CHROMagar™ O157

MEDIUM PURPOSE

Chromogenic medium for the selective isolation and differentiation of *E.coli* O157 in clinical and food samples.

The *E.coli* serotype O157:H7 or its non-motile variant O157:H- is the most common VTEC serotype in relation to public health. Its significance was recognized in 1982, following two outbreaks in the USA. Since then, more than 180 outbreaks have been reported worldwide, with an estimated WHO figure of 70,000 infections per year.

COMPOSITION

The product is composed of a single powder medium.

Product =	Pack
Total g/L	29.2 g/L
Composition g/L	Agar 15.0 Peptone and yeast extract 13.0 Chromogenic mix 1.2
Aspect	Powder Form
STORAGE	**15/30°C**
FINAL MEDIA pH	6.9 +/- 0.2

PREPARATION **(Calculation for 1L)**

Step 1
Preparation

- Disperse slowly 29.2g of powder base in 1L of purified water.
- Stir until agar is well thickened.
- Heat and bring to boil (100°C) while swirling or stirring regularly.

DO NOT HEAT TO MORE THAN 100°C. DO NOT AUTOCLAVE AT 121°C.

Warning 1: If using an autoclave, do so without pressure.

Advice 1: For the 100°C heating step, mixture may also be brought to a boil in a microwave oven: after initial boiling, remove from oven, stir gently, then return to oven for short repeated bursts of heating until complete fusion of the agar grains has taken place (large bubbles replacing foam).

Advice 2: if a more selective, and more specific, medium is needed, add a solution of Potassium Tellurite to obtain a final concentration of 2.5 mg/l at 45-50°C.

Advice 3 : in case of product samples containing a high load of *Proteus,* Cefixime can be added at 0.025 mg/l at 45-50°C.

Advice 4 : in case of product samples containing a high load of *Pseudomonas* and/or *Aeromonas*, Cefsulodin can be added at 5 mg/l at 45-50°C.

Step 2
Pouring

- Cool in a water bath at 45-50°C, swirling or stirring gently.
- Pour into sterile Petri dishes.
- Let it solidify and dry.

Storage

- Store in the dark before use.
- Prepared media plates can be kept for one day at room temperature.
- Plates can be stored for up to 2 weeks under refrigeration (2/8°C) if properly prepared and protected from light and dehydration.

INOCULATION

Related samples can be processed by direct streaking on the plate, as well as prior appropriate enrichment step.

- If the agar plate has been refrigerated, allow to warm to room temperature before inoculation.
- Streak sample onto plate.
- Incubate aerobically at 37°C for 24 hours.

Typical Samples
e.g. food, meat trimmings, animal or human faecal samples *** Possible appropriate enrichment step. Direct streaking or spreading technique

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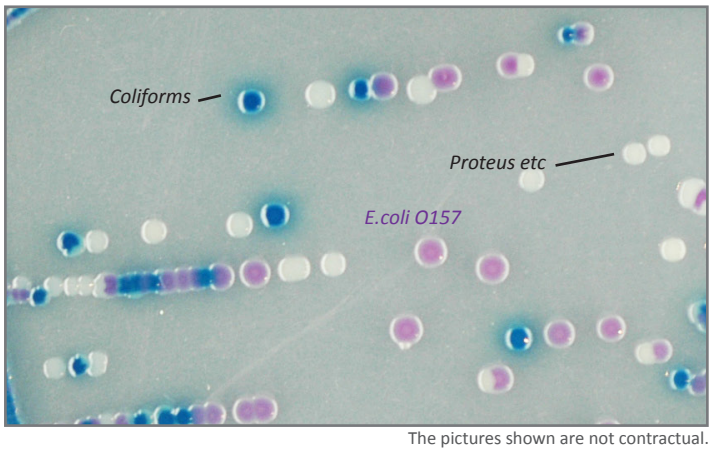
INTERPRETATION

Microorganism	Typical colony appearance
E.coli O157	→ mauve
Coliforms	→ metallic blue
Proteus	→ colourless to grey

Typical colony appearance



The pictures shown are not contractual.

PERFORMANCE & LIMITATIONS

• Sensitivity for *E.coli* O157 is 98% (Bettelheim *et al.* 1998). In absence of Potassium Tellurite, various non *E.coli* O157 may have same colony colour (like some *Salmonella*).

• A latex confirmation test for O157 is suggested for suspect colonies. Definite identification as *E.coli* O157 requires, in addition to characterisation of O157 serotype, a final identification as *E.coli*.

QUALITY CONTROL

Please perform Quality Control according to the use of the medium and the local QC regulations and norms.

Good preparation of the medium can be tested, isolating the ATCC strains below:

Microorganism	Typical colony appearance
E.coli O157:H7 ATCC® 35150	→ mauve
E.coli ATCC® 25922	→ metallic blue
Klebsiella ATCC® 13883	→ metallic blue
E. faecalis ATCC® 29212	→ inhibited

WARNINGS

• Do not use plates if they show any evidence of contamination or any sign of deterioration.

• Do not use the product beyond its expiry date or if product shows any evidence of contamination or any sign of deterioration.

• For in vitro diagnostic use. This laboratory product should be used only by trained personnel in compliance with good laboratory practices.

• Any change or modification in the procedure may affect the results.

• Any change or modification of the required storage temperature may affect the performance of the product.

• Unappropriate storage may affect the shelf life of the product.

• Recap the bottles tightly after each preparation and keep them in a low humidity environment, protected from moisture and light.

• For a good microbial detection: collection and transport of specimen should be well handled and adapted to the particular specimen according to good laboratory practices.

DISPOSAL OF WASTE

After use, all plates and any other contaminated materials must be sterilized or disposed of by propriate internal procedures and in accordance with local legislations. Plates can be destroyed by autoclaving at 121°C for at least 20 minutes.

REFERENCES

Please refer to our website page «Publications» for scientific publications about this particular product.

Web link: http://www.chromagar.com/publication.php

IFU/LABEL INDEX

- Quantity of powder sufficient for X liters of media
- Expiry date
- Required storage temperature
- Store away from humidity

Pack Size			Ordering References	
1000 ml	50 Tests of 20ml	=	EE220	Weight: 29.2gr
5000 ml	250 Tests of 20ml	=	EE222	Weight: 146gr
25 L	1250 Tests of 20ml	=	EE223-25	Weight: 730gr
Bulk size		=	on request	

Need some Technical Documents?

Available for download on www.CHROMagar.com

- Certificate of Analysis (CoA) --> One per Lot
- Material Safety Data Sheet (MSDS)

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CHROMagar
The Chromogenic Media Pioneer

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