



Enterotoxaemia ELISA KIT

BIO K 270

Enterotoxaemia is a fatal enteric disease that affects all species of domestic animals and is attributable to a toxigenic type of *Clostridium perfringens*. The latter is an anaerobic, strongly gram-positive bacterium that has the ability to form heat-resistant endospores. This bacterium is grouped into five types (types A, B, C, D and E) according to the four major lethal toxins, alpha, beta, epsilon, and iota (a, b, e, i) produced. *C. perfringens* has been shown to be a cause of human diseases such as gas gangrene (clostridial myonecrosis), food poisoning, necrotising enterocolitis of infants, and enteritis necroticans (pigbel). It is also the causative agent of lamb dysentery, ovine enterotoxaemia (struck) and pulpy kidney disease of sheep, and other enterotoxaemic diseases of lambs and calves. Large amounts of toxin in addition to large numbers of *C. perfringens* cells can usually be detected in the intestinal fluid of the diseased or dead animals. As *C. perfringens* is a natural commensal of human and animal intestines, identifying of the bacterium is not enough. Toxinotyping and quantifying of the isolated strains are essential. The Bio-X Enterotoxaemia Elisa Kit can detect the a-, b- and e-toxins of *Clostridium perfringens* and reveal the multiplication of the bacterium. The kit works with culture supernatants as well as biological probes such as liquid intestinal contents and pericardial- or peritoneal fluid.

Reliable Results

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

Ease-of-Use

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

Flexibility

Results can be read visually or spectrophotometrically.

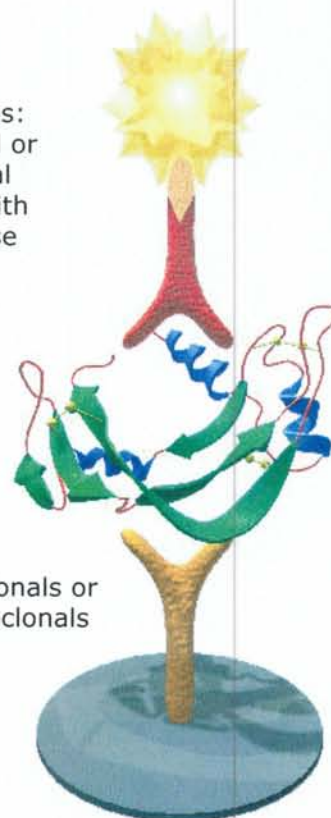
EIA Procedure

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

Conjugates:
Monoclonal or
polyclonal
labelled with
peroxidase

Toxins or
C. perfringens

Polyclonals or
monoclonals





Toxino- types	Alpha	Beta	Epsilon	Iota
A	++	-	-	-
B	+	++	+	-
C	+	++	-	-
D	+	-	++	-
E	+	-	-	++

Example of results

Direct colony hybridization Alpha Toxin gene

	+	-	
+	235	0	235
-	3	0	3
	238	0	238

Specificity: NA
Sensitivity: 99 %

Direct colony hybridization Bêta Toxin gene

	+	-	
+	5	0	5
-	0	233	233
	5	233	238

Specificity: 100 %
Sensitivity: 100 %

Direct colony hybridization Epsilon Toxin gene

	+	-	
+	62	1	63
-	0	175	175
	63	176	238

Specificity: 99.4 %
Sensitivity: 100 %

ELISA BIO K 095

ELISA BIO K 095



ATCC 13124 <i>Clostridium perfringens</i> Detection with BIO K 095 test kit					
First assay			Second assay		
Nbr of bacteria	O.D. ELISA		Nbr of bacteria	O.D. ELISA	
340 10 ⁶ bact/ml	1.638	Pos	200 10 ⁶ bact/ml	2.085	Pos
34 10 ⁶ bact/ml	0.656	Pos	20 10 ⁶ bact/ml	0.751	Pos
3.4 10 ⁶ bact/ml	0.068	Neg	2 10 ⁶ bact/ml	0.097	Neg

Typing of strains from various animal using BIO K 095

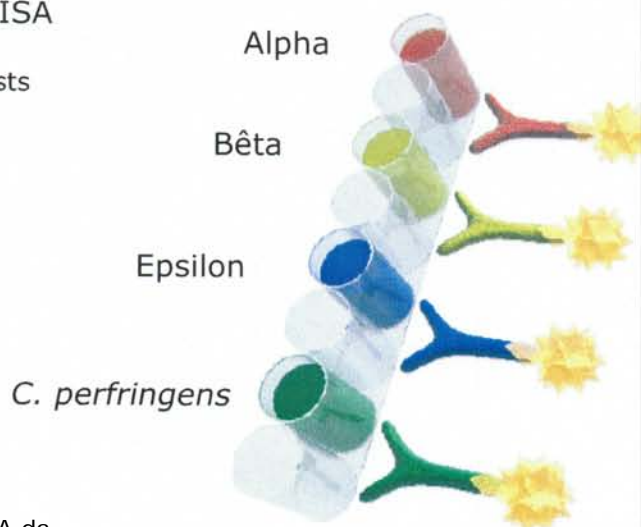
	Bovine Strains	Ovine & Caprine Strains	Ovine & Caprine Strains	Porcine Strains
	n=69	n=35	n=22	n=45
Alpha	98.55 %	100 %	100 %	100 %
Beta	0 %	0 %	18.18 %	11.11 %
Epsilon	0 %	68.57 %	63.64 %	2.22 %

Composition of the kit

BIO K 270 ENTEROTOXAEMIA ELISA

- 2 plates of 12 strips for a total of 24 tests
- 8 vials of positive reference
- 4 vial of conjugates
- 1 bottle of washing solution
- 1 bottle of dilution buffer
- 1 drop-dispenser bottle of chromogen
- 1 bottle of substrate solution
- 1 bottle of stopping solution

1 year of stability at 4°C



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