



EASY-DIGEST

Rotavirus - Coronavirus - *E. coli* F5 - *Cryptosporidium*

Diagnosis test for bovines

BIO K 151/1 - BIO K 151/2

Diarrhoea is a major cause of mortality in young cattle under six months.

Bovine neonatal gastroenteritis is a multifactorial disease. It can be caused by viruses (coronavirus or rotavirus), by bacteria: (*Salmonella*, pathogenic strains of *E. coli*) or by protozoa such as *Cryptosporidium*. Coronavirus and rotavirus are often associated with episodes of neonatal diarrhoea. *Cryptosporidium* is also frequently isolated in faeces, where it can be present in very high quantities. It can persist for a long period in the environment. F5-positive enterotoxigenic *E. coli* is frequently isolated in under-three-day-old calves, particularly in colostrum-deprived calves or in calves fed colostrum that is free of anti- *E. coli* F5 + specific antibody. The diagnosis of the etiological agent of diarrhoea can be performed only in the laboratory because the clinical signs do not suffice to distinguish between these different microorganisms. It is possible to identify these agents by means of different techniques, including culture, staining, electron microscopy and floating techniques. However, these techniques are labour intensive, impractical and time consuming. These classical techniques have rapidly been replaced by the ELISA technology because of its simplicity and limited laboratory equipment requirements. The sensitivity and specificity of the ELISA technique for detecting these pathogens is at least as good as that of the more classic techniques, and the results are very similar. The ELISA technique is rapid and reliable and is particularly suited to the analysis of large numbers of samples.

Reliable Results

The use of monoclonal antibodies as conjugates ensure excellent specificity and very reliable results.

Ease-of-Use

Minimal hands-on-time
Room temperature incubation
Results available in 70 minutes.

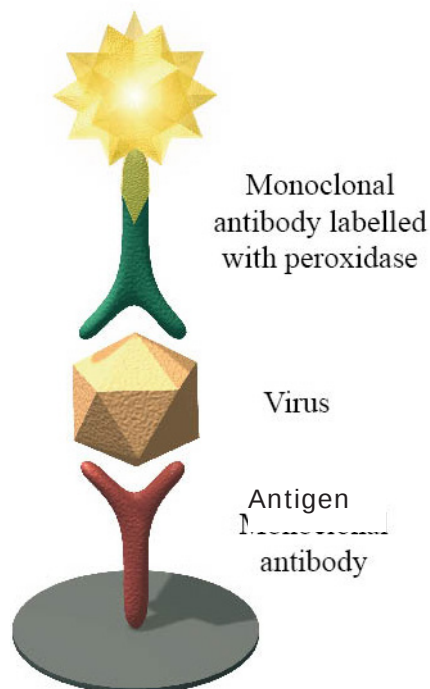
All reagents are ready to use.

Flexibility

Results can be read visually or spectrophotometrically.

EIA Procedure

- 1- Microplate coated with monoclonal antibodies
- 2- Add samples and positive + negative controls.
Incubate 1/2 hour at 21°C +/- 3°C
Wash
- 3- Add conjugates.
Incubate 1/2 hour at 21°C +/- 3°C .
Wash
- 4- Add chromogen
Wait 10 minutes.
Add stop solution.
Read at 450 nm or visually



