

Color LMX



Medium used for the identification and determination of *Escherichia coli* and total coliforms in water and food samples.

• CONTENTS (Liter)

Peptone, Special	3.0 g
Tryptophan	1.0 g
Sodium Chloride	5.0 g
Dipotassium Hydrogen Phosphate	3.0 g
Potassium Dihydrogen Phosphate	1.7 g
Sodium Pyruvate	1.0 g
Sodium Lauryl Sulfate	0.1 g
Chromogenic Mixture	0.2 g
Agar	12.0 g
Final pH = 6.8 ± 0.2 at 25°C	

• PROCEDURE

Suspend 27.0 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. DO NOT AUTOCLAVE. Cool to 45 - 50°C in water bath. If necessary, aseptically add 1.25 mL of Novobiocin supplement (MB-N1821). Mix well. Pour into petri dishes.

Novobiocin supplement**

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

Novobiocin	0.01 g
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** Equally use with MFDS (MB-N1821K).

• INTERPRETATION

Color LMX is a medium used for the identification and determination of *Escherichia coli* and total coliforms in water and food samples. Peptone, special and sodium pyruvate provide essential growth nutrients to the organisms. Tryptophan improves the indole reaction. Sodium Chloride maintains the osmotic balance. Phosphates are the buffering agents. Sodium lauryl sulfate inhibits the growth of Gram-positive bacteria. Chromogenic mixture consists of two chromogenic substrates: X-glucuronide and salmon-gal. β-D-galactosidase produced by coliforms cleaves salmon-gal, thereby forming the salmon to red colonies of coliforms. β-D-glucuronidase produced by *Escherichia coli* cleaves X-glucuronide. *Escherichia coli* develops dark blue to violet colonies by cleaving both X-glucuronide and salmon-gal. To confirm *Escherichia coli*, add a drop of Kovac's Reagent (MB-9410) on the dark-blue to violet colonies. Formation of cherry-red color indicates the positive reaction. Agar is the solidifying agent.

• TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at 35 ± 2°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: opaque with precipitates

Color: amber

Incubation conditions: 35 ± 2°C / 24 - 48 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics	Indole
<i>Escherichia coli</i>	25922	50-100	good	dark blue to violet colonies	+
<i>Enterobacter cloacae</i>	7256	50-100	good	salmon to red colonies	-
<i>Citrobacter freundii</i>	8090	50-100	good	light pink colonies	-
<i>Klebsiella pneumoniae</i>	27736	50-100	good	light pink colonies	-
<i>Salmonella enteritidis</i>	31194	50-100	good	colorless colonies	-
<i>Shigella flexneri</i>	12022	50-100	good	colorless colonies	-
<i>Enterococcus faecalis</i>	29212	≥10 ³	inhibited	-	-

• STORE

The powder is very hygroscopic. Store the powder at 2 - 8°C, 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. Frampton E.W., Restaino L. and Blaszkowski N., J. Food Prot., 51:402 (1988)
2. Manafi M. and Kneifel W., Zentralbl. Hyg., 189:225 (1989)
3. Kilian M. and Bülow P., 1976, Acta. Pathol. Microbiol. Scand., Sect. B, 84:245

• PACKAGE

Cat. No : MB-C1614 Color LMX	500 G
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