

# MacConkey Sorbitol Agar



Medium used for the isolation and cultivation of *Escherichia coli* O157: H7.

\*Equally use with MFDS (MB-M1108K), NIER (MB-M1108N) and TC-SMAC (Tellurite Cefixime-Sorbitol MacConkey Agar) (MB-T0883K).

## • CONTENTS (Liter)

Peptone	15.5 g
Proteose Peptone	3.0 g
D-Sorbitol	10.0 g
Bile Salts	1.5 g
Sodium Chloride	5.0 g
Neutral Red	0.03 g
Crystal Violet	0.001 g
Agar	15.0 g
Final pH = 7.1 ± 0.2 at 25°C	

## • PROCEDURE

Suspend 50.03 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. If necessary, aseptically add 2 vials of C.T. (Cefixime Tellurite) supplement (MB-C0760) (TC-SMAC Agar). Mix well. Pour into petri dishes.

### C.T. (Cefixime Tellurite) supplement\*\*

1 vial contents (each vial is sufficient for 500 mL of medium)

Cefixime	0.000025 g
Potassium Tellurite	0.00125 g

\*\*Equally use with MFDS (MB-C0760K).

## • INTERPRETATION

MacConkey Sorbitol Agar is a medium used for the isolation and cultivation of *Escherichia coli* O157: H7. Peptone and proteose peptone are the nitrogen and vitamin sources. D-Sorbitol is the fermentable carbohydrate. *E.coli* strains ferment sorbitol and produce red colonies while *E.coli* O157 doesn't ferment sorbitol and produces colorless colonies. Bile salts and crystal violet are selective agents that inhibit the growth of Gram-positive organisms. Sodium chloride maintains the osmotic balance. Neutral red acts as a pH indicator. Agar is the solidifying agent. C.T. (Cefixime Tellurite) supplement makes the medium more selective.

## • TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at 36 ± 1°C for 18 - 24 hours. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous

Color: pink-beige

### Prepared medium

Appearance : slightly opalescent

Color: red-purple

Incubation conditions: 36 ± 1°C / 18 - 24 hours

Microorganism	ATCC	Growth	Characteristics
<i>Escherichia coli</i>	25922	good	red colonies with bile precipitates
<i>Escherichia coli</i> O157:H7	35150	good	colorless colonies
<i>Enterococcus faecalis</i>	29212	partially 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. Store prepared medium at 2 - 8°C.

## • REFERENCES

1. Adams, S. (1991). Clinical Lab Science 4(1): 19-20.
2. Rappaport, F., and E. Henig. (1952). J. Clin. Pathology.5: 361-362.
3. Refer to the MFDS and the NIER.

## • PACKAGE

Cat. No : MB-M1108 MacConkey Sorbitol Agar	500 G
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## • MICROBIAL CULTURE IMAGES



*Escherichia coli* ATCC 25922 (100 CFU)

Incubation conditions : 36 ± 1°C 18 - 24 hours