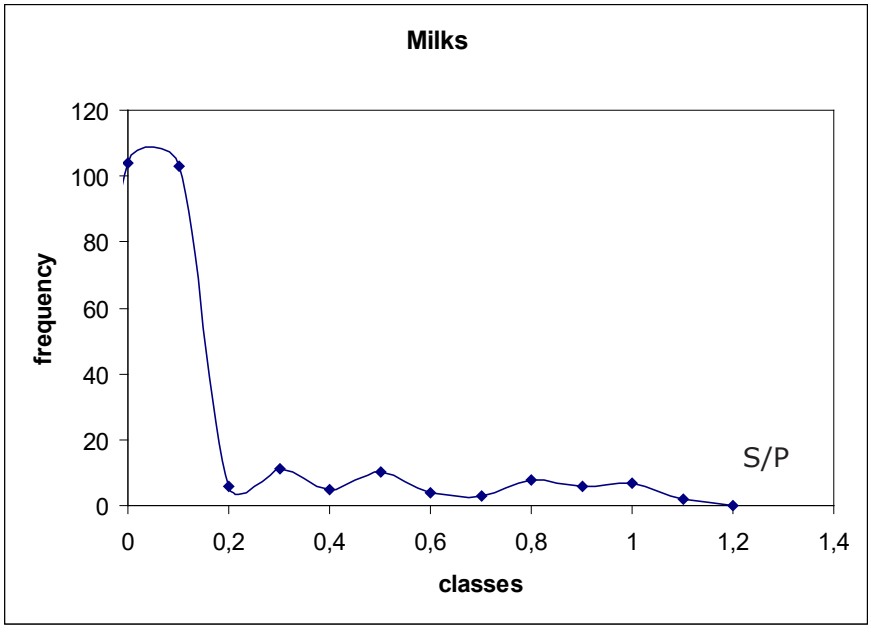
Bio-X Diagnostics - 38, Rue de la Calestienne (PAE) - 5580 Rochefort - Belgique
Tél : 0032(0)84.32.23.77 - Fax : 0032(0)84.31.52.63 - E-mail : a.ginter@biox.com

Example of results

270 serum and 270 milk samples taken from the same animals were tested using the BIO K 211 kit. These samples came from twenty-seven Belgian farms. Their optical density readings were divided by the optimal density reading for the kit's reference serum (S/P). Frequency histograms were then plotted for the blood sera (Graph 1) and milk samples (Graph 2).

Graph 1

Graph 2



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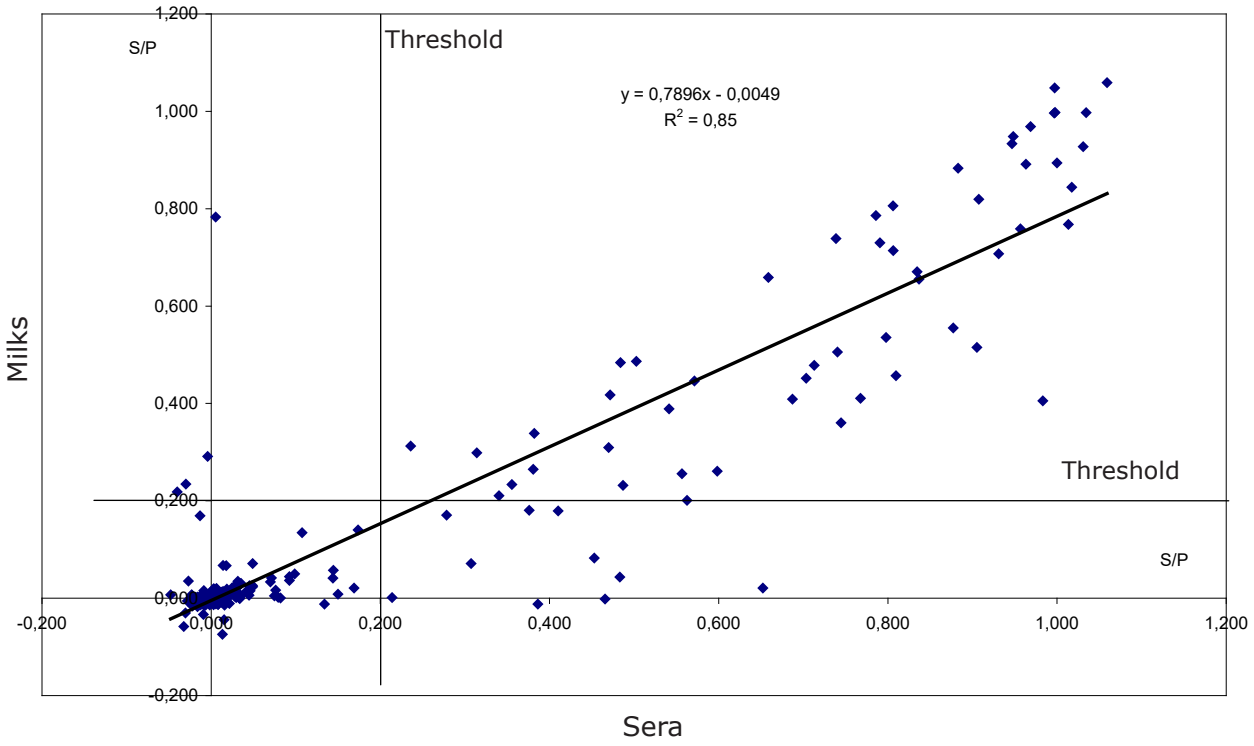
Example of results

