

# Gastrointestinal Pathogen Panel (GPP)



*“GoPath’s Gastrointestinal Pathogen Panel (GPP) is used as a routine clinical screening test for infectious gastroenteritis”*



**One test**  
detects and identifies over 90%  
of diarrhea-causing pathogens<sup>8</sup>

## Clinical Utility

GoPath Laboratories’ Gastrointestinal Pathogen Panel (GPP) serves the purpose of detecting and identifying the 14 most causative pathogens in stool specimens from symptomatic patients. The Gastrointestinal Pathogen Panel allows rapid screening for common diarrhea-causing pathogens ranging from viruses, bacteria and parasites in a single test. The simple work flow and enhanced test performance enable a more precise and effective diagnosis, which will greatly aid in guiding patient treatment and management.

### •All-Inclusive Screening Test to Provide Accurate Answers

Detect and identify over 90% diarrhea-causing pathogens including bacteria, viruses and parasites in a single test<sup>7,8</sup>. This is important as the signs and symptoms of infectious gastroenteritis are often overlapping among different pathogens; using one test can save time over conventional diagnostic methods

### •Simplify to a Lean Workflow

One test provides answers for multiple pathogens. Eliminate the hassle of managing multiple samples and testing methods into one confident test to reduce cost and increase patient care with a short turnaround time

### •Rule Out Infectious Causes

Be confident to rule out infectious causes of diarrhea with the GPP’s >99% NPV<sup>8</sup>

## Methodology

GoPath’s GPP FDA approved test is based on multiplex nucleic acid amplification followed by xTAG universal sorting system for amplicon detection. The sample(s) are pre-treated for nucleic acid extraction and purification. The samples then goes through the multiplex application and bead hybridization and detection stage where the data acquisition and analysis begins. Testing is completed within 48-72 hours.

## Pathogen Detection

GoPath’s GPP panel is qualitative (Positive or Not Detected) for the following pathogens (see figure 1):

**Figure 1. 14 different pathogens in GoPath’s GPP\***

Bacteria	Campylobacter Clostridium difficile (C. difficile) Toxin A/B Escherichia coli (E. coli) O157 Salmonella Shiga-like Toxin producing E. coli (STEC) stx 1/ stx 2 Shigella Vibrio cholerae, cholera toxin gene (ctx) Enterotoxigenic E. coli (ETEC) LT/ST
Parasites	Giardia lamblia Cryptosporidium Entamoeba histolytica
Viruses	Adenovirus 40/41 Norovirus GI/GII Rotavirus A

\*This is an FDA approved assay and all results can be used and interpreted for a full clinical evaluation and diagnosis of gastrointestinal infections.

## Interpretation

**Positive:** Target pathogen is detected. The pathogen detected can lead to signs and symptoms of infectious colitis or gastroenteritis.

**Negative:** Targets cannot be detected. It may be due to pathogens not detected by this test or to non-infectious causes.

