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Test-kit for the qualitative detection of Cryptosporidium spp. antigens in faeces of pocket pets, pets and farm animals

INSTRUCTIONS FOR USE



Supplied Exclusively To The UK Veterinary Market By Vetlab Supplies Ltd Visit Our Website www.vetlabsupplies.co.uk Telephone: 01798 874567 email us: info@vetlabsupplies.co.uk

Manufacturer:



1. INFORMATION ON THE TEST-KIT

TEST-KIT COMPONENTS

1 test-kit FASTest® CRYPTO Strip contains:

- 2 or 10 dipsticks, coated with monoclonal antibodies
- 2 or 10 sample tubes with 2.0 ml buffer diluent each
- 1 instructions for use

STABILITY AND STORAGE

Store at 15-25°C



Expiry date

APPLICATION AND ABBREVIATIONS



In vitro diagnosticum Follow instructions for use precisely

Do not use test-kit different kits, lot numbers or beyond stated expiry date.

TL - TEST line, CL - CONTROL line, LF - Lateral flow, **SA** – surface antigens

LIABILITY

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The entire risk due to the performance of this product is assumed by the purchaser. The manufacturer shall not be liable for indirect, special or consequential damages of any kind resulting from the use of this product.

level spoon, pulpy: 2 level spoons, fluid-watery: 3 level

Close sample tube tightly and rotate it easily to get the

spoons of feces) steadily into the buffer diluent (fig.1).

d. For sedimentation of gross feces particles place the sam-

1. Remove the dipstick from its foil pouch shortly before

2. Introduce the dipstick vertically and with the arrows

3. Remove the dipstick from sample tube as soon as the

pointing downwards into the sample tube for at least

1 minute. The liquid level (meniscus!) must not exceed

sample-buffer mixture (SBM) has reached the CL. If so, the blue CL will appear slowly but surely (fig.4/5). If the CL does not appear after 5–10 minutes, a new SBM must

be prepared and sedimented for at least 5 minutes. The dipstick must be held only in the supernatant until the LF

has reached the CL (see also 7. Precautions for users*).

ple tube on a flat and horizontal surface for 1-5 minutes.

ACCURACY

use.

Sensitivity 96.7 % Specificity 99.9 %

5. TEST PROCEDURE

the white arrowheads (fig.3).

(Comparison Method: Carbol Fuchsin Micro)

mixture as homogeneous as possible (fig.2).

and farm animals and therefore to introduce specific therapy, hygiene and prevention measures immediately.

(asymptomatic shedders).

2. INTRODUCTION

well as the owners (zoonosis).

Diarrhoea can lead to severe courses of disease up to death for

all species. Among the diverse diarrhoea pathogens in pocket

pets, pets and farm animals, especially *Cryptosporidium par-vum* (*C. parvum*) is a great challenge for the veterinarian due

to its common appearance and zoonotic potential. In reptiles,

C. parvum often is diagnosed as non-pathogenic intestinal by-passer (infected food animals). C. parvum shedding reptiles

therefore are a potential infection source for other animals as

Cryptosporidia form two types of infectious oocysts: 20 $\!\%$ are thin-walled and stay in the host, where they cause reinfection through autoinfection. The remaining 80 $\!\%$ are thick-walled

and are excreted intermittently, i.e. not with every defecation, as dormancy stages. These are very resistant and can remain

infectious for months. They can infect other animals as well as

humans via drinking water (infectious dose Ø 10–100 oocysts).

Prevalences are very variable, in calves 25-100 %, depending

on the stock. Lambs, piglets and foals are affected, too. In ger-

man hedgehogs, prevalences of 21.6% (spring) and 36.6%

(autumn) are discovered. Dogs (Germany, Austria ca. 0.5–1 %) and cats (Germany, Austria ca. 1–3 %) show considerably low-

Clinical symptoms can vary depending on age and immune

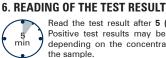
status of the animal. Neonates and young animals are predominantly affected. Caused by the high infectiveness, often a pop-

ulation problem arises. Double infections are not uncommon.

Special attention should be paid in the fact that Cryptosporidia play an important role independent of the diarrhoea problem

Therefore, FASTest® CRYPTO Strip enables the veterinarian to

prove C. spp. early, specifically and on-site in pocket pets, pets



er prevalences.

Read the test result after 5 (max.10) minutes. Positive test results may be observed earlier. depending on the concentration of antigen in the sample.

POSITIVE TEST RESULT (fig.4)

A red TEST line of any intensity (varying from very weak to strongly intensive) and a blue CONTROL line appear.

NEGATIVE TEST RESULT (fig.5)

Only a blue CONTROL line appears. This line indicates, irrespective of its intensity, that the test has been performed

INVALID TEST RESULT

laxis possibilities.

No infection with C. spp.

No CONTROL line visible. The test should be repeated using a new dipstick *.

fig.4 POSITIVE TEST RESULT CL TL fia.5 **NEGATIVE TEST RESULT**

9. INFORMATION FOR THE INTERPRETATION The interpretation of the test result should always be based on anamnestic and clinical data as well as the therapy and prophy-

cific reaction and therefore as negative test result.

