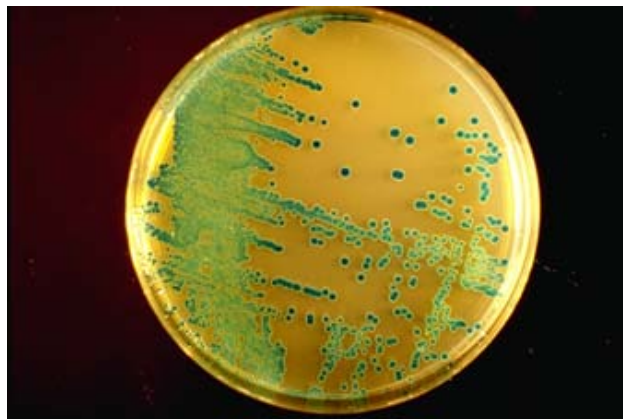


EC X - GLUC AGAR
(CHROMOGENIC E. COLI AGAR)
Chromogenic powdered and ready to use medium
for the detection of *E. coli* in water and foodstuffs



EC X-GLUC Agar: *E.coli* ATCC 25922

Typical Formula (g/l)

Tryptone	20.00
Yeast Extract	5.00
Bile Salts n. 3	1.50
Disodium Hydrogen Phosphate	5.00
Potassium Dihydrogen Phosphate	1.50
Sodium Chloride	5.00
X-GLUC	0.06
Tryptophan	1.00
Agar	12.00

Directions for powdered medium

Suspend 51g in 1000ml of cold distilled water. Heat to boiling, with agitation until complete dissolution and autoclave at 121°C for 15 minutes. Cool to 50°C and distribute into sterile Petri dishes.

Final pH 7.0 ± 0.2

Directions for ready to use flasks

Dissolve the contents of the bottle by boiling in a temperature controlled water bath. Cool to 50°C and distribute into sterile Petri dishes.

Description

EC X-GLUC Agar (Chromogenic *E. coli*), is a selective differential medium for the enumeration and immediate identification of *Escherichia coli* mainly in water samples by means of MF technique. It is also useful for the detection of *E. coli* in foodstuffs with surface inoculated plate or with poured plate technique.

The medium contains bile salts for the complete inhibition of Gram-positive bacteria and X-GLUC (5-bromo-4-chloro-3-indolyl-β-D-glucuronide) for the detection of β-glucuronidase enzyme. Among the *Enterobacteriaceae* only *E. coli*, together with some strains of *Salmonella* and *Shigella*, is β-glucuronidase positive, so cultivates on the plates with green-blue colonies. β-glucuronidase negative bacteria grow with colourless colonies. It is also possible to carry out the rapid indole test by leaving a drop of Kovacs' reagent (code 19171000) onto the medium and observing the reagent turning to red. Natali et al. evaluated Biolife EC X-GLUC Agar with water samples. The results show a good applicability of this medium to water analysis. EC X-GLUC Agar is recommended by Italian UNICHIM method n° 1185 for the rapid detection of *E. coli* in water for human consumption.

Technique**Membrane filtration method :**

1. Filter the sample on a 0,45µ membrane and settle the last over the medium surface.
2. Tightly close the plate and incubate at 44 (+/- 0,5)°C for 24 (+/-2) hours.
3. Count as *E. coli* all the blue or blue-green colonies, confirmed by indole test.

Poured plate method:

1. Pour 1ml of the decimal dilutions of the sample into the plates.
2. Add about 15ml of EC X-GLUC Agar pre-cooled to 48-50°C.
3. Mix well the inoculum with the medium.
4. Incubate at 44 (+/- 0,5)°C for 24 (+/-2) hours
5. Count as *E. coli* all blue or blue-green colonies, confirmed by indole test
6. Report the results as UFC/g considering the "dilution factor"

The medium can be inoculated even in surface, with the usual methods.

User quality assurance (44°C - 24 h)

Productivity control

E.coli ATCC 25922: growth, blue-green colonies, indole positive

Specificity control

S.typhimurium ATCC 14028: growth, colourless colonies, indole negative

Selectivity control

E.faecalis ATCC 19433: inhibited

Storage

Dehydrated medium: 2-8°C

Ready to use plates and flasks: 2-8°C

User prepared plates: 7 days at 2-8°C

User prepared flasks: 1 month at 2-8°C

References

- Bonadonna L. *Escherichia coli* nelle acque significato sanitario e metodologie di analisi. ISSN:1125-2464, 2001
- Delisle, G.J., Ley, A. (1989) J. Clin. Microbiol. 27, 778
- Frampton, E.W., Restaino, L., Blazko, N. (1988) J. Food Proct. 51,402
- Natali, P., Neri, A. Rossi, P., Ferrari, M. (1999) Biologi Italiani, n° 10/99, 20-22
- Unichim n° 1185: 2000.

Packaging

4019681 EC X-GLUC Agar (Chromogenic E. coli Agar) 100 g (2 l) - 500 g (9,8 l)

4019682 EC X-GLUC Agar (Chromogenic E. coli Agar) 100 g (2 l) - 500 g (9,8 l)

5119672 EC X-GLUC Agar (Chromogenic E. coli Agar) 6 x 100 ml ready to use flasks

497102 EC X-GLUC Agar (Chromogenic E. coli Agar) 30 ready to use plates, 55 mm diam.

541968 EC X-GLUC Agar (Chromogenic E. coli Agar) 20 ready to use plates, 90 mm diam.