

Laboratory News

VOL. 47, NO. 13 – June 11, 2024

Enteric Viral Panel Nucleic Acid Assay Now Available

Dr. Sophie Arbefeville and Dr. Taylor Wahlig

As of June 10th, 2024, the Microbiology & Molecular Pathology Laboratory in Marshfield is offering an Enteric Viral Panel that detects Norovirus GI & GII, Rotavirus A, Adenovirus F40/41, Sapovirus (I, II, IV, and I), and Human Astrovirus. With the addition of this test to our enteric pathogen testing menu, providers can now choose more specific tests when determining the cause of gastroenteritis.

Inside this Issue

Enteric Viral Panel.....	1
Test Details.....	2
Other Molecular Fecal Testing Options.....	3
Questions.....	4

Enteric Viral Panel Nucleic Acid Test

Rotavirus, norovirus, adenovirus, and astroviruses account for most cases of acute viral gastroenteritis. Most are transmitted via the fecal-oral route, including contaminated food and water. Transmission has also been shown to occur via fomites, vomitus, and possibly airborne methods.

Test Details

Test Code: EVPNAT - Enteric Viral Panel by Nucleic Acid Test

- **Specimen Collection:**
 - Preferred specimen: Fresh feces in leak-proof container
 - Also acceptable: Feces in Cary Blair ParaPak C&S Transport Media
- **Transport Temperature & Stability:**
 - Ambient: 2 days
 - Refrigerate: 5 days
- **Rejection Criteria:**
 - Frozen feces
 - Rectal swabs
 - Feces outside of stability ranges
 - Specimens collected from inpatients after 3 days of hospitalization without laboratory approval.
 - Duplicate specimens within 24 hours
 - If test is ordered in conjunction with the Enteric Parasite Panel and the Enteric Bacterial Pathogen Panel, all tests will be canceled, and the Extended Gastrointestinal Panel will be ordered instead.
- **Performed:** Monday through Friday
- **CPT Code:** 87505

Overview of other Molecular Fecal Testing Available at Marshfield Labs

Patients with diarrhea usually present with symptoms specific to either bacterial, parasitic, or viral causes. To help determine what testing should be considered, please refer to this document [Guidelines for Diarrheal Pathogen Testing in Patients Presenting to the Marshfield Clinic Health System \(MCHS\).pdf \(mfldclin.org\)](#)

Brief information on each test and possible indications for use are listed below:

Test Code: CDNAT – Clostridioides difficile, NAT

Clostridioides difficile is typically associated with recent antibiotic use, however one-third of those diagnosed with a *C. difficile* infection have not recently been on antibiotics. Therefore, this testing should be considered in a patient with unexplained diarrhea in the hospital or outpatient setting.

- **Test includes:** Clostridioides difficile
- **Specimen Type:** Fresh feces in a leak-proof container

Test Code: SSCSNAT – Fecal Bacteria-only Pathogen Panel, NAT

The most common causes of acute, inflammatory diarrhea are bacterial and include *Clostridioides difficile*, *Salmonella*, *Shigella*, *Campylobacter*, and Shiga-toxin-producing *E. coli* (including *E. coli* O157:H7). This assay should be considered in conjunction with CDNAT, unless the patient has recently used antibiotics, been hospitalized for >3 days, or has a history of *C. difficile* infection in the past. In each of these cases, a CDNAT should be ordered alone.

- **Test includes:** *Salmonella*, *Shigella*, *Campylobacter*, and Shiga-toxin-producing *E. coli*
- **Specimen Type:**
 - Preferred specimen: Fresh feces in leak-proof container
 - Also acceptable: Feces in Cary Blair ParaPak C&S Transport Media

Test Code: EPPNAT – Enteric Parasite Panel, NAT

In the United States, the most common parasitic causes of gastroenteritis are *Giardia lamblia* and *Cryptosporidium parvum*, which are protozoans that cause subacute onset of watery diarrhea and abdominal cramping, usually without fever.

- **Test includes:** *Giardia lamblia*, *Cryptosporidium*, and *Entamoeba histolytica*
- **Specimen Type:** Fresh feces in a leak-proof container

Test Code: EGIPNAT – Extended Gastrointestinal Pathogen Panel, NAT

Due to the cost of this assay and strict reimbursement guidelines, this test is restricted to patients who have been admitted to the hospital with acute diarrhea, although should not be ordered on patients who have been hospitalized for >3 days. This assay may occasionally also be helpful in the immunocompromised host with persistent diarrhea of unknown cause.

- **Test includes:** 20 bacterial, viral, and parasite targets (for details see: [Extended Gastrointestinal Panel, NAT \(marshfieldlabs.org\)](https://marshfieldlabs.org))
- **Specimen Type:**
 - Preferred specimen: Fresh feces in leak-proof container
 - Also acceptable: Feces in Cary Blair ParaPak C&S Transport Media

Questions

If you have any questions, please contact Dr. Wahlig, or Dr. Arbefeville in the Microbiology laboratory at 715-221-6141.