CM 20208 – B.T.B. LACTOSE AGAR, MODIFIED

INTENDED USE

For differentiating lactose positive and lactose negative colonies of Enterobacteriaceae.

PRODUCT SUMMARY AND EXPLANATION

Reactions with lactose are of great practical importance for the primary isolation of Enterobacteria from clinical specimens. The specimens e.g. faeces is usually plated on a lactose-containing medium on which lactose fermenters and lactose non fermenters form coloured and pale colonies respectively due to the dye incorporated. This procedure makes an immediate presumptive distinction between colonies of the true intestinal pathogens possible. Salmonella and Shigella, do not ferment lactose while the common intestinal commensals, Escherichia and Klebsiella, which do ferment lactose. Lactose Blue Agar is used for differentiating lactose fermenting and non-fermenting bacteria belonging to the family Enterobacteriaceae.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	3.500
Tryptone	3.500
Sodium chloride	5.000
Lactose	15.500
Bromo thymol blue	0.040
Agar	13.000

PRINCIPLE

Tryptone and peptone provide essential nutrients for bacterial metabolism. Lactose provides a fermentable carbohydrate source for the enteric bacteria. Bromo thymol blue is the pH indicator for indicating acid production due to carbohydrate fermentation. The dye turns yellow at acidic pH and imparts yellow colour to the colony. Alkalinization produces a blue coloration.

INSTRUCTION FORUSE

Dissolve 40.54 gramsin 1000 ml purified / distilled water.
Heat to boiling to dissolve the medium completely.
Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to greenish yellow homogeneous free flowing powder.
Appearance of prepared medium	: Green coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.0±0.2

INTERPRETATION

Culturalcharacteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Good-luxuriant	>=50%	35-37°C	18-24 Hours

PACKAGING:

Inpacksizeof500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°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.

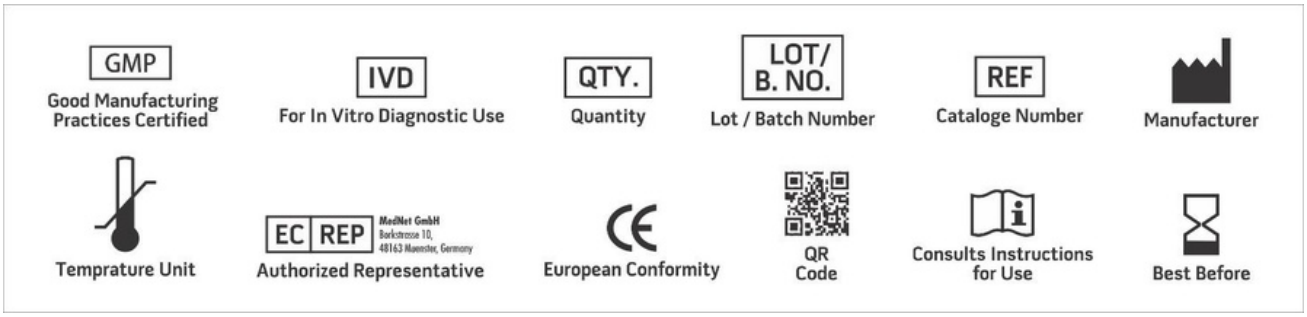
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

Afteruse,prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Cruikshank R.,Duguid J. P., Marmion B. P., Swain R. H. A., (Eds.), 1975, Medical Microbiology, The Practice of Medical Microbiology, 12th Edition, Vol. II, Churchill Livingstone
2. Winkle S., 1947, Zbl. Bakt. I. Orig., 152:103.



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

*For LabUse Only