

EC-MUG (4-methylumbelliferyl- β -D-glucuronide) Broth



Medium used for the isolation and identification of *Escherichia coli* in water, food and milk.

*Equally use with NIER (MB-E0642N) and Fluoro EC (MB-F1063).

• CONTENTS (Liter)

Tryptone	20.0 g
Lactose	5.0 g
Bile Salt No.3	1.5 g
Dipotassium Phosphate	4.0 g
Monopotassium Phosphate	1.5 g
Sodium Chloride	5.0 g
MUG (4-methylumbelliferyl- β -D-glucuronide)	0.05 g
Final pH = 6.9 \pm 0.2 at 25°C	

• PROCEDURE

Suspend 37.05 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 with Durham tubes.

• INTERPRETATION

EC-MUG (4-methylumbelliferyl- β -D-glucuronide) Broth is a medium used for the isolation and identification of *Escherichia coli* in water, food and milk. Tryptone provides nitrogen, carbon, amino acids, vitamins and minerals. Lactose provides the carbohydrate. Bile salts No.3 suppresses Gram-positive bacteria. Phosphates are the buffering agents. Sodium chloride maintains the osmotic balance. MUG is cleaved by enzyme glucuronidase and the hydrolysis product, 4-methylumbelliferone is detectable under long-wave ultra-violet light (366nm).

• TECHNIC

Inoculate the specimen using a sterile needle to the medium. Incubate at 35 \pm 2°C for 24 \pm 2 hours or 44 \pm 1°C for 24 \pm 2 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

Color: light amber

Incubation conditions: 35 \pm 2°C / 24 \pm 2 hours or 44 \pm 1°C / 24 \pm 2 hours

Microorganism	ATCC	Growth at 35°C / gas	Growth at 44°C / gas	Fluorescence
<i>Escherichia coli</i>	25922	good / +	good / +	+
<i>Enterobacter aerogenes</i>	13048	good / \pm	inhibition to good / -	-
<i>Enterococcus faecalis</i>	29212	inhibited / -	inhibition to good / -	-

• 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.

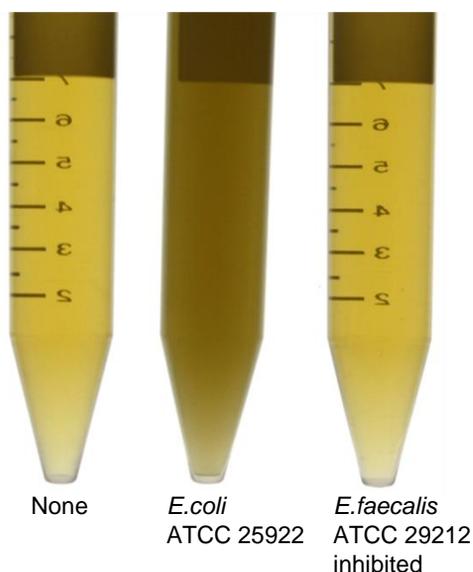
• REFERENCES

1. Eaton, A.D., L.S. Clesceri, and A.E. Greenberg (ed.).1995. Standard methods for the examination fo water and wastewater, 19th ed. American Public Health Association, Washington D.C.
2. Association of Officialn Analytical Chemists. 1995. Bacteriological analytical manual , 8th ed. AOAC International, Gaithersburg, MD.
3. Vanderzant, C., and D.F. Splittstoesser (ed.). 1992. Compendium of methods for the microbiological examination of food, 3rd ed. American Public Health Association, Washington D.C
4. Refer to the NIER.

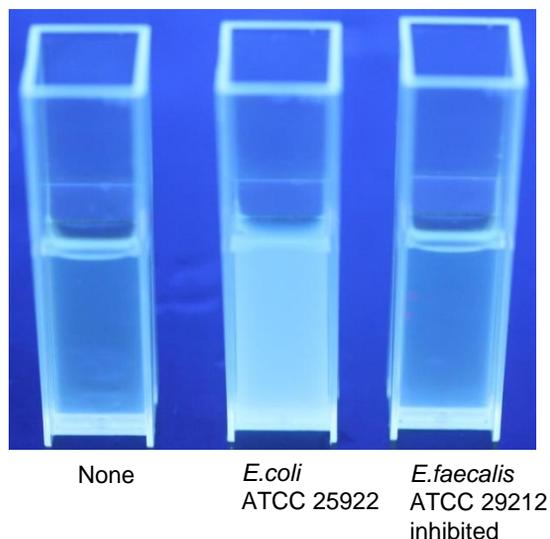
• PACKAGE

Cat. No : MB-E0642 EC-MUG (4-methylumbelliferyl-β-D-glucuronide) Broth	500 G
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• MICROBIAL CULTURE IMAGES



• fluorescence



Incubation conditions : 44 ± 1°C, 24 ± 2 hours