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## Product Specification

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<b>Product Name:</b>	MacConkey Agar
<b>Product Code:</b>	SG7056 / SG7218

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### PRODUCT DESCRIPTION:

MacConkey Agar (MAC) is a bacterial culture medium used to selectively grow Gram-negative bacteria while differentiating those that can ferment lactose from those that cannot. The medium contains bile salts and crystal violet dye, which inhibit the growth of most Gram-positive bacteria. This selective property allows only Gram-negative bacteria to thrive. Additionally, MAC differentiates bacteria based on their ability to ferment lactose: lactose-fermenting bacteria will produce pink colonies, while non-lactose-fermenting bacteria will produce colorless colonies. This product is available in both dehydrated and granulated form.

### Use:

Stir to suspend 52.0 g of dehydrated or 51.5 g of granulated medium in 1L distilled H<sub>2</sub>O. Mix well with heat with frequent agitation. Boil for one minute. Autoclave for 15 minutes at 121°C to sterilize. Allow to cool (40 – 45°C) before making additions, such as antibiotics (if desired). For laboratory use only.

### Components:

Peptic Digest of Animal Tissue – 20g/L  
Lactose - 10g/L  
Ox Bile - 5g/L  
Sodium Chloride - 5g/L  
Neutral Red – 0.075g/L  
Agar – 12g/L

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Item	Description
<b><u>Physical and Chemical Tests</u></b>	
Appearance (dry):	Light Grey Powder / Granules
Appearance (in gel):	Red Transparent Solid
pH (@25°C):	7.4 ± 0.2

**Quality Control**

Microorganism	Inoculum (CFU)	Growth	Recovery	Remarks
Escherichia coli (ATCC 8739)	10-100	Luxuriant	≥50%	Pink red with bile precipitate
Escherichia coli (ATCC 25922)	10-100	Luxuriant	≥50%	Pink red with bile precipitate
Shigella Flexneri (ATCC 12022)	10-100	Luxuriant	30-40%	Colorless
Enterobacter Aerogenes (ATC 13048)	10-100	Luxuriant	≥50%	Pale pink to red
Salmonella Enteritidis (ATCC 13076)	10-100	Luxuriant	≥50%	Colorless
Proteus Vulgaris (ATCC 13315)	10-100	Luxuriant	≥50%	Colorless
Staphylococcus aureus (ATCC 6538)	10-1000	Inhibited	0%	/

\* The microbiological test results were obtained from type cultures after incubation at a temperature of 36±1°C and observed after 18-24 hours.

**Storage:** Store in a dry and dark place at room temperature. Tighten the cap immediately after use.