The frequency histograms generated for the 270 milk and 270 blood serum samples reveal that the thresholds must be set preferentially at 20% of the kit's reference serum's signal. Graph 3 shows the correlation between the serological findings yielded by the blood sera and those yielded by the milk samples.

Graph 3



Milks

Sera	-	+	
-	204	4	208
+	10	52	62
	214	56	270

Concordance between the two tests: Kappa = 0.85
The concordance between the two tests is considered excellent.
Landis et Koch, The measurement of observer agreement for categorical data
Biometrics 1977, 33, 159-74

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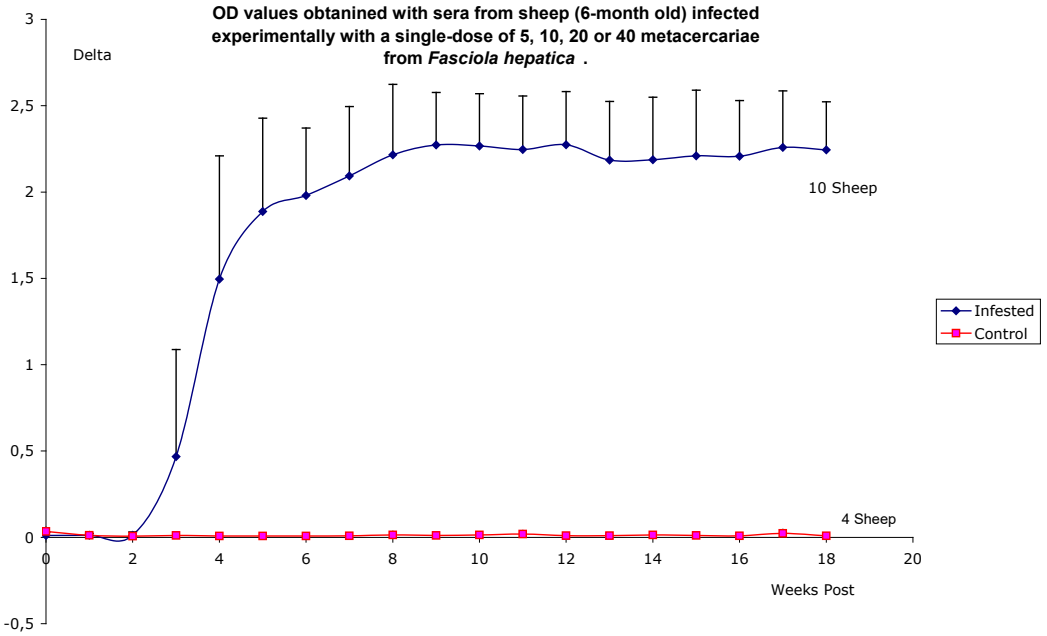
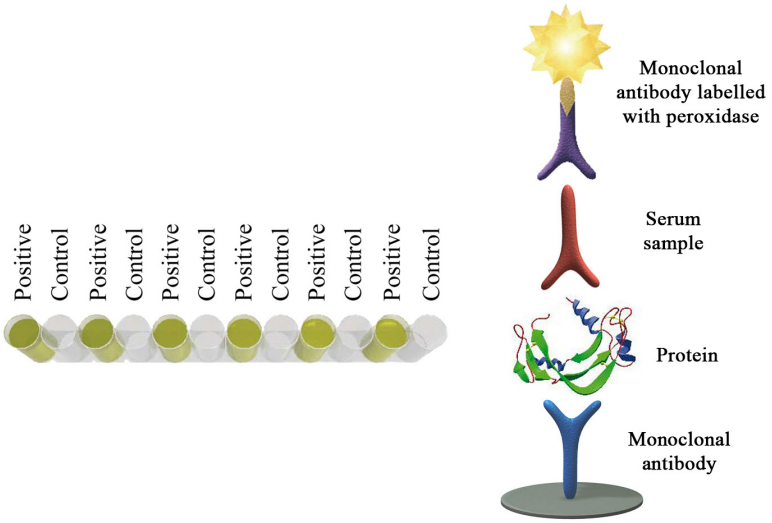
Example of results



Composition of the kit

BIO K 211 *Fasciola Hepatica* ELISA kit

	BIO K 211/2	BIO K 211/5
Microplate	2 (96 tests)	5 (240 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 (1 X)	1 X 1.4 ml (1 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)



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