

# VIASURE

## *Clostridium difficile* Real Time PCR Detection Kit

### Pathogen and product description

**C***lostridium difficile* is a gram-positive, sporogenic, anaerobic bacillus that belongs to the *Clostridiaceae* family. Initially, *C. difficile* was described as a member of the commensal microbiota of neonates. However, later it was identified as a causal agent of antibiotic-associated diarrhea (AAD) and its infection is associated with high morbidity and mortality in the elderly.

The major risk factors for *C. difficile* infection are broad spectrum antibiotics exposure, hospitalization, and advanced age. The severity of its infection ranges from mild diarrhea and pseudomembranous colitis to toxic megacolon, perforations of the colon and occasionally, sepsis and even death. The main routes of transmission are the fecal-oral or aerosols. In fact, infected persons with

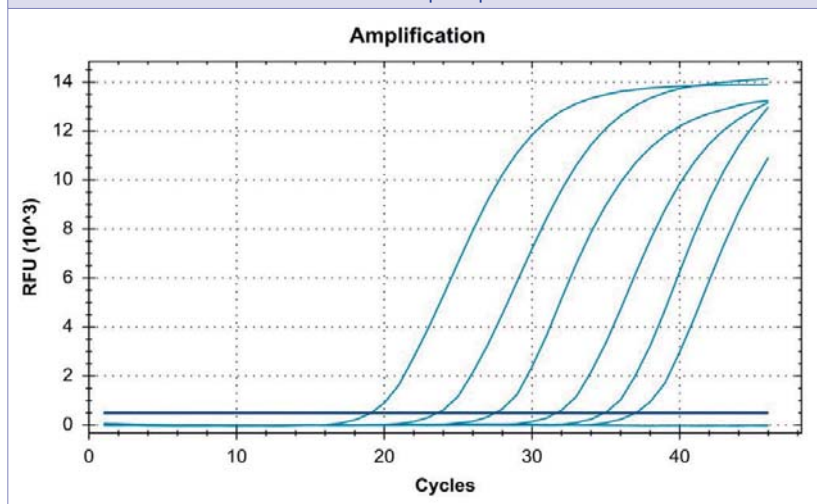
acute diarrhea can lead to heavy contamination of the environment with spores, which can persist in dust or on surfaces for months and be transmitted to other hospitalized patients or to healthcare workers once again. Afterwards, *C. difficile* can colonize the gut, replicate and, in particular, the toxigenic strains can produce enterotoxin A and cytotoxin B, if the genes that encoded them are present.

VIASURE *Clostridium difficile* Real Time PCR Detection Kit is designed for the diagnosis of infection caused by *C. difficile* in human stool sample. After DNA isolation, the identification of *Clostridium difficile* is performed by the amplification of a conserved region with the 16S rRNA gene using specific primers and a fluorescent-labeled probe.



### Analytical sensitivity

VIASURE *Clostridium difficile* Real Time PCR Detection Kit has a detection limit of  $\geq 100$  DNA copies per reaction



Dilution series of *Clostridium difficile* ( $10^7$ – $10^2$  copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System.

### Components

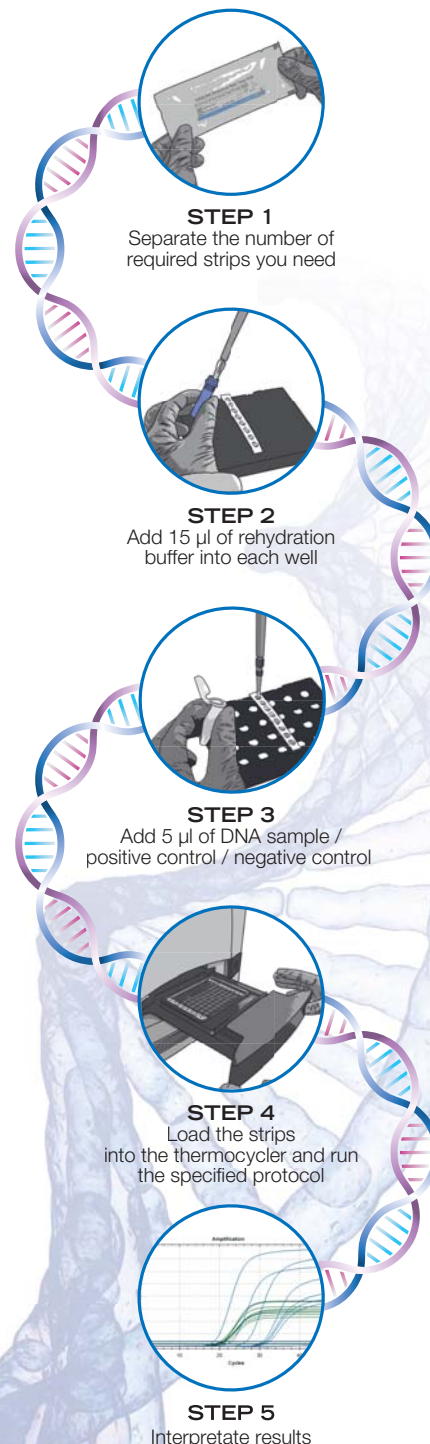
Reagent/Material	Description	Quantity
<i>Clostridium difficile</i> 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	6/12 x 8-well strip
<i>Clostridium difficile</i> 96-well plate	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	1 plate
Rehydration Buffer	Solution to reconstitute the stabilized product	1 vial x 1,8 mL
<i>Clostridium difficile</i> Positive Control	Non-infectious synthetic lyophilized DNA	1 vial
Negative Control	Non template control	1 vial x 1 mL
Water RNase/DNase free	Water RNase/DNase free	1 vial x 1 mL
Tear-off 8-cap strips	Optical caps for sealing wells during thermal cycling	6/12 x 8-cap strip
Shell Frame Grid	Shell Frame Grid	1 or 2

### Kit References

Reference	Description
VS-CDS106L	Viasure <i>Clostridium difficile</i> Real Time PCR Detection Kit 6 x 8-well strips, low profile
VS-CDS106H	Viasure <i>Clostridium difficile</i> Real Time PCR Detection Kit 6 x 8-well strips, high profile
VS-CDS112L	Viasure <i>Clostridium difficile</i> Real Time PCR Detection Kit 12 x 8-well strips, low profile
VS-CDS112H	Viasure <i>Clostridium difficile</i> Real Time PCR Detection Kit 12 x 8-well strips, high profile
VS-CDS113L	Viasure <i>Clostridium difficile</i> Real Time PCR Detection Kit 96-well plate, low profile
VS-CDS113H	Viasure <i>Clostridium difficile</i> Real Time PCR Detection Kit 96-well plate, high profile

### Work Flow

One-step rehydration of wells and add your extracted DNA



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