

TM 1915 -MacConkey SORBITOL AGAR BASE (ISO 16654-2001)

INTENDED USE

A selective medium for isolation and detection of *Escherichia coli* O157:H7.

PRODUCT SUMMARY AND EXPLANATION

MacConkey Sorbitol Agar Base is recommended for the isolation and identification of enteropathogenic *Escherichia coli* strains. It is based on the formulation described by Rappaport and Henigh which was modified by the ISO Committee. In this medium, *E.coli* O157: H7 is detected on the basis of its inability to ferment sorbitol, thus growing as colourless colonies.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	17.000
Agar	13.500
D-Sorbitol	10.000
Sodium chloride	5.000
Meat peptone	3.000
Bile salt	1.500
Neutral red	0.030
Crystal violet	0.001

PRINCIPLE

Medium contains Casein enzymic hydrolysate and Meat peptone which supply necessary nutrients like nitrogenous and carbonaceous compounds, long chain amino acids, minerals, vitamins and trace ingredients for the growth of organisms. Crystal violet and bile salt present in the medium inhibit the growth of gram-positive bacteria. Sodium chloride maintains osmotic equilibrium. Neutral red is an indicator. D-Sorbitol is the fermentable carbohydrate. Agar acts as a solidifying agent.

INSTRUCTION FOR USE

- Dissolve 40.03 grams of Part I in 990 ml distilled water. Add 10.0 grams of Part II in it.
- Gently heat to boiling with swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool to 45-50°C.
- Aseptically Add rehydrated contents 2 vials of Tellurite-Cefixime Supplement (TS 087).
- Mix well and pour into sterile petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Light yellow to pink, homogeneous free flowing powder
Appearance of Prepared medium	:	Purplish red coloured, clear to slightly opalescent gel
pH (at 25°C)	:	7.1± 0.2

INTERPRETATION

Cultural characteristics observed after incubation with addition of Tellurite-Cefixime Supplement (TS 087). Recovery rate is considered 100% on Soya Agar.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
<i>Escherichia coli</i> 0157:H7	35150	50-100	Good-Luxuriant	$\geq 50\%$	Colourless	35-37°C	18-24 Hours
<i>Pseudomonas aeruginosa</i>	27853	50-100	None to poor	$\leq 10\%$	Colourless	35-37°C	18-24 Hours
<i>Escherichia coli</i>	25922	≥ 1000	Inhibited	0%	-	35-37°C	18-24 Hours
<i>Staphylococcus aureus</i>	25923	≥ 1000	Inhibited	0%	-	35-37°C	18-24 Hours

PACKAGING

In 500 gm packaging size.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°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 powder show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Rappaport F. and Henigh E., 1952, J. Clin. Pathol., 6 : 361.
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4. Pelczar M. J., Chan E. C. and Kreig M. R., 1986, Microbiology, 5th Ed., McGraw Hill Book Co., New York, 5.
5. March S. B. and Ratnam S., 1986, J. Clin. Microbiol., 23:869.
6. Centre for Diseases Control, 1991, Morbid. Mortal, Weekly Rep 40:265.
7. Murray P. R., Baron J. H., Pfaller M. A., Tenover F. C. and Tenover R. H. (Ed.), 1999, Manual of Clinical Microbiology, 7th Ed. American Society for Microbiology, Washington, D. C.
8. Zadik J. M., Chapman P. A. and Siddons C. A., 1993, J. Med. Microbiol., 39:155.
9. Sanderson M. W., Gay J. M., Hancock D. D., Gay C. C., Fox L. K. and Besser T. E., 1955, J. Clin. Microbiol., 33: 2616.

 Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

***For Lab Use Only**

Revision: 20th July 2023