



QIAstat-Dx | Syndromic Testing

## Confident detection of GI infections with QIAstat-Dx

Similar symptoms, multiple pathogens –  
one syndromic solution

## The burden of GI disease

Gastrointestinal (GI) infections contribute significantly to the number of infectious disease illness worldwide, especially among young children. While the causative pathogens may differ due to specific risk factors between regions, the greater impact is still felt in low-income countries.

- Every year, there are an estimated 1.5 billion episodes of diarrhea worldwide. (1)
- In 2016, diarrhea was the eighth leading cause of mortality, responsible for more than 1.6 million deaths. (2)
- It was the fifth leading cause of death among children under five. (2)
- In low-income countries, chronic diarrhea in young children is a significant cause of malnutrition. (3)

## Similar symptoms, multiple pathogens

Symptoms of GI infection are typically nonspecific and can be overlapping. Diarrhea, nausea, vomiting and abdominal pain could be signals to a long list of causative pathogens. Bacteria, viruses and parasites are all possibilities. Correctly diagnosing patients allows healthcare providers to deliver timely and efficient care.

## Breakdown of GI pathogens in 2016

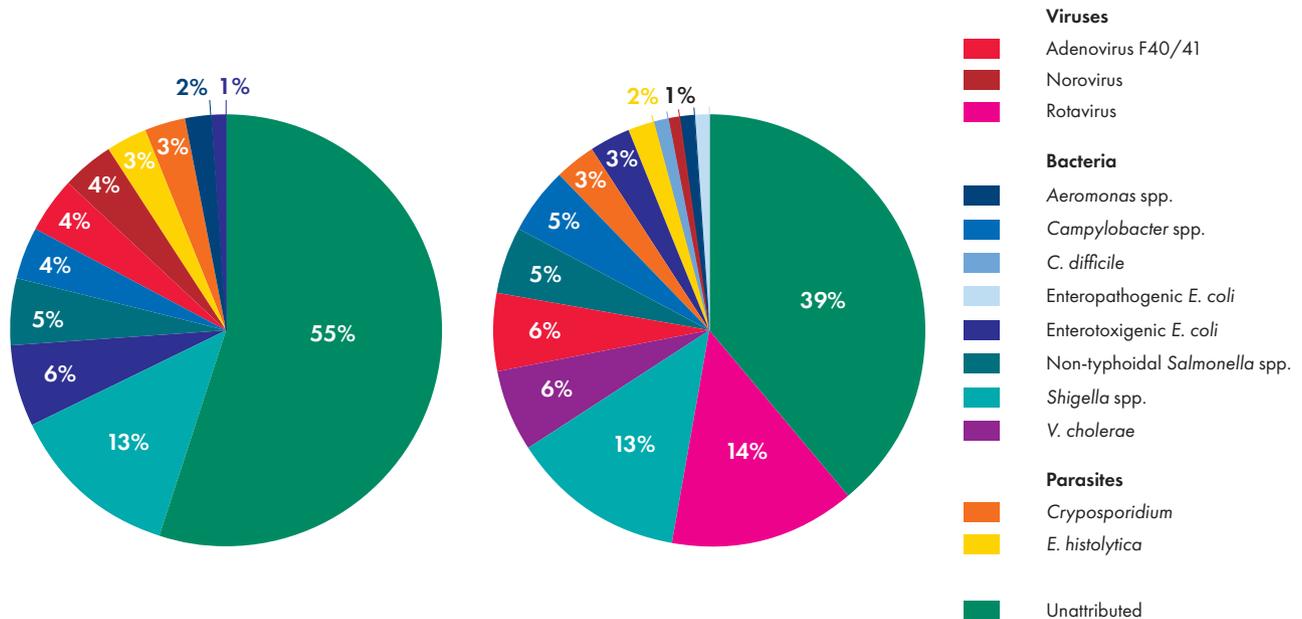


Figure 1. Etiological breakdown of pathogens causing global diarrhea episodes in 2016 (4).

Figure 2. Etiological breakdown of pathogens causing global diarrhea deaths in 2016 (4).

## 5 reasons to use syndromic testing for GI diagnostics

With syndromic testing, results for multiple pathogens are delivered at once. And compared to traditional methods, it can provide results faster. The benefits of syndromic testing extend through the lab, hospital and to the patients.



