MacConkey Broth Catalog: HB8313-51-5K

MacConkey Broth is used for the detection of coliform organisms in milk and water, which meets United States Pharmacopeia (USP), European Pharmacopoeia (EP) and Japanese Pharmacopoeia (JP), Chinese Pharmacopoeia (CHP) performance specifications, where applicable.

Used for in qualitative procedures for selective and differential isolation of enric gram-negative bacilli.

.Approximate Formula:

Ingredients	gm/liter
Pancreatic Digest of Gelatin	20.0
Lactose	10.0
Oxgall	5.0
Bromcresol Purple	0.01

Final pH 7.3±0.2 at 25℃

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 35.0g of the medium in one liter of deionized or distilled water. Mix well. Heat it slowly to dissolve completely the powder. Dispense into test tubes. Sterilize in an autoclave at 121 ℃ (15 lbs.) for 15 minutes

Principle and Interpretation:

MacConkey Broth is used for cultivating gram-negative, lactose-fermenting bacilli and as a presumptive test for coliform organisms. It has been used to analyze food, milk, and water samples for coliforms. In addition, this medium has also been used in the rapid detection of shiga-toxin producing E. coli in fecal samples. MacConkey Broth is recommended in the USP as a test medium for E. coli in the microbiological examination of nonsterile products.

Pancreatic Digest of Gelatin provides amino acids and other growth factors. Lactose is a carbon energy source for gram-negative lactose-fermenting bacilli. Oxgall inhibits the growth of gram-positive organisms. Bromcresol purple is the indicator.

Appearance:

Dehydrated medium is a free-flowing yellowish-grey powder. The prepared medium is a kind of purplish-red transparent liquid.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

MacConkey Broth must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 42±1℃ for 24-48 hours.

Microorganism	Strains Number	Inoculum (CFU）	Growth	Remarks
Salmonella typhimurium	ATCC 14028	10-100	Luxuriant	Turbidity 2; non-aerosis
Staphylococcus aureus	ATCC 25923	1000-5000	Inhibited	Turbidity 0(no growth)
Escherichia coli	ATCC 25922	10-100	Luxuriant	Turbidity 2, yellow with gas

Reference:

1. United States Pharmacopeial Convention, Inc. 2008. The United States pharmacopeia 31/The national formulary 26, Supp. 1, 8-1-08, online. United States Pharmacopeial Convention, Inc., Rockville, Md.
2. European Directorate for the Quality of Medicines and Healthcare. 2008. The European pharmacopoeia, 6th ed., Supp. 1, 4-1-2008, online. European Directorate for the Quality of Medicines
and Healthcare, Council of Europe, 226 Avenue de Colmar BP907-, F-67029 Strasbourg Cedex 1, France.
3. Japanese Ministry of Health, Labour and Welfare. 2006. The Japanese pharmacopoeia, 15th ed.,online. Japanese Ministry of Health, Labour and Welfare.
4. Chinese Pharmacopeia,2020

5. MacConkey. 1908. J. Hyg. 8:322.
6. Qadri, Buckle and Edwards. 1974. J. Appl. Bact. 37:7-14.

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