MacConkey (MC) Agar Modified

Medium used for the isolation and identification of *Yersinia enterocolitica*.
*Equally use with NIER (MB-M0655N).

• CONTENTS (Liter)

Peptone	20.0 g
D-Sorbitol	10.0 g
Sodium Chloride	5.0 g
Bile Salts No.3	1.5 g
Neutral Red	0.03 g
Crystal Violet	0.001 g
Agar	13.5 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. Aseptically add 2 vials of MacConkey (MC) Agar Modified supplement (MB-0751). Mix well. Pour into petri dishes.

MacConkey (MC) Agar Modified supplement
1 vial contents (each vial is sufficient for 500 mL of medium)

Irgasan	0.002 g
Novobiocin	0.00125 g

• INTERPRETATION

MacConkey (MC) Agar Modified is a medium used for the isolation and identification of *Yersinia enterocolitica*. Peptone provides the nitrogen and vitamin sources. D-Sorbitol is a carbohydrate source. During sorbitol fermentation, fermenting bacteria acidify the medium, a local pH drops around the colony and neutral red acts as a pH indicator. In result, sorbitol fermenting organisms grow as pink or red. Sodium chloride maintains the osmotic balance. Bile salts No.3 and crystal violet inhibit the growth of Gram-positive bacteria. Agar is the solidifying agent. Irgasan and novobiocin inhibit Gram-negative organisms.

• TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at 22 - 35˚C for 24 - 48 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: purplish-red
Incubation conditions: 22 - 35˚C / 24 - 48 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics
Yersinia enterocolitica	23715	50-100	good	pink colony
Escherichia coli	25922	≥10^3	inhibited	-
Proteus mirabilis	25933	≥10^3	inhibited	-
Enterococcus faecalis	29212	≥10^3	inhibited	-
Staphylococcus aureus	25923	≥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. Store prepared medium at 2 - 8°C.

• REFERENCES

1. United States Pharmacopoeia 24, 2000. Microbial Limit Tests, 1814-1818**.**
2. FDA (1995). Bacteriological Analytical Manual, 8th ed.Revision A., 1998. Published by AOAC International.
3. NCCLS document M22-A2, 1996. Quality Assurance for Commercially prepared Microbiological Culture Media 2nd ed.; Approved Standard.
4. American Health (1980). Standard Methods for the Examination of Water and Wastewater. 15th ed. APHA Inc. Washington DC.
5. American Health (1976). Compendium of Methods for the Microbiological Examination of Foods. APHA Inc. Washington DC.
6. Refer to the NIER.

• PACKAGE

Cat. No : MB-M0655 MacConkey (MC) Agar Modified	500 G