Provides faster diagnosis (5), enabling efficient and timely treatment.



Minimizes misdiagnoses due to overlapping clinical symptom (6), detecting co-infections better than standard lab testing. (7)



Reduces diagnostic uncertainty, avoiding the inefficiencies of traditional testing.



Decreases hospital costs (7,8), thanks to fewer additional tests and earlier patient discharge (8).



Improves surveillance (9), establishing baseline prevalence and seasonal patterns, and helping to identify potential outbreaks

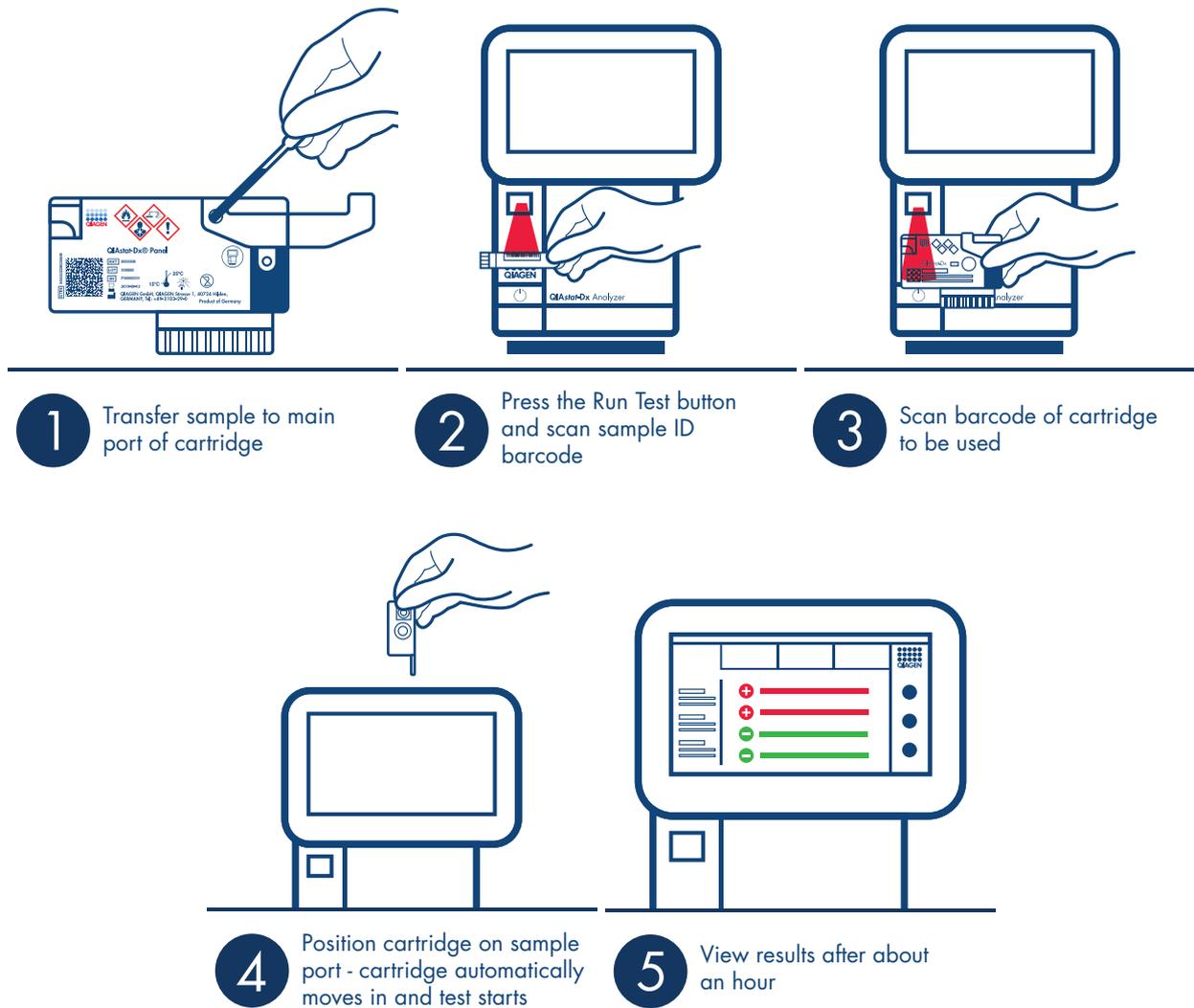


## Quick and comprehensive GI results with QIAstat-Dx

Syndromic testing with the QIAstat-Dx Gastrointestinal Panel renders obsolete yesterday's slow and cumbersome lab methodology. The comprehensive panel design of a QIAstat-Dx assay reduces both unnecessary testing and expense. Detection of a full range of pathogens by real-time RT-PCR is available in around just 60 minutes. Here's why you need it:

