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

**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 hemolytic colitis and hemorrhagic 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*. CHROMagar 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**

1. **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.
4. **Flexibility**: it can be supplemented with additional compounds to render it even more selective for the strain causing an outbreak.

**Medium Description**

<table>
<thead>
<tr>
<th>Powder Base</th>
<th>CHROMagar STEC base</th>
<th>Total ...........................................</th>
<th>30.8 g/L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agar ..................................................</td>
<td>15.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peptone and yeast extract ..................................</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Salts ................................................................</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chromogenic mix ...........................................</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storage at 15/30°C - pH: 6.9 +/-0.2 ...</td>
<td>Shell Life .........................................</td>
<td>2 years</td>
</tr>
</tbody>
</table>

*CHROMagar STEC Supplementation* (included in the pack)

<table>
<thead>
<tr>
<th>Freeze dried vials</th>
<th>qsf 1L or qsf 5L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage at 15/30°C</td>
<td>Aspect: Freeze dried</td>
</tr>
<tr>
<td>Shelf Life ..........</td>
<td>2 years</td>
</tr>
</tbody>
</table>

**Quality Control Strains**

- *E.coli* O157 ATCC 35150 .......... mauve colonies
- *E.colaeae* ATCC 13047 .......... metallic blue colonies
- *E.coli* ATCC 25922 .................... inhibited
- *E.faecalis* ATCC 29212 ................... inhibited

ATCC is a registered trademark of the American Type Culture Collection

**Order References**

Please use these product references when contacting your local distributor:

1000 mL pack ............... ST160
(Product = base powder ST160B + 2 supplements ST160(S))

500 mL pack ............... ST162
(Product = base powder ST162B + 5 supplements ST162(S))