

MacConkey Agar without Crystal Violet, NaCl and with 0.5% Bile Salts

Intended Use

MacConkey Agar without Crystal Violet, NaCl and with 0.5% Bile Salts is used for the cultivation and differentiation of enteric bacteria, restricting swarming of *Proteus* species as well as potentially pathogenic Gram-positive organisms.

Summary

MacConkey Agar is the earliest selective and differential medium for cultivation of enteric microorganisms from a variety of clinical specimens. Subsequently MacConkey Agar was recommended for use in microbiological examination of foodstuffs and for direct plating/inoculation of water samples for coliform counts. These media are also accepted by the Standard Methods for the Examination of Milk and Dairy Products and pharmaceutical preparations.

Principle

The original medium contains protein, bile salts, sodium chloride and two dyes. MacConkey Agar w/o CV, NaCl and w/ 0.5% Bile Salts is a modification of the original formulation with the exception of crystal violet and sodium chloride. This medium prevents the swarming of *Proteus* species that are generally encountered in pathological specimens. Also, potentially pathogenic Gram-positive organisms can be isolated using this medium. The selective action of this medium is attributed to bile salts, which are inhibitory to most species of Gram-positive bacteria. Gram-negative bacteria usually grow well on the medium and are differentiated by their ability to ferment lactose. Lactose fermenting strains grow as red or pink and may be surrounded by a zone of acid precipitated bile.

Formula*

Ingredients	g/L
Peptic Digest of Animal Tissue	20.0
Bile Salts	5.0
Lactose	10.0
Neutral Red	0.075
Agar	12.0
Final pH (at 25°C)	7.4 ± 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

Clinical samples - Urine; Food and Dairy samples; Pharmaceutical 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 47.07 g of the powder in 1000 mL purified / distilled water and mix thoroughly.
2. Boil with frequent agitation to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle
4. Cool to 45°C-50°C and pour into sterile petridishes.

Quality Control

Dehydrated Appearance: Light yellow to pinkish beige coloured, homogeneous free flowing powder.

Prepared Appearance: Orange red coloured, clear to slightly opalescent gel forms in petridishes.

Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 30°C-35°C.

Organism (ATCC)	Growth	Colour of Colony
<i>Escherichia coli</i> (25922)	Good	Pink
<i>Klebsiella aerogenes</i> (13048)	Good	Pale pink
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> (14028)	Good	Colourless
<i>Proteus mirabilis</i> (25933)	Good (swarming inhibited)	Colourless
<i>Enterococcus faecalis</i> (29212)	Good	Pale pink
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> (25923)	Good	Pale pink

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. MacConkey, 1900, The Lancet, ii:20.
2. MacConkey, 1905, J. Hyg., 5:333.
3. Dwnes F. P. and Ito K. (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201130180100	Dehydrated Culture Media	100 g
201130180500	Dehydrated Culture Media	500 g

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.
