TM 2110 – CHROMOGENIC BACILLUS AGAR BASE

INTENDED USE

For isolation and differentiation between various species of *Bacillus* by chromogenic method.

PRODUCT SUMMARY AND EXPLANATION

Majority of *Bacillus* species apparently have little or no pathogenic potential and are rarely associated with disease in humans or lower animals. The principal exception to this are *Bacillus anthracis,* the agent of anthrax, and *Bacillus cereus* ,but a number of other species, particularly those of the *B.subtilis* group, have been implicated in food poisoning and other human and animal infections. *Bacillus cereus* causes food poisoning due to consumption of contaminated rice, other starchy foods such as potato, pasta and cheese have also been implicated, eye infections and a wide range of other clinical conditions like abscess formation, meningitis, septicemia and wound infection.

Chromogenic Bacillus Agar Base is based on the formulation of MYP Agar formulated by Mossel et al used for enumeration of *Bacillus cereus* and *Bacillus thuringiensis* when present in large number in certain foodstuffs.

COMPOSITION

Ingredients	Gms / Ltr
Meat extract	1.000
Peptone	10.000
Chromogenic mixture	3.200
Phenol red	0.025
D- Mannitol	10.000
Sodium chloride	10.000
Agar	15.000

PRINCIPLE

The medium contains peptone and meat extract, which provide nitrogenous compounds. Mannitol serves as the fermentable carbohydrate, fermentation of which can be detected by phenol red. Mannitol fermenting organisms like *B. megaterium* yield yellow coloured colonies. The chromogenic mixture present in the medium is cleaved by the enzyme beta-glucosidase found in *B.cereus* resulting in the formation of blue colonies. *B.thuringiensis* also grows as blue/green colonies on this medium as *B.cereus* and *B.thuringiensis* are biochemically identical, however *B.cereus* shows flat colonies with distinct blue centres, while *B.thuringiensis* shows irregular margins. If selective isolation of *B.cereus* or *B.thuringiensis* is required aseptically add polymyxin B.

INSTRUCTION FOR USE

- Dissolve 49.22 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 lbs pressure (121ºC) for 15 minutes.
- Cool to 50°C and aseptically add rehydrated contents of 1 vial of Polymyxin B Selective Supplement if desired.
- Mix well and pour into sterile Petri plates

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder

Appearance of prepared medium : Red coloured, clear to slightly opalescent gel forms in Petri plates

pH (at 25°C) : 7.1 ± 0.2

INTERPRETATION

Cultural characteristics with addition of supplement observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth w/o addition of (TS 058)	Recovery w/o addition of (TS058)	Growth w/ addition of TS058)	Recovery w/ addition of (TS058)	Growth w/o addition of (TS 058)	Incubation Temperature	Incubation Period
Bacillus cereus	10876	50-100	Good-luxuriant	>=50%	Good luxuriant	≥ 50%	Light blue, large, flat colonies with blue centre	30°C	24-48 Hours
Bacillus thuringiensis	10792	50-100	Good-luxuriant	>=50%	good-luxuriant	≥ 50%	Light blue, large, flat colonies with irregular	30°C	24-48 Hours
Bacillus megaterium	14581	50-100	Good-luxuriant	>=50%	inhibited	0%	yellow, mucoid colonies	30°C	24-48 Hours
Bacillus coagulans	7050	50-100	Good-luxuriant	>=50%	Inhibited	0%	pink, small, raised colonies	30°C	24-48 Hours
Bacillus subtilis	6633	50-100	Fair	20-30%	Inhibited	0%	yellowish green to green colonies	30°C	24-48 Hours

PACKAGING:

In pack size of 100 gm and 500gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°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

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

REFERENCES

1.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed. American Society for Microbiology, Washington, D.C
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3. Mortimer P. R. and McCann G., 1974, Lancet, 1043.
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5.Wohlgemuth K., Kirkbride C. A., Bicknell E. J. and Ellis R. P., 1972 Am. Vet. Met, Ass. 161:1691.
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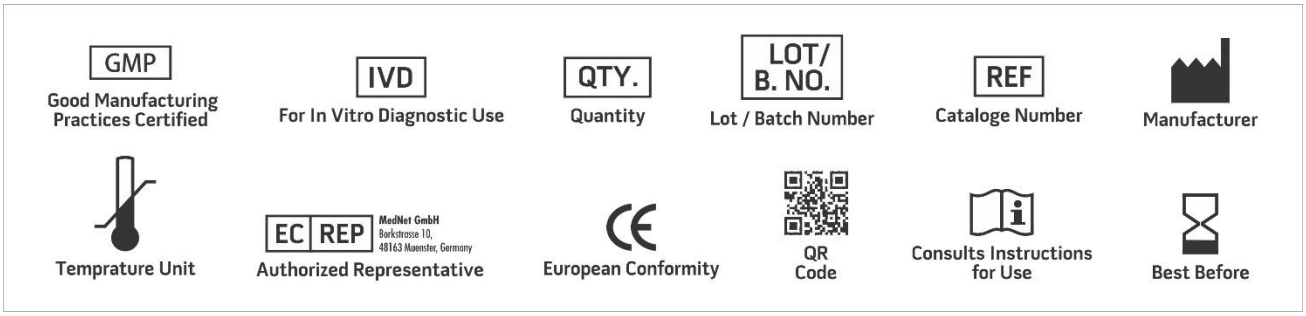

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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