80330 Enrichment *ChromoSelect* Broth Base for EC O157:H7
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Enrichment *ChromoSelect* Broth (Base) for EC 0157:H7 is recommended for isolation and selective differentiation of *E. coli* 0157:H7 from food and environmental samples by chromogenic method.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	10.0
Sorbitol	10.0
Bile salts mixture	1.5
Chromogenic mixture	1.3
Final pH 7.1 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-8°C.
Appearance: Faintly yellow coloured, homogeneous, free flowing powder.
Color and Clarity: Light amber to yellow coloured, clear solution without any precipitate.

Directions:
Suspend 11.4 g in 495 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and aseptically add the contents of 1 vial of EC 0157:H7 *ChromoSelect* Selective Supplement I (Cat. No. 80331) to the medium. Mix well and pour into sterile test tubes.

Principle and Interpretation:
March and Ratnam (1) reported the inability of *Escherichia coli* 0157:H7 to ferment sorbitol while developing Sorbitol MacConkey medium. Subsequently Thomson et al. (2) observed the absence of β-glucoronidase activity in *Escherichia coli 0157:H7* from a variety of samples by direct culture. The bluish colour development of *E. coli* and *Klebsiella* in the medium is due to enzyme β-D-galactosidase and β-glucoronidase which cleaves the chromogenic substrates present in chromogenic mixture and *E. coli* 0157:H7 gives purple colour to the medium due to the absence of β-glucoronidase and inability to ferment sorbitol. Casein enzymic hydrolysate provides nitrogenous, carbonaceous compounds and other essential growth nutrients. Sorbitol is a fermentable sugar, bile salt mixture inhibits most of the gram-positive organisms. Addition of tellurite and novobiocin (in the Supplement) makes the medium more specific and selective.

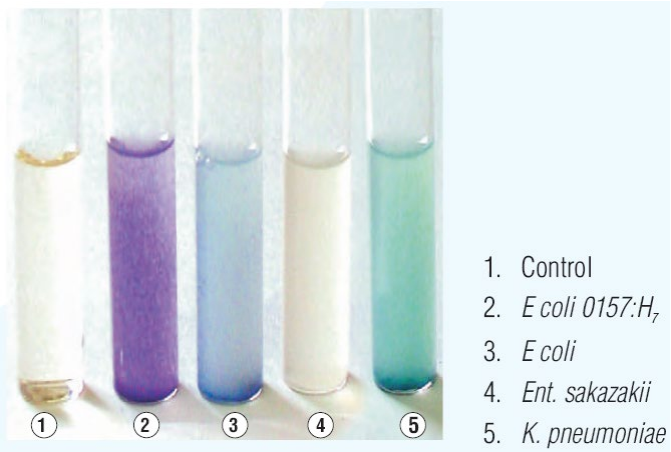
Cultural characteristics after 18-24 hours at 35-37°C.

Organisms (ATCC)	Growth*	Growth**	Color of Medium*	Color of Medium**
Escherichia coli (25922)	+++	-	blue#	-
Escherichia coli 0157:H7 (NCTC 12900)	+++	+++	purple#	purple#
Enterococcus faecalis (29212)	-	-	-	-
Enterococcus sakazakii (12868)	+++	-/+	white#	colourless#
Klebsiella pneumoniae (13883)	+++	++	bluish-green#	bluish-green#
Staphylococcus aureus (25923)	-	-	-	-
Salmonella serotype Enteritidis (13076)	+++	++	light green#	light green#
Shigella flexneri (12022)	++	-	colourless	-

Key: * = growth and colour observed without supplement
** = growth and colour observed with addition of supplement
# = may show slight precipitation of growth

References:

1. S.B. March, S. Ratnam, Sorbitol-MacConkey medium for detection of Escherichia coli O157:H7 associated with hemorrhagic colitis, J. Clin. Microbiol. 23, 869 (1986)
2. J.S. Thompson et al., Rapid biochemical test to identify verocytotoxin-positive strains of Escherichia coli serotype 0157, J. Clin. Microbiol. 29, 2165 – 2168 (1990)



Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.