

CAMPYLOBACTER Enteric (Stool Antigen) ELISA

INFECTIOUS DISEASES

Qualitative Measurement of Campylobacter

Foodborne Illnesses: Determination of Campylobacter antigen

Simple

Microwell Enzyme-based assay (ELISA)
Rapid turnaround
Room temperature incubation

Convenient

Ready to use reagents
Controls provided

ORDERING

Catalog No.	Description
7060	Campylobacter
7063	Cryptosporidium
7066	E. coli O157
7069	Giardia
7072	Verotoxin
7075	C. difficile Toxins A&B
7078	E. histolytica



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CE and EN ISO 13485 compliant

INTENDED USE

The Biomerica Campylobacter ELISA is intended for the qualitative detection of antigen to Campylobacter species in human fecal specimens. This assay is intended for *in vitro* diagnostic use only.

BACKGROUND

Campylobacter is a gram-negative, spiral-shaped bacterium which can cause disease in humans and animals. Two species of Campylobacter, *C. jejuni*, and *C. coli*, are the species most often associated with human illness, or campylobacteriosis.

Most people who become ill with campylobacteriosis get diarrhea, cramping, abdominal pain, and fever within two to five days after exposure. The diarrhea may be bloody, and can be accompanied by nausea and vomiting. The illness typically lasts for about one week. In immunocompromised persons, campylobacter occasionally spreads to the bloodstream, causing a potentially life-threatening situation.

Campylobacteriosis usually occurs in single, sporadic cases, but it can also occur in outbreaks where a number of people get sick at the same time. Most individual cases are associated with eating raw or undercooked poultry, or from cross-contamination of other foods by raw or undercooked poultry.¹ Outbreaks are generally associated with unpasteurized milk or contaminated water.² Animals can become infected, and contact with the stool of an infected animal can become a mechanism for spreading infection. Arthritis and Guillain-Barre Syndrome (GBS) have been linked to human infection with campylobacter on rare occasions.^{3,4}

Typical cultivation methods require fresh stool samples and entail pre-enrichment and enrichment steps in broth, followed by isolation on a selective solid medium. Of particular importance in the cultivation of Campylobacter is the requirement for a microaerobic atmosphere.^{5,6} The development of ELISA tests specific for campylobacter antigens in stool samples eliminates the need for fresh samples as well as shortens the time-to-result by days.

PERFORMANCE

A total of 64 stools were tested against a Reference ELISA. The following results were obtained:

		Reference ELISA		
		Positive	Negative	Total
Biomerica Campylobacter ELISA	Positive	20	0	20
	Negative	1	43	44
	Total	21	43	64

Accuracy: 98%

Sensitivity: 95%

Specificity: 100%

ORDERING

Catalog No.	Description
7060	Campylobacter ELISA kit - Qualitative (96 tests)

 and EN ISO 13485:2003 Compliant, Multi-language inserts available

Bibliography

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2. Beumer, R.R., Cruysen, J.J., Birtantie, I.R. (1988) The occurrence of Campylobacter jejuni in raw cow's milk. J. Appl. Bacteriol 65: 93-96.
3. Nachamkin, Irving, 1997. Microbiologic Approaches for Studying Campylobacter Species in Patients with Guillain-Barre Syndrome. J of Infect Dis Vol 176 (Suppl 2) pp. S106-114.
4. Rees, J.H., Soudain, S.E., et.al. 1995. Campylobacter jejuni infection and Guillain-Barre syndrome. N. Engl. J. Med. 333: 1374-1379.
5. Steinbruckner, B., Harter, G., Pelz, K., Kist, M. (1999) Routine identification of Campylobacter jejuni and Campylobacter coli from human stool samples. FEMS Microbiol. Lett 179: 227-232.
6. Bolton, FJ and Robertson, L. 1982. A Selective medium for isolating Campylobacter jejuni/coli. J Clin Pathol Vol 35, pp. 462-467.7060 Mar 2010



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