TM 1854 - CHROMOGENIC EC 0157: H7 AGAR BASE (ISO 16654:2001)

INTENDED USE

For isolation and differentiation of *Escherichia coli* O157:H7 from food and environmental samples.

PRODUCT SUMMARY AND EXPLANATION

Chromogenic EC 0157: H7 Agar Base is used for selective isolation and detection of *Escherichia coli* 0157: H7. Based on the virulence properties, different strains are divided into Enterotoxigenic (ETEC), Enteropathogenic (EPEC), Enteroinvasive (EIEC), Verotoxigenic (VTEC) and Enterohaemorrhagic (EHEC). *Escherichia coli* O157:H7 is an Enterohaemorrhagic strain implicated in foodborne illness. They are identified at laboratory scale by exploiting their unusual biochemical characters. This culture media is based on the formulation described by Rappaport and Henigh and uses a chromogenic mixture along with sorbitol for selective isolation of *Escherichia coli* O157:H7.

COMPOSITION

Ingredients	Gms / Ltr
Agar	12.000
Casein enzymatic hydrolysate	8.000
Sorbitol	7.000
Bile salt mixture	1.500
Sodium Lauryl sulphate	0.100
Chromogenic mixture	0.250

PRINCIPLE

This medium contains Casein enzymatic hydrolysate as a source of carbon, nitrogen and growth nutrients. Bile salts and Sodium lauryl sulphate inhibits the growth of the Gram-positive microbial flora. The chromogenic substrate is specifically and selectively cleaved by *E.coli* O157: H7 resulting in a dark purple to magenta coloured moiety. *E.coli*, on the other hand, forms light pink to mauve coloured colonies. Addition of selective supplement makes the medium more selective with Potassium tellurite inhibiting *Aeromonas* and *Providencia* species and Novobiocin inhibiting gram-positive bacteria.

INSTRUCTION FOR USE

- Dissolve 28.85 grams in 990ml distilled water.
- Warm gently to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool at 40 – 50°C.
- Aseptically add rehydrated contents of 1 vial of Chromogenic EC O157:H7 Selective Supplement (TS 248) with 10ml sterile distilled water.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	:	Cream to yellow coloured, homogeneous free flowing powder
Appearance of prepared medium	:	Light Amber coloured, clear to slightly opalescent gel
pH (at 25°C)	:	6.8± 0.2

INTERPRETATION

Cultural characteristics observed after incubation, with added Chromogenic EC O157:H7 Selective Supplement (TS 248). Recovery rate is 100% for bacterial growth on Soya Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Appearance of colony	Recovery	Incubation Temp.	Incubation Period
Escherichia coli	25922	50-100	None-Poor	Light pink – Mauve	<=10%	35-37°C	18 - 24 Hours
Escherichia coli O157:H7	NCTC 12900	50-100	Luxuriant	Dark purple or magenta	>=50%	35-37°C	18 - 24 Hours
Staphylococcus aureus	25923	≥1000	Inhibited	-	0%	35-37°C	18 - 24 Hours
Pseudomonas aeruginosa	27853	50-100	Fair-Good	Colourless	30-40%	35-37°C	18 - 24 Hours

PACKAGING

In pack size of 100gm & 500gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

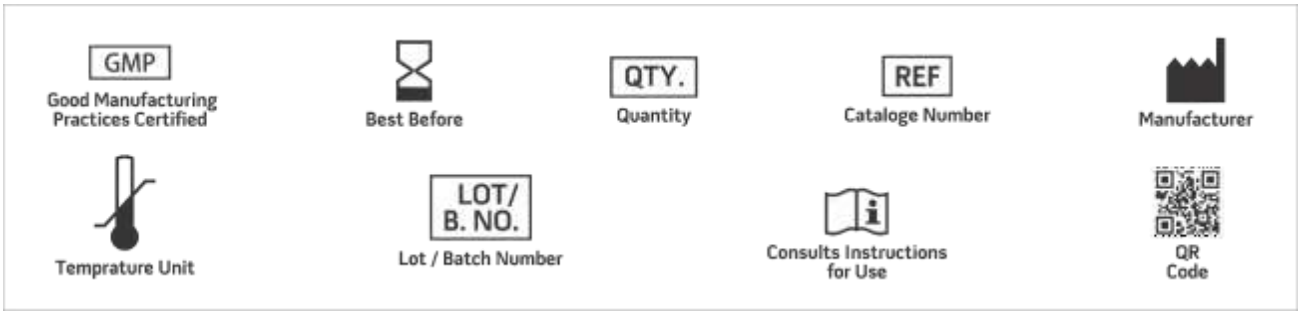
Product Deterioration: Do not use, if powder show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Downes F. P. and Ito K., (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed.,American Public Health Association, Washington, D.C.
2. Rappaport F. and Henigh E., 1952, J. Clin. Pathol., 5:361.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 11 oct,2025