

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

INTENDED USE

A selective medium for isolation and detection of Escherichia coli 0157: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	Recover	Colour of colony	Incubation Temperatur e	Incubation Period
Escherichia coli 0157:H7	35150	50-100	Good- Luxuriant	>=50%	Colourles s	35-37°C	18-24 Hours
Pseudomonas aeruginosa	27853	50-100	None to poor	<=10%	Colourles s	35-37°C	18-24 Hours
Escherichia coli	25922	≥1000	Inhibited	0%	-	35-37°C	18-24 Hours
Staphylococcus aureus	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.

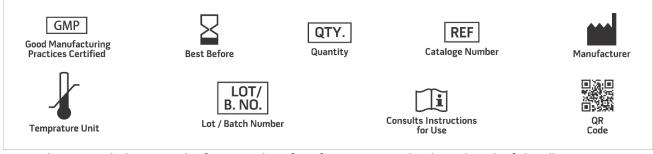
Product Deterioration: Do not use, if powder show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

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.
- 2. Karmali M. A., Petric M., Lim C. et al, 1985, J. Infect. Dis.,151:775.
- 3. ISO 1995, Draft ISO/ DIS 16654:1999.
- 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 Yolken 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.



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

*For Lab Use Only Revision: 20th July 2023



