Speed V-Diar 4 & V-Diar 5™

Rapid detection of antigens of the principal pathogens responsible for neonatal diarrhoea in calves

TWIST & TEST™

METHOD	Immunochromatographic strip test
ANALYSES	Detection of antigens specific to: - Coronavirus - Rotavirus - *Cryptosporidium parvum* (oocysts) - *E. coli F5* (K99) and *E. coli* CS31A*
SAMPLE	Faeces
PREPARATION	30 seconds
READING	15 minutes
STORAGE	18 months at room temperature between +2°C and +30°C
PRESENTATION	- V-Diar 4: 5 tests and 10 tests - V-Diar 5: 5 tests and 10 tests
RELIABILITY	In comparison with reference techniques(3) : (ELISA, modified Ziehl-Nielsen stain, bacteriology, latex agglutination)

	Sensitivity	Specificity
Coronavirus	94,3 %	99,2 %
Rotavirus	93,5 %	100 %
Cryptosporidia	97,2 %	95 %
E. coli.K99	93,5 %	99,2 %
E. coli.CS31A*	89 %	93 %

* only for Speed V-Diar 5

ADVANTAGES

- →***Quick,*** *Speed V-Diar enables the identification of the causative agents of neonatal calf diarrhoea in only 15 minutes.*
- →***Simple,*** *Speed V-Diar is ready to use and only takes 30 seconds to do. It can be performed during* ***an on-farm visit and gives an immediate result.***
- →***Stable,*** *Speed V-Diar can be stored for* ***18 months at room temperature,*** *between 2°C and 30°C.*

Why perform the Speed V-Diar test?

Neonatal diarrhoea is the **principal cause of mortality** and growth retardation in **calves under 1 month of age.** It represents more than 25% of the reasons for consultation on farms(2).

Due to the **similarities between the symptoms** of bacterial, viral, or parasitic diarrhoeas, laboratory identification is essential. Furthermore, **associations of various different pathological agents are common**(3).

A precise etiological diagnosis enables the implementation of a **treatment** protocol that is **specific to each** farm along with appropriate **preventive measures** throughout the calving season.

When should Speed V-Diar be used?

Speed V-Diar can be used to determine which pathological agents are implicated in calf diarrhoea.

The Speed V-Diar test is carried out from **the first signs of diarrhoea, before any form of treatment is administered.**

On a larger scale, Speed V-Diar can be used to identify the pathological agent(s) that are present on the farm from the **first few cases of diarrhoea** in the calving season. This identification enables the instigation of **appropriate sanitary and prophylactic measures.**

(1) Internal study, BVT

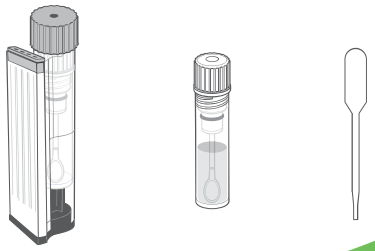
(2) ROUSSEAU C. - Pathologie du veau. Activéto, 2002; 6.

(3) FOURNIER R. and NACIRI M. - Prévalence des agents de diarrhées chez le jeune veau. Point Vétérinaire, 2007, 273: 58 - 63.

Speed V-Diar™ *test protocol*

Equipment needed for one test:

1 testing device
1 sample collection tube with reagent
1 single-use pipette

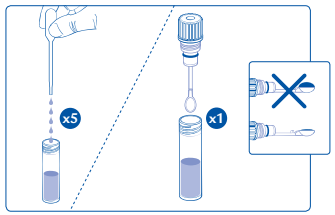


1 Sampling

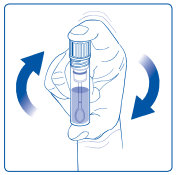
- *Type of sample:* Faeces
- *Storage of samples:*
  - 48h at between 2 and 8°C;
  - Several months at – 20°C.

2 Preparation

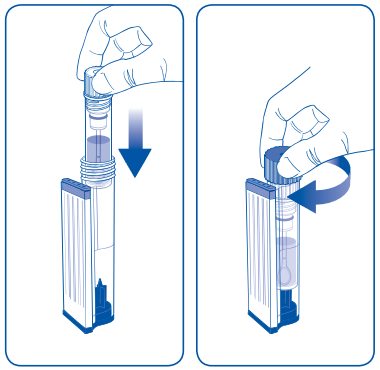
- 1 - Place 5 drops or one level spoonful of the faeces in the reagent tube



- 2 - Close the reagent tube and mix the contents

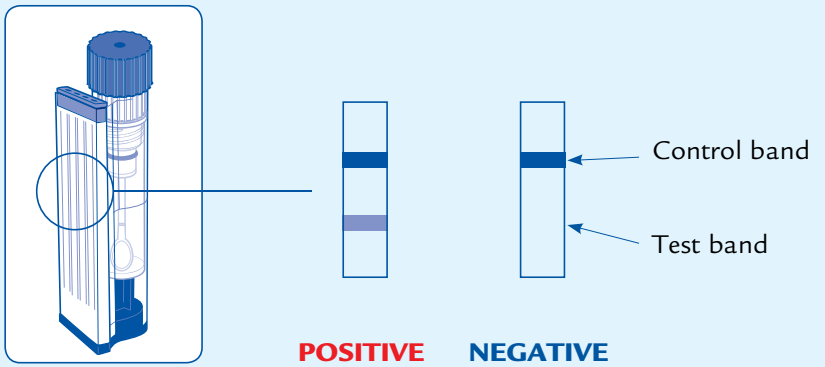


- 3 - Insert the tube of reagent in the testing device and screw shut until you hear a “click”



3 Reading

- Time to reading: after **15 minutes** of migration



If no control band appears on the strip within the allotted time for migration, the test is invalid.

4 Interpretation

- **Combinations of different pathogens are common** several strips may react positively for the same test.
- The lowest detectable concentration for ***Cryptosporidium parvum*** **is 500-1,000 oocysts/ml of faeces**.
- A positive result for the *E. coli* CS31A or of F5 (K99) strips indicates a **concentration that is greater than or equal to 10^9 bacteria/g of faeces**, threshold value for differentiating between sick calves and healthy carriers.