

M8302 MacConkey Agar with Crystal Violet Sodium, Chloride and 0.15% Bile Salts

MacConkey Agar with Crystal Violet, Sodium Chloride and 0.15% Bile Salts is a differential medium recommended for the selection and recovery of the *Enterobacteriaceae* and related enteric gram-negative bacilli.

Composition:

Ingredients	Grams/Litre
Peptic Digest of Animal Tissue	20.0
Lactose	10.0
Bile Salts	1.5
Sodium Chloride	5.0
Crystal Violet	0.001
Neutral Red	0.05
Agar	15.0
Final pH 7.2 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder in a dry place in tightly-sealed containers at 2-25°C.

Appearance: Pinkish beige colored, homogeneous, free flowing powder.

Gelling: Firm

Color and Clarity: Red with purplish tinge, clear to slightly opalescent gel forms in petri plates.

Directions:

Suspend 51.55 g of MacConkey Agar with Crystal Violet, Sodium Chloride and 0.15% Bile Salts in 1000 ml of distilled water. Heat to boiling, with gentle swirling to dissolve the agar completely. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 minutes. Avoid overheating. Cool to 45-50°C and pour into sterile petri plates.

Principle and Interpretation:

This agar is prepared in accordance with the United States Pharmacopeia and National Formulary USP/NF. It contains crystal violet and is very selective. They suppress the growth of Staphylococci. MacConkey Agar with Crystal Violet, Sodium Chloride and 0.15% Bile Salts is recommended for use in microbiological examination of foodstuffs and for direct inoculation of water samples for coliform counts. The selective action of this medium is attributed to crystal violet and bile salts, which are inhibitory to most species of gram-positive bacteria. Gram-negative bacteria usually grow well on this medium and are differentiated by their ability to ferment lactose. Lactose fermenting strains grow as red or pink. The red color is due to the production of acid from lactose. *Shigella* and *Salmonella* are colorless and transparent. *Yersinia enterocolitica* may appear as small, non-lactose fermenting colonies.



Cultural characteristics after 18-24 hours at 35°C.

Organisms (ATCC)	Growth	Colour of Colony
<i>Enterobacter aerogenes</i> (13048)	+++	pink to red
<i>Escherichia coli</i> (25922)	+++	pink to red with bile precipitate
<i>Proteus vulgaris</i> (13315)	+++	Colourless
<i>Salmonella enteritidis</i> (13076)	+++	Colourless
<i>Salmonella typhi</i> (6539)	+++	Colourless
<i>Shigella flexneri</i> (12022)	++	Colourless
<i>Staphylococcus aureus</i> (25923)	-	-
<i>Enterococcus faecalis</i> (29212)	+	Colourless to pink
<i>Streptococcus pneumoniae</i> (6303)	+++	

References:

1. The United States Pharmacopoeia XXI and the National Formulary, (1985). 16th' Edition. United States Pharmacopeial Convention, Inc. Washington, D.C.
2. International Organization for Standardization (ISO), (1990). Draft ISO/DIS 9308-2.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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