**Indeterminate:** An indeterminate result may be due to PCR inhibition/poor sample quality.

**CPT Code: 87507**

**FDA Approved**

## Sample Submission

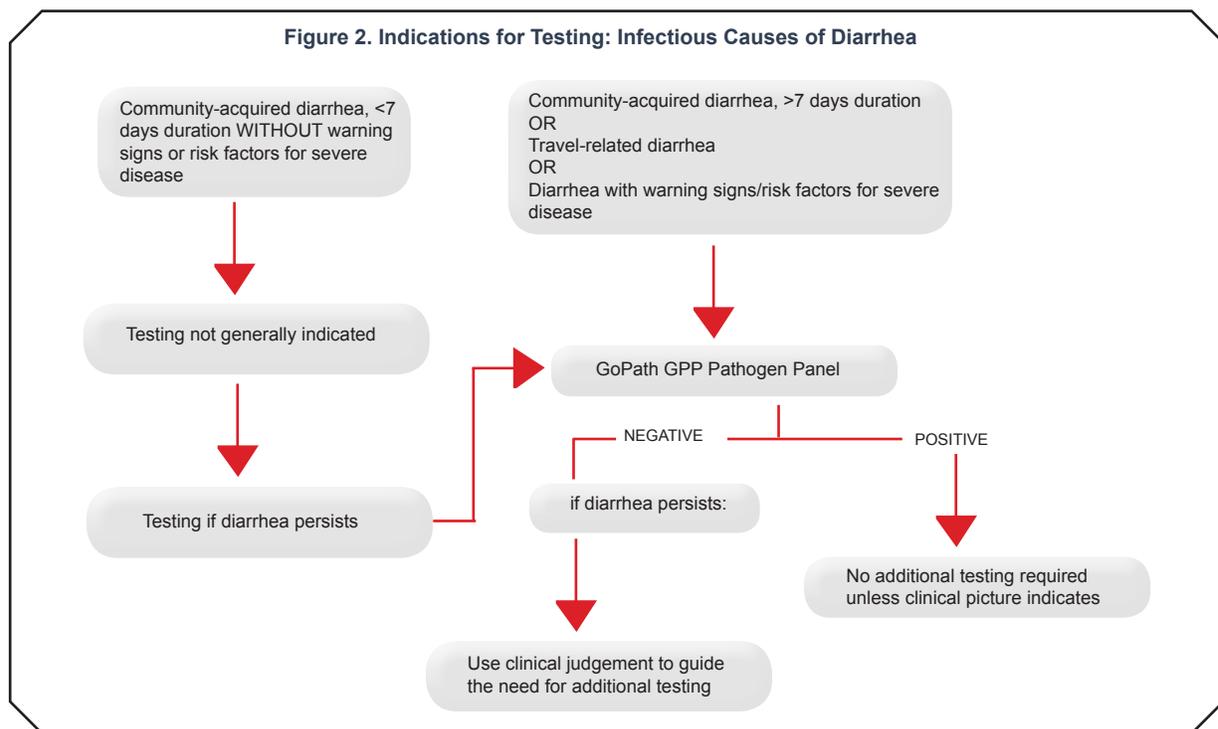
Collect required amount of diarrheal fecal material and fill to 25ml (red fill line) on a Protocol™ Cary-Blair Media specimen vial with a green top. Store at room temperature and ship the same day specimen is collected. (see Patient Instructions for Collecting Stool)

## Causes For Specimen Rejection

- If the specimen is a fully-formed stool
- No visible fecal matter (specimen was not to the red fill line)
- Time and/or temperature instructions not followed as specified
- Quantity not sufficient (QNS) for analysis
- Following the Patient Instructions for Collecting Stool will prevent possible rejections.

## Limitations

Negative result does not rule-out infection in patients with increased gastrointestinal infection pretest. The GPP test does not test for all potential infectious agents of diarrheal disease and results of this test must be correlated in conjunction with patient's other clinical and epidemiological findings.



## References

1. Claas EC et al. Performance of the xTAG® gastrointestinal pathogen panel, a multiplex molecular assay for simultaneous detection of bacterial, viral, and parasitic causes of infectious gastroenteritis. *J Microbiol Biotechnol.* 2013;23(7):1041-5.
2. Coste JF et al. Microbiological diagnosis of severe diarrhea in kidney transplant recipients by use of multiplex PCR assays. *J Clin Microbiol.* 2013 Jun;51(6):1841-9.
3. Wessels E. et al. Added value of multiplex Luminex Gastrointestinal Pathogen Panel (xTAG® GPP) testing in the diagnosis of infectious gastroenteritis. *Clin Microbiol Infect.* 2014 Mar;20(3):O182-7.
4. Michael D. et al. Evaluation of the Luminex xTAG Gastrointestinal Pathogen Panel and the Savyon Diagnostics Gastrointestinal Infection Panel for the detection of enteric pathogens in clinical samples. *Journal of Medical Microbiology* (2014), 63, 1419–1426.
5. Magpix video training can be found at <https://www.luminexcorp.com/support/instrument-support/magpix-instrument-support/>
6. Laboratory Testing for Infectious Causes of Diarrhea. Mayo Medical Laboratories, 5 Jan. 2016. Web. 29 June 2016.
7. Scallan E. Hoekstra RM, Angulo FJ, Tauxe RV, Widdowson M-A, Roy SL, Jones JL, and Griffin PM. Foodborne illness acquired in the United States—major pathogens. *Emerg Infect Dis.* 2011; 17:7-15.
8. Luminex Corporation. US Clinical Site Data. xTag Gastrointestinal Pathogen Panel (GPP) Package Insert 2013.



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