Interpretation of a <u>negative</u> FASTest® CRYPTO Strip

With ongoing diarrhoea and a single negative test

bation time is to be interpreted as a positive test result.

Any non-described colour or contour variation of TL and CL with-

in the indicated incubation time or after more than 10 minutes

(e.g. grevish, shadow-like lines) has to be considered as unspe-

TL can vary both in intensity (from weak to intense red) and width. Therefore, any red line appearing within the required incu-

Be aware, every animal tested positive is considered potentially infectious (ZOONOSIS!) for humans, especially for kids!

Infection, but feces sample does not contain C, spp. SA due to

intermittent antigen shedding Infection, but concentration < 50–100 oocysts/ $100 \,\mu g$ feces.

3. INFORMATION ON THE SPECIMEN MATERIAL

Due to the normally inhomogeneous or nest-like dissemination of antigens in the feces, the specimen material has to be mixed up homogeneously (spatula, vortex-mixer) before sampling.

For the test, the required amount of feces as described in point 4b/Specimen collection and preparation, is needed. The amount depends on the consistency of the sample. Use the attached spoon.

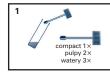
Non-cooled (15-25°C), the sample should be tested within 4 hours! At 2–8 °C, the sample can be stored up to 4 days, permanently at minimum $-20\,^{\circ}\text{C}$.

Keep in mind that the sample material, as well as all used test-kit components, should have reached room temperature at the time of application.

Endogeneous and exogeneous interfering substances of the sample (e.g. proteases, mucosa components, blood, but also viscosity, pH-value as well as grass and cat litter) can cause interferences (matrix effects) that can influence the target measurement. These can lead to an impaired LF and/or unspecific reactions on the TL and CL.

4. SPECIMEN COLLECTION AND PREPARATION

- a. Open the sample tube with the buffer diluent.
- b. Mix the feces sample homogeneously (applicator, vortexer). Then mix the required sample volume (compact: 1

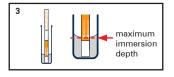


test-kit components.

the LF has reached the CL.



4. Place the dipstick on a flat and horizontal surface for incubation.



7. PRECAUTIONS FOR USERS

- The guidelines for working in medical laboratories must be observed. It is recommended to wear disposable gloves and other personal protective equipment (protective clothing, possibly a face mask). Wash and disinfect hands after completing the test.
- Label sample material and associated sample tube to ensure a precise assignment.
- · Use a new sample tube and a new dipstick for each sample.
- The buffer diluent contains low concentrations of toxic sodium azide as a preservative, therefore avoid skin/eye contact and/or ingestion.

The sample material must be seen as potentially infec-

tious and disposed of accordingly, together with the used

* To avoid an application error/external influence (e.g. too much sample material, too short sedimentation time, components in the faeces that clog the pores of the suction pad), the test can be repeated. Use a new dipstick and carefully observe the sample preparation. It is advisable to only hold the dipstick in the supernatant when repeating the test until

8. TEST PRINCIPLE

The FASTest® CRYPTO Strip is based on latest rapid immunochromatographic technique. Positive feces samples contain C. spp. surface antigens as well as all of the vegetative cycle forms of $\it C.$ spp.. These antigens will react at the conjugate pad with mobile antibodies bound to red latex particles. Migrating ("lateral flow", LF) along the nitrocellulose membrane, these specific antigen-antibody complexes are bound by fixed monoclonal anti-*Cryptosporidium* anti-bodies (mAbs) producing a red TEST line (**TL**). These mAbs guarantee a high level of specificity for the aetiologic detection of C. spp. antigens.

A correct test procedure will be indicated by a second, blue CONTROL line (CL).

The intensity or width of the TL depends on the concentration of C. spp. antigens in the introduced amount of sample. FASTest® CRYPTO Strip does not rely on the presence of intact C. spp. oocysts and/or vegetative cycle forms.

Calf: new test within max. 24h using a new feces sample (due to limited onset of therapy) Other species: new test within 7 days using a new feces sample

(optimal: serial feces sample**; Ø prepatency time 7 days, depending on infection dose)

Interpretation of a positive FASTest® CRYPTO Strip

Attention: The stronger the intensity and the earlier the appearance of the TL, the higher the concentration of $\it C$. spp. SA.

- "Intensity of diarrhoea" can vary individually (age, immune status) or could not appear despite of a positive FASTest® CRYPTO
- Strip (asymptomatic eliminators!)
 Due to medical therapy, *C.* spp. SA could be shed short-term and in a higher rate because of the additional shedding of vegetative C. spp. cycle forms.
- Despite treatment, reinfections with "consisting pathogen reser voirs" in the animals' environment and therefore a short prepatency time (Ø 7 days) can lead to a positive test result.
- ** Serial feces sample: Individual testing of at least three consecutive feces samples. Only a multiple negative feces test rules out a Cryptosporidium infection!