



INTENDED USE

For detection and enumeration of coliform bacteria

COMPOSITION

Ingredients	Gm\Ltr.
Pancreatic digest of gelatin	20.000
Lactose monohydrate	10.000
Dehydrated Ox bile	5.000
Bromocresol purple	0.010

PRODUCT SUMMARY AND EXPLANATION

MacConkey Broth is a modification of MacConkey Medium. Childs and Allen demonstrated the inhibitory effect of neutral red and therefore substituted it by the less inhibitory bromocresol purple dye. BCP is more sensitive in recording pH variation in the medium. This medium is prepared in accordance with the harmonized method of USP/BP/JP.

PRINCIPLE

Pancreatic digest of gelatin provides necessary nitrogen source. Lactose is the carbohydrate for Gram-negative lactose-fermenting bacilli. Bromocresol purple is the pH indicator in the medium, which turns yellow under acidic condition. Lactose fermenting organisms turn the medium yellow due to the acidity produced on lactose fermentation. The colour change of the dye is observed when the pH of the medium falls below 6.8. Lactose non-fermenting organisms like *Salmonella* and *Shigella* do not alter the appearance of the medium. Dehydrated Ox bile inhibit the growth of Gram-positive organisms.

INSTRUCTION FOR USE

1. Dissolve 35.01gms of the medium in 1000ml of distilled water.
2. Gently heat to boiling with gentle swirling and dissolve the medium completely.
3. Dispense into test tubes containing Durham tubes.
4. Sterilize by autoclaving at 15 psi (at 121°C) for 15 minutes.
5. Cool to room temperature prior to inoculation.

QUALITY CONTROL SPECIFICATIONS

Appearance of dehydrated Powder: Cream to yellow colour with green tinge, homogeneous free flowing powder



Appearance of prepared medium: Purple colour, clear to slightly opalescent solution

pH (at 25°C): 7.3 ± 0.2

INTERPRETATION

Culture characteristics observed after incubation period of 18 - 24 hours at 35 ± 2°C.

Microorganisms	ATCC	Inoculum (CFU)	Growth	Acid / Gas production
<i>Escherichia coli</i>	25922	50-100	Luxuriant	+ve / +ve
<i>Enterobacter aerogenes</i>	13048	50-100	Luxuriant	+ve / +ve
<i>Salmonella choleraesuis</i>	12011	50-100	Good	- ve / -ve
<i>Staphylococcus aureus</i>	25923	≥ 1000	Inhibited	-----

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

REFERENCES

1. British Pharmacopoeia, 2016, The Stationery office British Pharmacopoeia
2. Childs E. and Allen, 1953, J. Hyg: Camb. 51:468-477.
3. Japanese Pharmacopoeia, 2016
4. MacConkey A. T., 1900, The Lancet, ii: 20.
5. The United States Pharmacopoeia, 2019, The United States Pharmacopoeial Convention. Rockville, MD.



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PRODUCT DATA SHEET



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.