# VIASURE MULTIPLEX

Cryptosporidium, Giardia & E. histolytica Real Time PCR Detection Kit

# Pathogen and product description

nteric protozoa continue to be the most commonly encountered parasitic diseases affecting millions of people each and causing significant morbidity and mortality worldwide. Among them, *Cryptosporidium spp.*, *Entamoeba histolytica* and *Giardia lamblia* are the major etiological agents.

Cryptosporidium can be acquired through personto-person, contact with companion and farm animals, ingestion of contaminated food, drinking water and recreational water. Cryptosporidium can be present without symptoms or cause diarrhea and abdominal discomfort with weight loss and malabsorption. Giardia lamblia infection occurs by the faecal-oral route transmission, either through direct contact or by ingestion of contaminated food or water. Diarrhoea is the major symptom of the disease but the clinical manifestations vary; from non-symptomatic infections to severe diarrhea, abdominal cramps, bloating and flatulence

often accompanied by nausea and weight loss. *Entamoeba histolytica* disease is spread primarily by food or water contaminated with cysts but may also be transmitted from person to person by faecaloral route. Clinical features of amoebiasis range from asymptomatic colonization (90% of the cases) to amoebic dysentery (stomach pain, nausea or vomiting and severe diarrhea with bloody and slimy stools, fever) and invasive extraintestinal disease, most commonly in the form of liver abscesses.

VIASURE Cryptosporidium, Giardia & E. histolytica Real Time PCR Detection Kit is designed for the diagnosis of the Cryptosporidium, Giardia lamblia and/or Entamoeba histolytica in human stool samples. After DNA isolation, the identification is performed by the amplification of a conserved region of the 18S rRNA gene for Cryptosporidium, Giardia lamblia and Entamoeba histolytica respectively, using specific primers and a fluorescent-labelled probe.



## Analytical sensitivity

**VIASURE** Cryptosporidium, Giardia & E. histolytica Real Time PCR Detection Kit has a detection limit of  $\geq 50$  DNA copies per reaction (figures 1, 2 and 3).

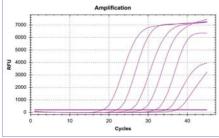


Figure 2. Dilution series of Giard (10<sup>7</sup>–10<sup>1</sup> copies/rxn) template ru

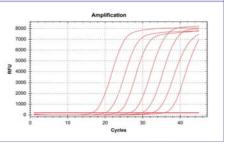


Figure 1. Dilution series of Cryptosporidium (10<sup>7</sup>−10<sup>2</sup> copies/rxn) template run on the Bio-Rad CFX96 Touch<sup>TM</sup> Real-Time PCR Detection System (Cy5 channel).

Figure 2. Dilution series of Giardia lamblia (10<sup>7</sup>−10<sup>1</sup> copies/rxn) template run on the Bio-Rad CFX96 Touch<sup>™</sup> Real-Time PCR Detection System (FAM channel).

Figure 3. Dilution series of E. histolytica (10<sup>7</sup>−10<sup>1</sup> copies/rxn) template run on the Bio-Rad CFX96 Touch<sup>TM</sup> Real-Time PCR Detection System (ROX channel).

### Components

Kit References

Description

6 x 8-well strips, low profile

6 x 8-well strips, high profile

12 x 8-well strips, low profile

12 x 8-well strips, high profile

96-well plate, low profile

96-well plate, high profile

Reference

VS-KGE106L

VS-KGE106H

VS-KGE112L

VS-KGE112H

VS-KGE113L

VS-KGE113H

Reagent/Material	Description	Quantity
Cryptosporidium, Giardia & E. histolytica 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	6/12 x 8-well strip
Cryptosporidium, Giardia & E. histolytica 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
Cryptosporidium, Giardia & E. histolytica Positive Control	Non-infectious synthetic lyophilized cDNA	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

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#### Work Flow

One-step rehydration of wells and add your extracted DNA



STEP 1
Add 15 µl of rehydration buffer into each well

STEP 2
Add 5 µl of DNA sample /
positive control /
negative control



STEP 3 Load the strips into the thermocycler and run the specified protocol



STEP 4 Interpretate results



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