

Viral gastroenteritis is a major health problem in developing countries, and even in developed countries it has significant morbidity and economic consequences. In humans, it can be caused by any of a number of viruses including: adenoviruses, astroviruses, noroviruses, rotaviruses and sapoviruses. Human Astrovirus (HAstV) infection has been found in all age groups, but is most prevalent in young children who are likely exposed numerous times during childhood. Astroviruses are classified into 8 antigenic serotypes (HAstV 1-8). The virus can be passed person-to-person via fecal-oral transmission or from person-to-food-to-person. While gastroenteritis caused by astrovirus is less severe than that caused by rotavirus, it is considered to be a significant pathogen in patients undergoing various types of transplantation. Therefore, detection may provide insight as to the cause of symptoms for which no alternative etiology has been determined. Real-time RT-PCR provides a rapid and sensitive method to determine the presence of target-specific amplifiable nucleic acids in all samples intended for PCR¹⁻⁴. For more information, call the lab at 513-636-9820.

Reporting Units:

Positive/Negative

Unacceptable Specimens:

- Frozen whole blood
- Swabs in gel or charcoal media

Shipping Conditions:

- Ambient if sent within 24 hours
- On wet ice if sent >24 hours after collection

Testing Schedule:

Testing for Astrovirus is performed Mon-Fri on first shift. For testing outside of this schedule, call the lab at 513-636-9820. **TAT:** 1-3 days

CPT Codes:

87798

Contact Information:

Cincinnati Children's Division of Pathology
Molecular and Genomic Pathology Services

Phone: 513-636-9820

Fax: 513-803-2941

Email: pathology@cchmc.org

Website: cincinnatichildrens.org/pathology

For pricing or billing questions, call 513-636-0120.

Shipping Address:

Cincinnati Children's Hospital Medical Center
Lab Processing, GL1.279

Attn: Molecular and Genomic Pathology Services (MGPS)
3333 Burnet Ave.

Cincinnati, OH 45229

References:

1. Van Maarseveen N, Wessels E, de Brouwer C, et al. Diagnosis of viral gastroenteritis by simultaneous detection of Adenovirus group F, Astrovirus, Rotavirus group A, Norovirus genogroups I and II, and Sapovirus in two internally controlled multiplex real-time PCR assays. *J Clin Microbiol.* 49:205-210. 2010.
2. Logan C, O'Leary J, O'Sullivan N. Real-time reverse transcription PCR detection of Norovirus, Sapovirus, and Astrovirus as causative agents of acute viral gastroenteritis. *J Virol Methods.* 146: 36-44. 2007.
3. Sebire N, Malone M, Shah N, et al. Pathology of astrovirus associated diarrhoea in a paediatric bone marrow transplant recipient. *J Clin Pathol.* 57:1001-1003. 2004.
4. Walter J and Mitchell D. Role of astroviruses in childhood diarrhea. *Curr Opin Pediatr.* 12:275-279. 2000.

Sample Type	Volume Needed	Collection Container
Stool	1mL or 0.3g	Sterile Container
Rectal Swab*	n/a	Lavender Top (EDTA)
Tissue (originating from the gastrointestinal tract)**	0.3g	Sterile Container

* Red or green top culturette swabs preferred; viral transport media acceptable.

** Wrap tissue in gauze wetted slightly with sterile saline to keep moist during transport.

Clinical Lab Index:

Astro: <https://www.testmenu.com/cincinnatichildrens/Tests/662800>