

CM 21057 - M-FC BASAL MEDIUM

INTENDED USE

Forenumeratationof faecal coliform by membrane filtration technique with the addition of fluorogenic and chromogenic supplement.

PRODUCT SUMMARYAND EXPLANATION

Coliformbacteria are the members of the *Enterobacteriaceae* and are present in large numbers in faeces and sewage. The presence of coliform bacteria, which grow at 44°C, confirms serious water contamination. Membrane filter technique is the most common technique used in the detection of faecal coliforms as recommended by APHA. This medium is formulated in accordance with Ciebin et.al. The chromogenic substrate, 5-bromo-4-chloro-3-indolyl-Beta-D-glucuronide in the medium is cleaved by the presence of enzyme β - glucuronidase in *E. coli* thereby producing blue coloured colonies. MUG Supplement in the medium is cleaved by the enzyme β -glucuronidase of *E. coli* to release 4- methylumbelliferone which produces visible blue–green fluorescence under long UV light. This medium can be used by addition of either of the two supplements or in combination for the confirmation of *E. coli*.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	10.000
Proteose peptone	5.000
Bile Salts Mixture	1.500
Yeast extract	3.000
Sodium chloride	5.000
Agar	15.000

PRINCIPLE

Tryptose, proteose peptone and yeast extract provides carbon, nitrogen compounds, Vitamin Bcomplex and other essential growth nutrients. Bile salts inhibit gram positive organisms. Sodium chloride maintains osmotic balance.

INSTRUCTION FOR USE

Dissolve 39.5gramsin1000 ml purified/distilled water.

Heat to boiling to dissolve the medium completely. Do not autoclave.

Cool to 45-50°C.

Add rehydrated contents of 1 vial of MUG supplement or Chromogenic supplement.

Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder

Appearance of prepared medium : Light yellow coloured clear to slightly opalescent gel forms in Petri plates

pH (at 25°C) : 7.4±0.2

INTERPRETATION

Culturalcharacteristics observed with added MUG supplement and Chromogenic supplement both in combination, after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Fluorescence under uv light	Incubation Temperature	Incubation Period
<i>Enterobacter aerogenes</i>	13048	>=104	inhibited	0%	-	-	44-45°C	24 Hours
<i>Escherichia coli</i>	25922	50-100	good-luxuriant	>=50 %	blue	positive	44-45°C	24 Hours
<i>Enterococcus faecalis</i>	29212	>=104	inhibited	0%	-	-	44-45°C	24 Hours
<i>Staphylococcus subsp. aureus</i>	25923	>=104	inhibited	0%	-	-	44-45°C	24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Ciebin, Brodsky, Eddington, Horsnell, Choney, Palmateer, Ley, Joshi and Shears. 1995. Appl. Enviro Microbiol.
3. Collee J.G., Fraser A.G., Marmion B.P., Simmons A., (Eds) Mackie and McCartney, Practical Medical Microbiology 1996, 14th Edition, Churchill Livingstone.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative MedNet GmbH Buckhorn 10, 48163 Münster, Germany	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For LabUse Only**