

> References

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> Technical Sheet

- | | | |
|--|---|--|
|  <ul style="list-style-type: none"> ■ ELISA sandwich double-well test ■ Target : coproantigens ■ Coating : polyclonal antibodies specific to <i>Fasciola hepatica</i> |  <ul style="list-style-type: none"> ■ Sample : bovine and ovine fecal matter ■ Dilution : 2g/2ml for bovine & 0,5g/2ml for ovine |  <ul style="list-style-type: none"> ■ Reading Wavelength: 450nm ■ Incubation time : 2 hours ■ Substrate : Single component TMB |
|--|---|--|

> To place an order

Reference	Description	Number of reactions
BIO K 201	Monoscreen™ AgELISA <i>Fasciola hepatica</i>	2 plates / 96 tests

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

> About AnalysisScreen



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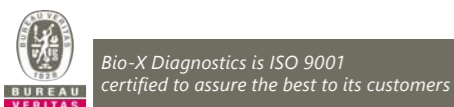
MONOSCREEN^{Ag} ELISA

MonoScreen AgELISA - *Fasciola hepatica*

Reference - BIO K 201



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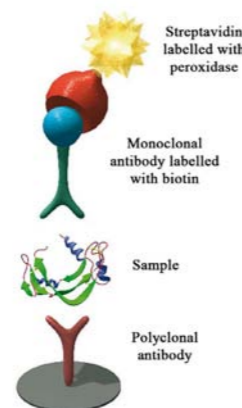
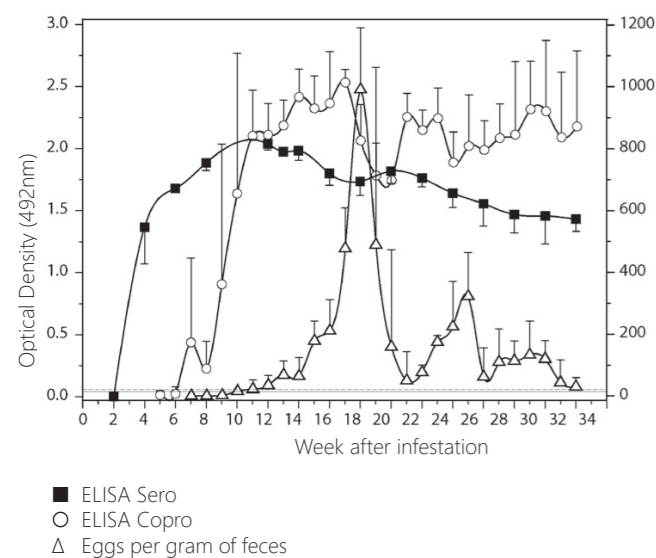
ABOUT THE DISEASE

The diagnosis of fascioliasis takes into account several parameters: structure of livestock, treatments used, weather and environmental conditions, production, previous parasitic infestations. There are hence suspicions of *Fasciola* in farms already affected by the parasite or when production losses occur at year end with grazing livestock near biotopes favorable for limnaea. The result must then be considered in a reflection on three levels: therapeutic, economic and preventive.

Coprolological tests are inexpensive, simple, but have the disadvantage of being time-consuming and not sensitive. In addition, the counting of eggs in fecal matter is only possible during the laying period and gives irregular results. Serological methods have the advantage of being very sensitive and allow the detection of antibodies in milk and serum. However, they do not differentiate between infestations in progress and traces of infestations after treatment.

MONOSCREEN^{Ag} ELISA *Fasciola hepatica* is the first kit for the antigen detection of *Fasciola hepatica* in fecal matter.

- Based on the specific detection of a coproantigen of *Fasciola hepatica*
- Double conjugate for a better test sensitivity
- With an active infestation, it allows the individual monitoring of the effectiveness of measures taken
- Kinetics of response earlier than counting oocysts (tab 1)



Tab 1: response to an experimental sheep infestation of a serological ELISA (Monoscreen^{Ag} AbELISA), an antigenic ELISA (Monoscreen^{Ag} AgELISA) and an oocyst counting method

The performances of the MONOSCREEN^{Ag} ELISA *Fasciola hepatica* are well documented in multiple publications

