

MacConkey Sorbitol Agar Base

Intended Use

MacConkey Sorbitol Agar Base is recommended for isolation and identification of enteropathogenic *Escherichia coli* strains associated with infant diarrhea.

Summary

MacConkey Sorbitol Agar Base 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). MacConkey Sorbitol Agar however should not be solely used to detect pathogenic *E. coli* O157:H7 strains as some non-toxic strains will also not ferment sorbitol. 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 colourless colonies and most of the faecal flora ferment sorbitol and appear pink. MacConkey Agar with Sorbitol therefore permits ready recognition of *E. coli* O157:H7.

Principle

Enzymatic digest of casein and enzymatic digest of animal tissue provide carbon and nitrogen while sodium chloride maintains the osmotic balance. Sorbitol is the source of energy. Bile salts No.3 and crystal violet inhibit the Gram-positive organisms. Neutral red is a pH indicator.

Formula*

Ingredients	g/L
Enzymatic Digest of Casein	17.0
Enzymatic Digest of Animal Tissue	3.0
Sorbitol	10.0
Sodium Chloride	5.0
Bile Salts No. 3	1.5
Neutral Red	0.03
Crystal Violet	0.001
Agar	13.5
Final pH (at 25°C)	7.1 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability

Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen

Food and Water samples

Specimen Collection and Handling

Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 50.03 g of the powder in 990 mL purified / distilled water.
2. Mix thoroughly.
3. Heat gently with frequent agitation to dissolve the powder completely. DO NOT OVERHEAT.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
5. Cool to 45°C-50°C and aseptically add rehydrated contents of 2 vials of Tellurite-Cefixime Supplement (204200800005).

Quality Control

Dehydrated Appearance: Pinkish orange coloured, soft homogenous powder.

Prepared Appearance: Light red to red coloured with purplish tinge, slightly opalescent gel forms in petridishes.

Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30°C-35°C for 18-24 hours.

Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30°C-35°C for 18 hours.

Indicative Properties: The test results observed are within the specified temperature and time, inoculating ≤ 100 cfu of appropriate microorganism.

Growth Promoting + Indicative

Organism (ATCC)	Growth	Colour of Colony
<i>Escherichia coli</i> 0157:H7 NCTC 29900	Good	Colourless
<i>Escherichia coli</i> 25922 (00013*)	Inhibited	
<i>Pseudomonas aeruginosa</i> 27853 (00025*)	Partial Inhibition	Colourless
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> 25923 (00034*)	Inhibited	

(*): Corresponding WDCM numbers.

Note: For Good Growth - Growth observed on test media should be comparable to the growth observed on control media.

Interpretation of Results

Refer to appropriate references and procedures for results.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. March and Ratnam. 1986. J Clin Microbiol. 23: 869.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.

201130270100
201130270500

Product description

Dehydrated Culture Media
Dehydrated Culture Media

Pack Size

100 g
500 g

 Temperature Limit	 Manufacturer	 Batch Code	 Date of Manufacture	 This way up	 Received on
 Catalogue Number	 Consult Instructions for use	 Use-by Date	 Hygroscopic keep container tightly closed	 Opened on	

Revision: 0326/VER-04

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.
