July 2016

Share:

microscoop

ATCC *Salmonella enterica* Panel

The World Health Organization estimates that 1 in 10 people throughout the world become sick every year through the consumption of contaminated food, with at least 420,000 cases resulting in death[1]. Of the known incidences of foodborne illness, tens of millions of human cases have been attributed to *Salmonella* infection[2].

This pathogen is a hardy and widely distributed microorganism with the ability to survive for long periods of time in both wet and dry environments. To date, there are over 2,500 known serovars of *Salmonella*, with most of the disease-causing isolates belonging to *S. enterica* subsp. *enterica*[2].

To aid in the development of robust food safety programs for this bacterial pathogen, ATCC offers a *Salmonella enterica* Panel (ATCC® MP-15™) comprising five serovars commonly associated with contaminated food or water.

ATCC® No.	Product Description	Serotype	Serotype Name
13312™	NCTC 5735	I 6,7:c:1,5	Choleraesuis
4931™	NCTC 4444	I 1,9,12:g,m:-	Enteritidis
6962™	NCTC 129	I 6,8:e,h:1,2	Newport
6539™	AMC	I 9,12:d:-	Typhi
700720™	LT2	I 4,5,12:i:1,2	Typhimurium

Each strain is fully characterized under ISO 9001:2008 certified and ISO/IEC 17025:2005 accredited processes, so you can trust the quality of your food testing assays and the integrity of your data.

Get started today!

References

1. World Health Organization. Food Safety Fact Sheet. http://www.who.int/mediacentre/factsheets/fs399/en/
2. World Health Organization. *Salmonella* (non-typhoidal) Fact Sheet. http://www.who.int/mediacentre/factsheets/fs139/en/

Listeriosis research tools

Listeria monocytogenes is a foodborne bacterial pathogen often associated with unpasteurized dairy products and ready-to-eat foods. Although the occurrence of listeriosis is relatively low, its consequences can be severe and occasionally fatal, particularly among pregnant women, infants, children, and the elderly. To support research on this bacterial pathogen, ATCC offers a variety of authenticated strains and nucleic acids.

Browse our *L. monocytogenes* products.

Campylobacteriosis research tools

Campylobacteriosis is an infectious disease caused by ingesting food or drink contaminated with *Campylobacter* species. Though this disease is typically self-limiting, it can result in chronic disease in some individuals, resulting in severe arthritis or Guillain-Barré Syndrome. To support research on this infectious disease, ATCC offers over 15 species of *Campylobacter*, including those most commonly associated with foodborne disease.

Browse our *Campylobacter* products.

Are you going to IAFP 2016? Check out our poster!

Evaluation of GFP reporter-labeled control strains for Shiga toxin-producing ***Escherichia coli*** (STEC) Assays

Megan M. Bumann, B.S., Katherine Burgomaster, M.S., Dev Mittar, Ph.D.

Growing concern over bacterial food contamination has led to increased examination of food testing protocols in today's industry. Currently, the use of bacterial strains in testing protocols as positive controls is not widely practiced for fear of cross-contaminating samples. Due to ongoing scrutiny of food testing methodology and growing regulations under the

Food and Drug Administration (FDA) Food Safety Modernization Act, it is imperative to have control strains with unique, easily detectable traits that distinguish positive control strains from actual food contaminants, diminishing the fear of cross-contamination and improving current methodology. In this study, we created green fluorescent protein (GFP) reporter-labeled *Escherichia coli* strains, including Shiga toxin-producing O157, and evaluated their use as positive controls in media and food safety testing.

Date: August 2, 2016
Time: 10:00 AM – 6:00 PM
Location: Poster P2-49

Quiz the Scientist

I am a foodborne pathogen associated with the consumption of raw or undercooked shellfish, particularly oysters. I can also cause necrotizing wound infections. Can you guess what I am?

Click here for more clues.

ATCC Puzzle

Test your microbial expertise with the ATCC puzzle!
Download the puzzle

Still puzzled?
View the answers to last month's puzzle

Publications

- ATCC Culture Guides
- Quality Control Solutions for Food Testing
- Enteric Disease Research Materials
- Importance of Certified Reference Materials

Frequently Asked Questions

Q: ***Escherichia coli*** and ***Shigella*** are very closely related taxonomically. What are some of the tests that can distinguish the two organisms?

A: *E. coli* has several characteristics that distinguish it from *Shigella*. The first, and the easiest, is that *E. coli* are motile where *Shigella* is non-motile. *E. coli* are also positive for lysine decarboxylation, lactose fermentation/ONPG, and gas production from glucose. *Shigella* are negative for these biochemical tests.

Have more questions?

Quality Control

Assay Development

Multidrug Resistance

Microbiology Resources

View from the Petri Dish

ATCC - 10801 University Boulevard, Manassas, VA 20110

Image of *Vibrio vulnificus* bacteria courtesy of Janice Haney Carr, CDC. Image of *Listeria* bacterium in tissue courtesy of CDC.