DiaSource

Cryptosporidium and Giardia lamblia Combo Rapid Test

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Cryptosporidium

Overview Cryptosporidium

Cryptosporidiosis is a worldwide infection caused by the protozoan Cryptosporidium, a parasite that infects many species of vertebrates, including humans, causing acute gastroenteritis, abdominal pain, and diarrhea.

Cryptosporidiosis is transmitted primarily through the fecal–oral route, i.e., by ingesting viable oocysts of animal and/or human origin, emitted with feces that contaminated food or water.

In the immunocompromised hosts, the parasite causes prolonged infections that can also be fatal. For this reason, cryptosporidiosis is considered one of riskiest opportunistic infections for patients with acquired immunodeficiency syndrome.

The best way to control the infection in these patients is setting up sensitive and specific diagnostic tests for epidemiological surveillance and morbidity reduction.



Cryptosporidium

Epidemiology Cryptosporidium

Cryptosporidiosis is found throughout the world. Infection rates vary from 0.6 to 2% in industrialized countries and from 4% to 32% in other countries.

Higher rates have been observed in immunocompromised individuals with chronic diarrhoea. Currently, cryptosporidiosis is the 2nd leading cause of mortality from diarrhoea in children under the age of two (after rotavirus) in developing countries.

Cryptosporidiosis can occur at any age. In healthy individuals, the infection causes no symptoms or only a common gastrointestinal infection (gastroenteritis).

Symptoms appear 7 hours to 10 days after infection:

- Diarrhea
- abdominal cramps
- Fever
- nausea.

Symptoms disappear spontaneously after a few days or weeks.

In patients with weakened immune systems, such as AIDS patients, the infection causes severe diarrhea, sometimes similar to cholera, accompanied by fever, for which the patient may need to be fed by infusion for months.



Giardia lamblia

Overview Giardia lamblia

Cryptosporidiosis is a worldwide infection caused by the protozoan i. Giardiasis is a common gastrointestinal disease, caused by the flagellate protozoan Parasite Giardia lamblia.

Gardia lamblia, which is also recognized as Giardia intestinalis or Giardia duodenalis, is the most common protozoan infecting the small intestine of humans and is a major cause of enteric infection throughout the world, especially in children.

G. lamblia is ranked among the top 10 parasites infecting people.

Giardia cysts are commonly present in sewage, treated wastewater and surface water and have been detected in vulnerable groundwater and untreated or inadequately treated drinking-water. Giardia can persist for moderate to long periods of time in water.



Giardia lamblia

Epidemiology Giardia lamblia

Around 200 million people are infected worldwide annually while 500,000 deaths are reported per year.

According to World Health Organization about 200 million people in Asia, Africa and Latin America showed symptoms of giardiasis with about 500,000 new cases every year especially in children.

In high-income countries, incidence rates range from 5.2 cases per 100 000 for the general population and 15-16.5 per 100,000 for young children.

In low-income countries, Giardia is found in 2% to 20% of diarrhea cases and up to 45% in persistent diarrhoea cases.

Giardia infection (giardiasis) can result in a watery diarrhea that comes with a broad spectrum of gastrointestinal symptoms, including flatulence, bloating, weight loss, abdominal cramping, nausea, malabsorption, greasy and foul-smelling stools, fatigue, and chills.

Asymptomatic infections can occur especially in children, in highly endemic areas and in persons with prior infection



WHAT IS GIARDIASIS?

Giardiasis, or "beaver fever," is a condition caused by a parasitic intestinal infection, which results in uncomfortable symptoms that affect the digestive system. Giardia parasites are most commonly passed to new hosts when someone drinks water hat has been contaminated with the parasite or eats food that contains them.

SIGNS & SYMPTOMS

- · Loose or watery diarrhea
- · Exhaustion/fatigue
- · Sometimes stools that appear "greasy" or discolored
- · Cramps, pain in the abdomen, and stomach bloating
- · Gassiness, belching, or passing lots of gas
- Loss of appetite, nausea, or other symptoms of an upset stomach
- Sometimes other symptoms due to dehydration and electrolyte imbalance

Why use combo rapid test for Cryptosporidium and Giardia lamblia?

The reason for using a combo rapid test for Cryptosporidium and Giardia lamblia is to help healthcare providers quickly identify two of the most common protozoan causes of parasitic diarrhea—especially in children, immunocompromised patients, and travelers.

Early detection is key to ensuring prompt treatment, avoiding complications like dehydration and malnutrition, and preventing further transmission, particularly in outbreak or low-resource settings.

Dual Detection: This combo test simultaneously identifies Cryptosporidium and Giardia lamblia antigens in a single sample, improving diagnostic efficiency and saving time during clinical evaluations.

Quick Diagnosis: Results are available in minutes, enabling rapid treatment decisions and helping reduce the spread of infection, particularly in daycare centers, refugee camps, or rural areas.

Point-of-Care Testing: Designed for on-site use—whether in clinics, emergency care, or field settings—without the need for microscopy, specialized technicians, or laboratory infrastructure.



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Why use combo rapid test for Cryptosporidium and Giardia lamblia?

Non-invasive: Utilizes a stool sample, which is standard for gastrointestinal diagnostics, without requiring additional or invasive procedures.

Specificity and Reliability: Targets parasite-specific antigens, reducing the risk of misdiagnosis compared to symptomatic assessment alone, which can be unreliable due to symptom overlap with bacterial or viral causes.

Cost-Effective: A single test covering two pathogens reduces the cost and burden of performing multiple separate diagnostics, making it ideal for use in screening campaigns and outbreak control.

Public Health Value: Ideal for managing community-wide outbreaks, especially in settings with poor sanitation or limited access to clean water. Early detection helps break the chain of transmission.



Article code	#RAPAC625	
Reading	Visual reading	
Detection type	Qualitative detection of Cryptosporidium Antigens and Giardia lamblia	
Regulatory status	CE-IVD	ID: DATE:
Specimen type	Feces	Crypto G.lamblia
Reading time	10 minutes	c c
Number of Tests per kit	10 tests	. Ц. Ц.
Storage temperature	2-30°C	
Shipping temperature	Ambient temperature	s 🗍 🗍 s
Sensitivity	Crypto 95.5% - Giardia 95.1 %	
Specificity	Crypto 97.5% - Giardia 97.7 %	



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