

## TM 201 – SORBITOL AGAR ( MACCKONKEY SORBITOL AGAR)(DOUBLE PACK)

### INTENDED USE

For isolation and identification of enteropathogenic *E.coli* strains associated with infant diarrhea.

### PRODUCT SUMMARY AND EXPLANATION

MacConkey Sorbitol Agar is based on the formulation described by Rappaport and Henigh. This medium is recommended for isolation of enteropathogenic *Escherichia coli* O157: H7, which ferments lactose but does not ferment sorbitol, hence produces colourless colonies. This organism has been recognized as a cause of hemorrhagic colitis. *E.coli* O157: H7 is a human pathogen associated with hemorrhagic colitis that results from the action of a shiga-like toxin (SLT). On standard MacConkey Agar containing lactose, this strain is indistinguishable from other lactose-fermenting *E.coli*. In MacConkey Sorbitol Agar Base, lactose is replaced by sorbitol. Unlike most *E.coli* strains, *E.coli* O157:H7 ferments sorbitol slowly or not at all. The growth of *E.coli* O157:H7 on MacConkey Agar with Sorbitol shows colorless colonies and most of the fecal flora ferment sorbitol and appear pink. MacConkey Agar with Sorbitol therefore permits ready recognition of *E.coli* O157:H7.

### COMPOSITION

| Ingredients        | Gms / Ltr |
|--------------------|-----------|
| <b>Part I</b>      |           |
| Peptone            | 17.000    |
| Protease peptone   | 3.000     |
| Agar               | 13.500    |
| Crystal violet     | 0.001     |
| Neutral red        | 0.030     |
| Sodium chloride    | 5.000     |
| Bile salt mixtures | 1.500     |
| <b>Part II</b>     |           |
| D-sorbitol         | 10.000    |

### PRINCIPLE

Peptone and proteose peptone 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 mixture present in the medium inhibit growth of gram-positive bacteria. Sodium chloride maintains osmotic equilibrium. Neutral red is an indicator. D-Sorbitol is the fermentable carbohydrate.

### INSTRUCTION FOR USE

- Dissolve 40.0 grams of Part-I and 10 grams of Part-II in 1000 ml distilled water.
- Gently heat to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Avoid overheating, Cool at room temperature prior to dispense.

### QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Light yellow to pink homogeneous free flowing powder.  
**Appearance of prepared medium** : Purplish red coloured clear to slightly opalescent gel forms in Petri plates.  
**pH (at 25°C)** : 7.1 ± 0.2

### INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism                    | ATCC        | Inoculum (CFU/ml) | Growth    | Recovery | Color of the colony | Incubation Temperature | Incubation Period |
|----------------------------------|-------------|-------------------|-----------|----------|---------------------|------------------------|-------------------|
| <i>Salmonella Typhi</i>          | 6539        | 50-100            | Luxuriant | ≥70%     | Pink                | 35-37°C                | 18-24 Hours       |
| <i>Escherichia coli</i>          | 25922       | 50-100            | Luxuriant | ≥70%     | Colourless          | 35-37°C                | 18-24 Hours       |
| <i>Shigella flexneri</i>         | 12022       | 50-100            | Luxuriant | ≥70%     | Pink                | 35-37°C                | 18-24 Hours       |
| <i>Escherichia coli serotype</i> | O11 and O55 | 50-100            | Luxuriant | ≥70%     | Colourless          | 35-37°C                | 18-24 Hours       |

### PACKAGING:

In pack size of 100 gm and 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




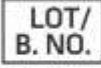








After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

### REFERENCES

1. 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. March S. B. and Ratnam S., 1986, J. Clin. Microbiol., 23:869.
4. Centre for Diseases Control, 1991, Morbid. Mortal, Weekly Rep 40:265.



5. Murray P. R., Baron J. H., Pfaller M. A., Tenover F. C. and Tenover F. C. and Tenover F. C. and Tenover F. C. and Tenover F. C. and Tenover F. C. and Tenover F. C. and Tenover F. C. and Tenover F. C. and Tenover F. C. (Ed.), 1999, Manual of Clinical Microbiology, 7th Ed. American Society for Microbiology, Washington, D. C

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|--|--|---|---|---|--|
|  <p><b>GMP</b><br/>Good Manufacturing Practices Certified</p> |  <p><b>IVD</b><br/>For In Vitro Diagnostic Use</p>  |  <p><b>QTY.</b><br/>Quantity</p>   |  <p><b>LOT/B. NO.</b><br/>Lot / Batch Number</p> |  <p><b>REF</b><br/>Catalogue Number</p>      |  <p><b>Manufacturer</b></p> |
|  <p><b>Temperature Unit</b></p>                               |  <p><b>EC REP</b><br/>Authorized Representative<br/> <small>Müller GmbH<br/>                 Birkens 16,<br/>                 69142 Mannheim, Germany</small></p> |  <p><b>European Conformity</b></p> |  <p><b>QR Code</b></p>                           |  <p><b>Consults Instructions for Use</b></p> |  <p><b>Best Before</b></p>  |

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

**\*For Lab Use Only**  
**Revision: 08 Nov., 2019**