

Fluoro MacConkey Broth



Medium used for the isolation and cultivation of lactose fermenting or non-fermenting Gram-negative organisms, especially *Escherichia coli* by UV fluorescence.

• CONTENTS (Liter)

Peptone	20.0 g
Lactose	10.0 g
Bile Salts No.3	1.5 g
Sodium Chloride	5.0 g
Neutral Red	0.03 g
Crystal Violet	0.001 g
MUG	0.1 g
Final pH = 7.1 ± 0.2 at 25°C	

• PROCEDURE

Suspend 36.63 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. Pour into tubes.

• INTERPRETATION

Fluoro MacConkey Broth is a medium used for the isolation and cultivation of lactose fermenting or non-fermenting Gram-negative organisms, especially *Escherichia coli* by UV fluorescence. Peptone provides the nitrogen and vitamin sources. Lactose is the fermentable carbohydrate. During lactose fermentation, a pH drop in the medium and Neutral red acts as a pH indicator. In result, lactose fermenting organisms grow as pink or red but non-fermenting organisms do not. Bile salts No.3 and crystal violet inhibit the growth of Gram-positive bacteria. Sodium chloride maintains the osmotic balance. MUG (4-Methylumbelliferyl-β-D-glucuronide) is a fluorescent substrate for β-D-glucuronidase encoded by *Escherichia coli*. The enzyme releases a highly fluorescent compound called 4-methylumbelliferone which fluoresces blue when the growths are observed under a UV.

• TECHNIC

Inoculate the specimen with stab using a sterile needle to the middle of the medium. Incubate at 35 ± 2°C for 18 - 24 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: light pink-beige

Prepared medium

Appearance : clear to slightly opalescent

Color: purplish-red

Incubation conditions: 35 ± 2°C / 18 - 24 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics	Fluorescence
<i>Escherichia coli</i>	25922	50-100	good	pink	+
<i>Salmonella typhimurium</i>	14028	50-100	good	-	-
<i>Proteus mirabilis</i>	25933	50-100	good	yellow	-
<i>Enterococcus faecalis</i>	29212	≥10 ³	partially inhibited	-	
<i>Streptococcus mutans</i>	25175	≥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. Trepeta, A., and S.C. Edberg. (1984). J. Clin. Microbiol. 19: 172-174.
2. MacFaddin, J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Vol. 1. Williams & Wilkins, Baltimore, MD.
3. MacConkey, A. 1905. Lactose-fermenting bacteria in feces. J. Hyg. 5:333-379.

• PACKAGE

Cat. No : MB-F1337 Fluro MacConkey Broth	500 G
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