- Easy to use – less than one-minute hands-on time, plus seamless workflow
- Comprehensive results – prompt answers for 24 GI targets
- Key additional information – Ct values for detected pathogens

### QIAstat-Dx Gastrointestinal Panel workflow



## An effective tool for identifying co-infections

As part of a European clinical trial, Hannet et al. conducted a multicenter study of the QIAstat-Dx Gastrointestinal Panel. Their findings show its strong performance and an interesting take on the potential role of Ct values.(10)

**385 patients**

The study evaluated patient samples at university hospitals across Europe.

**98.2% PPA  
99.0% NPA**

It found the QIAstat-Dx Gastrointestinal Panel was highly sensitive and specific.

**32.5% of samples with co-infections**

It also reported the QIAstat-Dx Gastrointestinal panel to be an effective tool for identifying co-infection.



## Clinical trial discussion

### Verifying findings of co-detected pathogens

Numerous reports show the high co-infection rates and emerging pathogens newly detected by highly multiplexed PCR methods have created a clinical challenge not addressed by current guidelines. The authors mention that Ct values like those provided by the QIAstat-Dx Gastrointestinal Panel may help assess whether co-detected pathogens are true findings.

### Confirming of *C. difficile* positive samples

As labs receive more Cary-Blair stool specimens, the important parameter for *C. difficile* testing and treatment - stool density - is not always available. When an unexpected *C. difficile* result is reported, the authors suggest Ct values could support the lab in assessing the sample's density. (10)



## QIAstat-Dx Gastrointestinal Panel

The QIAstat-Dx Gastrointestinal Panel is a multiplexed nucleic acid test for use with the QIAstat-Dx Analyzer. It enables simultaneous qualitative detection and identification of multiple gastrointestinal viral, bacterial and parasitic nucleic acids in stool samples with suspected GI infections.



### Bacterial

- *Clostridium difficile* toxin A/B
- Enteroaggregative *E. coli* (EAEC)
- Enteroinvasive *E. coli* (EIEC)/*Shigella*
- Enteropathogenic *E. coli* (EPEC)
- Enterotoxigenic *E. coli* (ETEC) It/st
- *Campylobacter* spp. (*C. jejuni*, *C. upsaliensis*, *C. coli*)
- *Plesiomonas shigelloides*
- *Salmonella* spp.
- Shiga-like toxin producing *E. coli* (STEC) stx1/stx2
- Shiga-like toxin producing *E. coli* (STEC) O157:H7
- *Vibrio cholerae*
- *Vibrio parahaemolyticus*
- *Vibrio vulnificus*
- *Yersinia enterocolitica*

### Viral

- Adenovirus F40/41
- Astrovirus
- Norovirus GI
- Norovirus GII
- Rotavirus A
- Sapovirus (GI, GII, GIV, GV)

### Parasitic

- *Cryptosporidium* spp.
- *Cyclospora cayetanensis*
- *Entamoeba histolytica*
- *Giardia lamblia*

## Ordering Information - Instrument

Product	Contents	Cat. no.
QIAstat-Dx Analyzer 1.0	Instrument consists of both the Operational Module and Analytical Module	9002824
QIAstat-Dx Analytical Module	One each of module containing hardware and software for sample testing and analysis	9002814
QIAstat-Dx Operational Module	One each of module to enable interaction with the Analyzer	9002813

## Ordering Information - Assay

Product	Contents	Cat. no.
QIAstat-Dx Gastrointestinal Panel	Six individually packaged cartridges containing all reagents needed for sample preparation and multiplex RT-real time PCR plus internal control, including six transfer pipettes	691411





Confidently detect GI infections with QIAstat-Dx.  
Visit [QIAstat-Dx.com](http://QIAstat-Dx.com) for more information.

The QIAstat-Dx Analyzer and the QIAstat-Dx Gastrointestinal Panel are for in vitro diagnostic use.

#### References:

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