# BCIG (5-Bromo-4-Chloro-3-Indolyl-β-D-Glucuronide) Agar

Medium used for the detection and enumeration of *Escherichia coli* in food.
*Equally use with MFDS (MB-B0790K) and Color T.B.X. Agar (MB-C1622).

## • CONTENTS (Liter)

| | |
|---|---|
| Tryptone | 20.0 g |
| Bile Salts No.3 | 1.5 g |
| BCIG (5-Bromo-4-Chloro-3-Indolyl-β-D-Glucuronide) | 0.075 g |
| Agar | 15.0 g |

Final pH = 7.2 ± 0.2 at 25°C.

## • PROCEDURE

Suspend 36.58 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45-50°C in water bath. Mix well. Dispense in petri dishes.

## • INTERPRETATION

BCIG (5-Bromo-4-Chloro-3-Indolyl-β-D-Glucuronide) Agar is a chromogenic and selective medium used for the detection and enumeration of *Escherichia coli* in food. Tryptone provides the essential growth nutrients to microorganisms. Bile salts No.3 inhibits gram-positive organisms. The chromogenic agent BCIG helps to detect glucuronidase activity. The enzyme β-D-glucuronidase which has been shown to be highly specific for *Escherichia coli* splits the bond between the chromophore and the glucuronide. For this, *Escherichia coli* colonies are colored blue-green.

## • TECHNIC

Inoculate the plates with spreading the specimen on surface of medium using a sterile loop. Incubate at 44 ± 1°C for 18 - 24 hours. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

Dehydrated medium
Appearance: free-flowing, homogeneous.
Color: light beige.
Prepared medium
Appearance: clear to slightly opalescent.
Color: light amber.
Incubation conditions: 44 ± 1°C / 18 - 24 hours

| Microorganism | ATCC | Inoculum CFU | Growth | Characteristics |
|---|---|---|---|---|
| *Escherichia coli* | 25922 | 50-100 | good | blue-green colonies |
| *Salmonella typhimurium* | 14028 | 50-100 | good | colorless colonies |
| *Enterococcus faecalis* | 29212 | ≥$10^3$ | inhibited | - |
| *Bacillus cereus* | 11778 | ≥$10^3$ | inhibited | - |

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8˚C.

## • REFERENCES


1. Anderson J.M. and Baird-Parker A.C. (1975) J. Appl. Bact. 39. 111-117.
2. Feng, P.C. S. and P. A. Hartmann. 1982. Appl. Environ. Microbiol. 43:1320-1329.
3. Gross, R. J. and B. Rowe. 1985. J. Hyg. Camb. 95:513-550.
4. Ottaviani, F., Ottaviani, M., Agosti, M., (1997) Esperienze su un agar selettivo e differenziale per Listeria monocytogenes. Industrie alimentari, XXXVI, luglio-agosto, 888.
5. ISO 16649-2 (2001): Microbiology of food and animal feeding stuffs-Horizontal method for the enumeration of E. coli – Part 2: colony count technique at 44°C using 5-bromo-4-chloro-3-indolyl-β-D-glucuronic acid.3. Ottaviani, F., Ottaviani, M., Agosti, M., (1997) Esperienze su un agar selettivo e differenziale per Listeria monocytogenes. Industrie alimentari, XXXVI, luglio-agosto, 888.
6. Refer to the MFDS.


## • PACKAGE

| | |
|---|---|
| Cat. No : MB-B0790<br>BCIG (5-Bromo-4-Chloro-3-Indolyl-β-D-Glucuronide) Agar | 500 G |

## • MICROBIAL CULTURE IMAGES

None

*Escherichia coli* ATCC 25922

*Salmonella Typhimurium* ATCC 14028

Incubation conditions : 36±1℃ 24h

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