- A study conducted over two seasons, fall and spring, evaluated several tests (flotation of 4 and 10g of feces, two serological ELISA and **Monoscreen AgELISA *Fasciola hepatica***) under field conditions. Monoscreen^{Ag} ELISA *Fasciola hepatica* proves to be the most sensitive and one of the most specific (Charlier et al., Veterinary Parasitology, June 2008)

	Sensitivity	Specificity	LR+	LR-
SF4g	43 [33-54]	100 [97-100]	- [12.3-∞]	0.57 [0.47-0.67]
SF10g	64 [53-74]	93 [87-97]	9.7 [4.8-20.1]	0.38 [0.29-0.50]
Pourquier	88 [80-94]	84 [76-91]	5.6 [3.7-8.8]	0.14 [0.08-0.24]
ES	87 [78-93]	90 [83-95]	8.5 [5.0-15.1]	0.15 [0.08-0.24]
Copro-antigen Bio-X	94 [87-98]	93 [86-97]	13.6 [6.9-27.8]	0.06 [0.03-0.14]

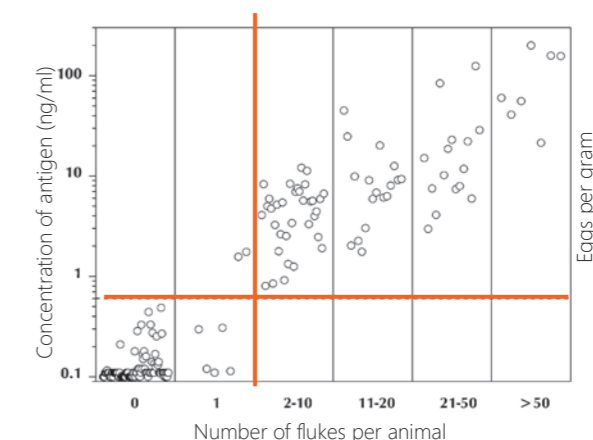
Sensitivity, specificity, likelihood ratios for a positive (LR+) and negative (LR-) test result of five diagnostic tests for *F. hepatica* infestation in cattle (a sedimentation-flotation on 4g (SF4g) and 10g of faeces (SF10g), Pourquier ELISA, ES ELISA and a copro-antigen ELISA) that were evaluated in «spring» and «autumn» 2006 (I=95% confidence interval)

- A study conducted on characterized samples of bovine and ovine feces confirms the excellent performance of Monoscreen^{Ag} ELISA *Fasciola hepatica* (Palmer et al, Australian veterinary Journal, Sept 2014)

	Ovine		Bovine	
	Negative	Positive	Negative	Positive
Number	106	40	156	94
Egg/gr	0	6-240	0	110
Sensitivity (%)		100%		87%
Specificity (%)	100%		>99%	

MONOSCREEN^{Ag} ELISA *Fasciola hepatica* can be used on individual or mixed samples

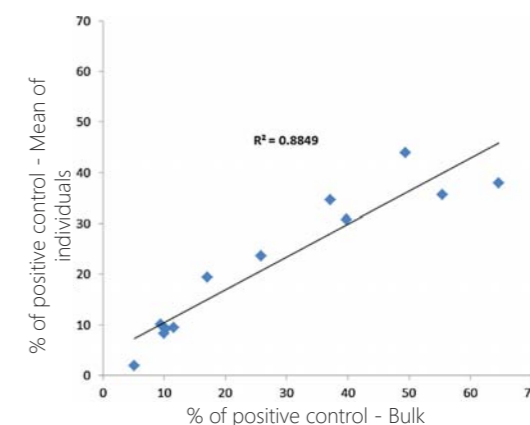
- On an individual sample, the detection limit is evaluated at 2 flukes (tab 2) (Mezo et al, Journal of Parasitology, 2004)



Tab 2 : concentration in coproantigen measured by Monoscreen AgELISA *Fasciola hepatica* on bovine fecal matter (n = 180) in reference to the counting of flukes post-mortem

MONOSCREEN^{Ag} ELISA *Fasciola hepatica* can be used on individual or mixed samples

- The test can then be used in a mixed sample, thereby reducing the analysis cost. There is a strong correlation between the results obtained in a mixture of 5 and the mean of individual samples (tab 3) (Elliott et al, Veterinary Parasitology, april 2015)



Tab 3 : correlation between the response of Monoscreen AgELISA *Fasciola hepatica* on mixtures of 5 feces and the mean of their individual values