

# VIASURE MULTIPLEX

## *Aeromonas + Yersinia enterocolitica Real Time PCR Detection Kit*

### Pathogen and product description

**A**eromonas and *Yersinia enterocolitica* are responsible for a wide spectrum of clinical manifestation worldwide.

*Aeromonas* are a type of Gram-negative, facultative anaerobe bacteria that belongs to the *Aeromonadaceae* family. There are nine known *Aeromonas* species related to human disease, the most important being: *Aeromonas hydrophila*, *Aeromonas caviae* and *Aeromonas veronii*. Whilst *Yersinia* has three well known human and animal species: *Yersinia enterocolitica*, *pestis* and *pseudotuberculosis*.

*Yersinia enterocolitica* is a foodborne pathogen and its clinical manifestations typically include nausea, vomiting, abdominal pain, diarrhea and fever. This infectious disease, also called yersiniosis, can range from a self-limiting gastroenteritis to a potential fatal septicaemia. But this isn't the only disease related to *Aeromonas*, as they can also penetrate through wounds, causing cellulitis, myonecrosis, ulcers among other symptoms.

*Aeromonas* can be encountered among fish, some invertebrate animals and both in fresh and salt water, making them its main pathways of transmission and regarding *Yersinia*, there is strong evidence that food of animal origin is responsible for human infections.

VIASURE *Aeromonas + Yersinia enterocolitica* Real Time PCR Detection Kit is designed for the diagnosis of the *Aeromonas* and/or *Yersinia enterocolitica* in human stool samples. After DNA isolation, the identification of *Aeromonas* and/or *Yersinia enterocolitica* is performed by the amplification of a conserved region of the *gyrB* and *ail* gene for *Aeromonas* and/or *Yersinia enterocolitica* respectively, using specific primers and a fluorescent-labelled probe.

VIASURE *Aeromonas + Yersinia enterocolitica* Real Time PCR Detection Kit contains in each well all the components necessary for real time PCR assay in a stabilized format, as well as an internal control to discard the inhibition of the polymerase activity.





## Analytical sensitivity

**VIASURE** *Aeromonas + Yersinia enterocolitica* Real Time PCR Detection Kit has a detection limit of  $\geq 10$  DNA copies per reaction for *Aeromonas* and *Yersinia enterocolitica* (figures 1 and 2).

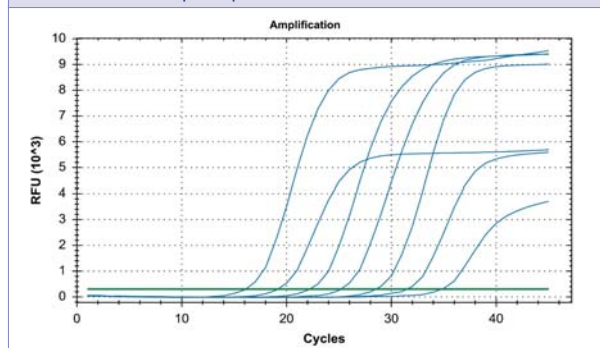


Figure 1. Dilution series of *Aeromonas*  $10^7$ – $10^1$  copies/rxn template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (FAM channel).

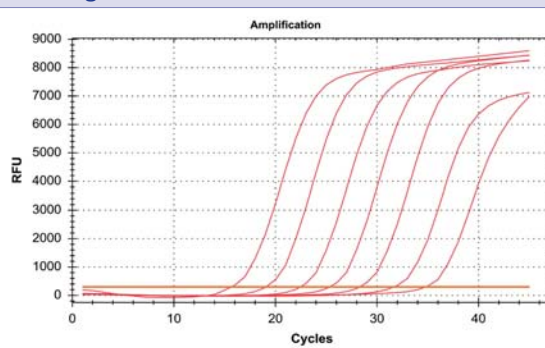


Figure 2. Dilution series of *Yersinia enterocolitica* ( $10^7$ – $10^1$  copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (ROX channel).

## Components

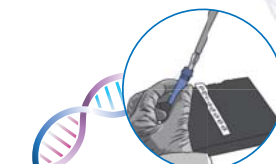
Reagent/Material	Description	Colour	Quantity
<i>Aeromonas + Yersinia enterocolitica</i> 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	White	6/12 X 8-well strip
<i>Aeromonas + Yersinia enterocolitica</i> 96-well plate	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	White	1 plate
Rehydration Buffer	Solution to reconstitute the stabilized product	Blue	1 vial x 1,8 mL
<i>Aeromonas + Yersinia enterocolitica</i> Positive Control	Non-infectious synthetic lyophilized cDNA	Red	1 vial
Negative Control	Non template control	Violet	1 vial x 1 mL
Water RNase/DNase free	Water RNase/DNase free	White	1 vial x 1 mL
Tear-off 8-cap strips	Optical caps for sealing Wells during thermal cycling	Transparent	6/12 x 8-cap strip

## Kit References

Reference	Description
VS-AEY106L	Viasure <i>Aeromonas + Yersinia enterocolitica</i> Real Time PCR Detection Kit 6 x 8-well strips, low profile
VS-AEY106H	Viasure <i>Aeromonas + Yersinia enterocolitica</i> Real Time PCR Detection Kit 6 x 8-well strips, high profile
VS-AEY112L	Viasure <i>Aeromonas + Yersinia enterocolitica</i> Real Time PCR Detection Kit 12 x 8-well strips, low profile
VS-AEY112H	Viasure <i>Aeromonas + Yersinia enterocolitica</i> Real Time PCR Detection Kit 12 x 8-well strips, high profile
VS-AEY113L	Viasure <i>Aeromonas + Yersinia enterocolitica</i> Real Time PCR Detection Kit 96-well plate, low profile
VS-AEY113H	Viasure <i>Aeromonas + Yersinia enterocolitica</i> Real Time PCR Detection Kit 96-well plate, high profile

## Work Flow

One-step rehydration of wells and add your extracted DNA



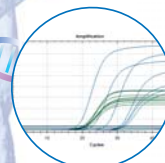
**STEP 1**  
Add 15  $\mu$ l of rehydration buffer into each well



**STEP 2**  
Add 5  $\mu$ l of DNA sample / positive control / negative control



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



**STEP 4**  
Interpretate results