

For detection of Shiga-Toxin producing *E. coli* (STEC)

**Colorex**™

# Colorex<sup>™</sup> STEC



#### **Plate Reading**

- Most common Shiga-Toxin E. coli serotypes
   → mauve
- Other Enterobacteriacae
  → colourless, blue or inhibited
- Gram (+) bacteria
- → inhibited





Serotype	isolates	Sensitvity
0157	394/410	96 %
026	152/155	98 %
045	1/1	100 %
0103	62/90	69 %
0111	64/66	97 %
0121	31/36	86 %
0145	45/49	92 %

Internal figures

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## **Background**

An increasing and worrisome number of studies have recently shown that, non-O157 Shiga Toxin-producing *E. coli* (STEC) have been responsible for foodborne poisoning outbreaks. The CDC has also reported warnings about this potential risk:

"Disease caused by Shiga toxin-producing Escherichia coli (STEC) ranges from self-limiting diarrhea to hemorrhagic colitis and hemolytic uremic syndrome (HUS). <.....> several non-O157:H7 serotypes have been implicated as the cause of foodborne outbreaks and HUS in the United States, Europe, and Australia. Studies from Canada, Europe, Argentina, and Australia suggest that non-O157:H7 STEC infections are as prevalent, or more so, than O157:H7 infection."

CDC report « Prevalence of Non-O157:H7 Shiga Toxin-Producing *Escherichia coli* in Diarrheal Stool Samples [...]»

The U.S. Department of Agriculture (USDA) released on March 2012 a policy document declaring that six serogroups of non-O157:H7 shiga-toxin producing *E. coli* (nSTEC) will be considered adulterants, in non-intact raw beef, including ground beef and tenderized steaks. The six *E. coli* serogroups include: O26, O103, O45, O111, O121 and O145. If raw beef contains any of the six strains it will not be allowed into commerce for sale to consumers.

In many cases, laboratories have limited their search for pathogenic *E. coli* to the common O157 serotype. This is due, among other reasons, to the fact that there were no available selective culture media for non-O157 *E. coli*. Colorex<sup>TM</sup> STEC is designed to fill this gap: detection, as mauve colonies, of not only the classical STEC O157, but also many other serotypes.

### **Medium Performance**

- **Easy reading**: a majority of STEC strains grow in mauve colony color, while other bacteria grow in blue, colourless or are inhibited.
- 2 Highly STEC selective medium: excellent tool for large number of samples screening procedures.
- (3) Worldwide premiere: unique medium in the market for STEC detection.
- Flexibility: it can be supplemented with additional compounds to render it even more selective for the strain causing an outbreak.

## **Medium Description**

Powder Base Colorex <sup>™</sup> STEC base	Total       30.8 g/L         Agar       15.0         Peptone and yeast extract       8.0         Salts       5.2         Chromogenic mix       2.6         Storage at 15/30 °C - pH: 6.9 +/-0.2         Shelf Life       2 years
Colorex <sup>TM</sup> STEC Supplement (included in the pack)	Freeze dried vials

Usual Samples	food, environmental, faeces.
Procedure	Direct Streaking. Incubation 18-24 h at 37 °C. +/- prior enrichment step. Aerobic conditions.