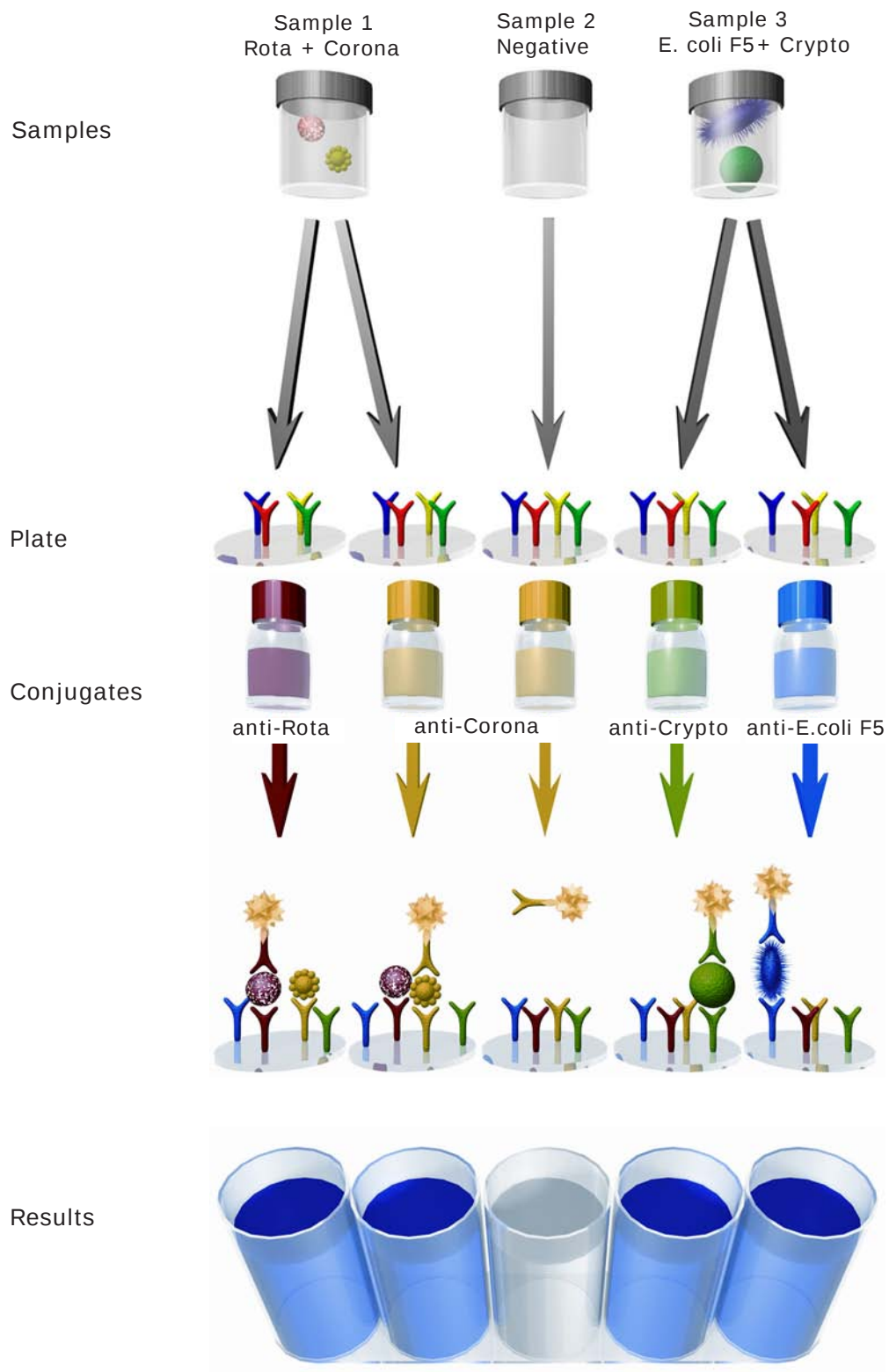
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EASY-DIGEST

BIO K 151

Rotavirus - Coronavirus - *E. coli* F5 - *Cryptosporidium*





- All of the solutions are ready to use, so you have no dilutions to perform.
- The four conjugates are stabilised in different coloured solutions to eliminate the risk of mix-ups.
- A single positive and a single negative control, both ready to use. These reagents are common to the four valencies, for ease of application.
- A single plate on which each well is saturated with four monoclonal antibodies specific to the four causal agents that the kit covers, i.e., rotavirus, coronavirus, *E. coli* attachment factor F5, and *Cryptosporidium*. The user chooses which conjugate(s) to use in line with the customer's request.
- Enough of each conjugate is supplied to test up to 96 samples (151/1) or 192 samples (151/2) for each valence. You can also "mix 'n match"
- The results can be determined with the naked eye, without using a plate reader.
- The reagents are stable for one year.

The Easy Digest kit's reliability has been confirmed by comparing its results with those produced by our kit Digestive BIO K 348

Example of results for Rotavirus

Digestive BIO K 348			
	+	-	
+	34	0	34
-	1	52	53
	35	52	87

ELISA BIO K 151

Sensibility : 97 %
Specificity : 100 %

Example of results for Coronavirus

Digestive BIO K 348			
	+	-	
+	13	3	16
-	1	70	71
	14	73	87

ELISA BIO K 151

Sensibility : 92,8 %
Specificity : 95,9 %

Example of results for *E. coli* F5

Digestive BIO K 348			
	+	-	
+	4	0	3
-	0	83	84
	4	83	87

ELISA BIO K 151

Sensibility : 100 %
Specificity : 100 %

Example of results for *Cryptosporidium*

Digestive BIO K 348			
	+	-	
+	29	7	36
-	0	51	51
	29	58	87

ELISA BIO K 151

Sensibility : 100 %
Specificity : 88 %



Example of results

Days after birth

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Calf 1	Crypto						+	+	+	+	+	+	+	+				
	Rota																	
	Diarrhoea						+	+	+	+	+	+	+					
Calf 2	Crypto							+	+	+	+	+	+	+	+	+	+	+
	Rota					+	+											
	Diarrhoea					+	+	+	+	+	+	+	+	+	+		+	

BIO K 151 EASY-DIGEST ELISA KIT

	BIO K 151/1	BIO K 151/2
Microplates	1	2
Washing solution	1 x 100 ml (20x)	1 x 100 ml (20x)
Dilution buffer	1 x 50 ml (5x)	1 x 50 ml (5x)
Conjugates	4 x 12 ml (1x)	4 x 12 ml (1x)
Positive control	1 x 3 ml (1x)	1 x 3 ml (1x)
Negative control	1 x 3 ml (1x)	1 x 3 ml (1x)
TMB monocomponent	1 x 12 ml (1x)	1 x 25 ml (1x)
Stop solution	1 x 6 ml (1x)	1 x 15 ml (1x)

Stability : One year +2°C and +8°C.

