*FAST*est® C. diff 2T ad us. vet.

Diarrhoea pathogen with high toxin potential

Fast test for the qualitative detection of Glutamate Dehydrogenase and of Toxins A /B from *Clostridioides difficile* in feces of dog, cat, horse and pig

Fast aetiological diagnostics

Peracute to chronic diarrhoea

High mortality and lethality

Human pathogen agent

Immediate initiation of specific therapy, quarantine and prophylaxis measures

Effective reduction of economic losses

- Simple and hygienic test procedure with feces
- Innovative test system and reliable pathogen detection
- Parallel incubation of both test membranes and in the same buffer
- Fast test interpretation after 15 minutes
- Storage at room temperature (15–25 °C)
- Long shelf life
- Compact test box with 10 tests

*FAST*est® C. diff 2T ad us. vet.

Clostridioides difficile is a gram positive anaerobic spore former. It causes diarrhoea in various species. Studies prove the incidence of *C. difficile* in animal food. Therefore, a zoonotic potential for humans (diarrhoea, colitis) must be implied. Additionally there are hints of mutual transfer between dog/cat and human within a household.

Most important virulence factors for the development of *C. difficile* infection (CDI) are the enterotoxin A (TcdA) and cytotoxin B (TcdB).

Dog/cat: *C. difficile* can be proven in feces of healthy juvenile and adult animals as well as in animals with diarrhoea (single animals, nosocomial infections in animal hospitals and shelters). A significant correlation between *C. difficile* and diarrhoea could not be proven, but feces samples of animals with diarrhoea showed significantly higher TcdA (increased secretion of liquid into the intestinal lumen) and/or TcdB (lethal damage of the intestinal wall) detection as with healthy animals.

Horse: Both in single animals and with diarrhoea outbreaks in herds CDI (TcdA & TcdB) occur, especially in foals, partly associated with *C. perfringens*, then mostly with deathly course within 3 days. Clinically indicative are colic, partly without/before diarrhoea onset and massive antibiotic associated colitis.

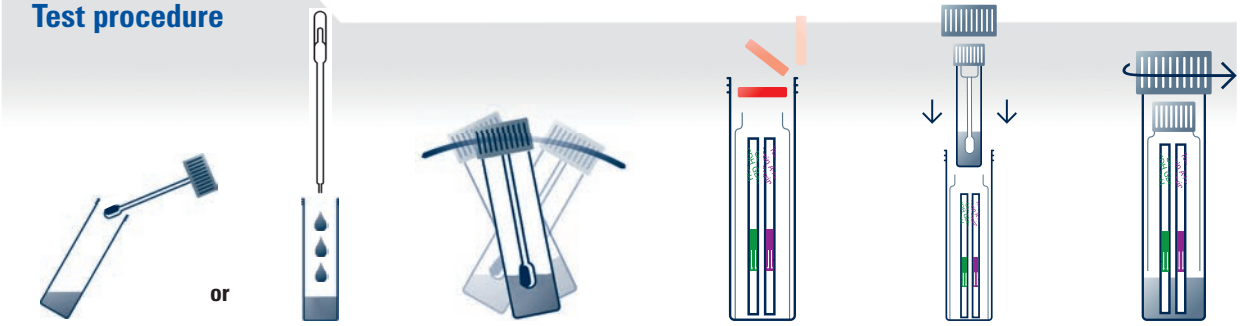
Pig: In 1–7 days old piglets, CDI is one of the most important diarrhoea diseases (mortality up to 16 %). The prevalence decreases with increasing age. The fecal-oral colonisation with *C. difficile* happens in endemic areas at 100 % within 48 h, lactogenic via the sow (ca. 25 %) or aerogenic via surroundings. Clinical symptoms (yellow-watery diarrhoea, but also constipation) are not always visible. Risk factors for development of an acute CDI are age, provocation dose, but also associated toxins and the administration of antibiotics. Retarded growth, lower weaning weight and severe economic losses are the consequences.

	GDH	Toxin A/B
Sensitivity	**96 %**	**99 %**
Specificity	**98 %**	**96.3 %**

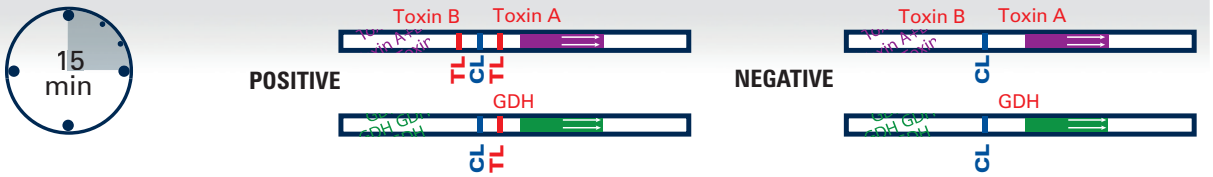
Diagnosis of an acute CDI can be difficult due to the endemic nature of *C. difficile*. With a two-step diagnostic of GDH (Glutamate Dehydrogenase) and the Toxins A/B, the proof can succeed with high certainty. The proof of GDH is said to be very sensitive compared to culture (golden standard) and therefore can be used as so-called "exclusion test". On the other hand, the proof of the Toxins A/B is seen as highly specific (but less sensitive) compared to culture. Therefore, the double test can be optimally used as confirmation test.

In combination with anamnesis and clinic, the ***FAST*est® C. diff 2T** is suitable as on-site diagnostic test for the secure exclusion or proof of a *C. difficile* infection.

Test procedure



Test interpretation



It is generally advisable for diarrhoea to perform differential diagnostics with ***FAST*est® C. perfringens Toxin** (serous-catarrhal enteritis [type A] or necrotising enteritis [type C]), ***FAST*est® CCoV** Strip, ***FAST*est® CRYPTO** Strip, ***FAST*est® CRYPTO-GIARDIA** Strip, ***FAST*est® CRYPTO-ROTA** D2T, ***FAST*est® GIARDIA** Strip, ***FAST*est® PARVO** Card/Strip or ***FAST*est® ROTA** Strip as well as the proof of inflammation with ***FAST*est® CRP** canine.

Distribution:

EN 01-2023