

## Escherichia coli, Strain CoGen001577

Catalog No. NR-4357

**For research use only. Not for human use.**

### Contributor and Manufacturer

BEI Resources

### Product Description:

Bacteria Classification: Enterobacteriaceae, Escherichia

Species: Escherichia coli

Strain: CoGen001577

Serotype: O157:H7

Original Source: Escherichia coli (E. coli), strain CoGen001577 is an isolate from Illinois that was obtained during the 2006 California spinach outbreak.<sup>1</sup>

Comments: The E. coli (O157:H7) isolated during the 2006 California spinach outbreak are defined by a common set of 14 distinct chromosomal markers.<sup>2</sup>

E. coli is a Gram-negative, rod-shaped bacterium which occurs singly or in pairs. It is a major facultative inhabitant of the large intestine. Many enterohemorrhagic E. coli (EHEC) strains encode potent toxins, similar to those of Shigella dysenteriae, which can cause severe intestinal, kidney and central nervous system disease. E. coli O157:H7 is the most common EHEC serotype contributing to food and waterborne illness in North America, with hemolytic uremic syndrome (HUS) being the most severe complication.<sup>3</sup>

### Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Tryptic Soy Broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

### Packaging/Storage:

NR-4357 was packaged aseptically, in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

### Growth Conditions:

Media:

Tryptic Soy Broth or equivalent

Tryptic Soy Agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic

Propagation:

1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.

3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tubes and plate at 37°C for 24 hours.

### Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Escherichia coli, Strain CoGen001577, NR-4357."

### Biosafety Level: 2

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories, 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see [www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm).

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# References:

1. "Illinois' *E. coli* Case Linked to Bagged Spinach." Illinois Department of Public Health. September 26, 2006. <http://www.idph.state.il.us/public/press06/9.26.06spinach.htm>
2. Kotewicz, M. L., et al. "Optical Mapping and 454 Sequencing of *Escherichia coli* O157:H7 Isolates Linked to the U.S. 2006 Spinach-Associated Outbreak." *Microbiology* 154 (2008): 3518-3528. PubMed: 18957604.
3. Manning, S. D., et al. "Variation in Virulence Among Clades of *Escherichia coli* O157:H7 Associated with Disease Outbreaks." *Proc. Natl. Acad. Sci. U. S. A.* 25 (12): 4868-4873. PubMed: 18332430.
4. Centers for Disease Control and Prevention (CDC). "Ongoing Multistate Outbreak of *Escherichia coli* serotype O157:H7 Infections Associated with Consumption of Fresh Spinach – United States, September, 2006." *MMWR Morb Mortal Wkly Rep.* 55 (2006): 1045-1046. PubMed: 17008868.
5. Cooley, M., et al. "Incidence and Tracking of *Escherichia coli* O157:H7 in a Major Product Production Region in California." *PLoS One.* 14 (2007): e1159. PubMed: 18174909.
6. Kulasekara, B.R., et al. "Analysis of the Genome of the *Escherichia coli* O157:H7 2006 Spinach-Associated Outbreak Isolate Indicates Candidate Genes that May Enhance Virulence." *Infect. Immun.* 77 (2009): 3713-3721. PubMed: 19564389.

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