Fluoro E.coli O157:H7

Medium used for the isolation and identification of enterohemorrhagic (EHEC) *Escherichia coli O*157:H7-strains from foodstuffs and clinical specimens.

• CONTENTS (Liter)

Peptone	20.0 g
Meat Extract	2.0 g
Yeast Extract	1.0 g
Sorbitol	10.0 g
Ammonium Iron (III) Citrate	0.5 g
MUG (4-methylumbelliferyl-β-D-glucuronide)	0.1 g
Sodium Chloride	5.0 g
Bromothymol Blue	0.025 g
Sodium Thiosulfate	2.0 g
Sodium Deoxycholate	1.12 g
Agar	13.0 g

Final pH = 7.4 ± 0.2 at 25°C

• PROCEDURE

Suspend 54.75 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). Mix well. Pour into petri dishes.

C.T. (Cefixime Tellurite) supplement

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

Cefixime	0.000025 g
Potassium Tellurite	0.00125 g

• INTERPRETATION

Fluoro E.coli O157:H7 is a medium used for the isolation and identification of enterohemorrhagic (EHEC) *Escherichia coli* O157:H7-strains from foodstuffs and clinical specimens. Peptone, meat extract and yeast extract provide the growth factors necessary for bacterial growth. Sorbitol is the fermentable carbohydrate. Sorbitol fermenting microorganisms grow as yellow because bromothymol blue serves as the pH indicator. Ammonium Iron (III) citrate and sodium thiosulfate are the indicators of hydrogen sulfide production. MUG (4-methylumbelliferyl-β-D-glucuronide) is a chromogenic substrate for β-D-glucuronidase encoded by *Escherichia coli.* The enzyme hydrolyzes MUG to glucuronide and highly fluorescent compound called 4-methylumbelliferone which is observed by UV. But enterohemorrhagic (EHEC) *Escherichia coli* O157:H7-strains aren't capable of forming the enzyme. Sodium chloride maintains the osmotic balance. Sodium deoxycholate inhibits Gram-positive bacteria. Agar is the solidifying agent. Cefixime and potassium tellurite provide selectivity to the medium.

• 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: homogeneous
Color: beige
Prepared medium
Appearance : clear
Color: light green
Incubation conditions: 36 ± 1°C / 18 - 24 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics	Fluorescence	Sobitol Fermentation
Escherichia coli 0157:H7	35150	50-100	good	colorless	-	-
Escherichia coli	25922	50-100	good	yellow colonies	+	+
Enterobacter aerogenes	13048	50-100	good	yellow colonies	-	+
Enterococcus faecalis	29212	≥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. SZABO, R.A., TODD, E.C., EAN, A.: Method to isolate E. coli 0157:H7 from food. - J. Food Prot., 10; 768-772 (1986).
2. March S.B., and Ratnam S., J. Clin. Microbiol. 23; 869-872 (1986).

• PACKAGE

Cat. No : MB-F0905 Fluoro E.coli O157:H7	500 G

KisanBio Co., Ltd.
YangJaecheon-ro 31-gil-11, SeoCho-Gu, Seoul #06746 Korea
TEL: 82-2-529-2282 FAX: 82-2-529-2284 www.kisanbio.com