TM 2101 - GLUCOSE YEAST EXTRACT BC AGAR MEDIUM

INTENDED USE

Recommended for cultivation and enumeration of *Bacillus coagulans*.

PRODUCT SUMMARY AND EXPLANATION

Bacillus coagulans is a lactic acid-forming bacterial species. Spore forming *B. coagulans* strains are used in some countries as probiotics for patients on antibiotics. There are number of organisms from different groups like *Lactobacillus, Bifidobacterium, Enterococcus, Bacillus, Streptococcus* used as probiotics. Most of these lose their viability during harsh manufacturing processes and storage of food. Hence these require encapsulation via special processes. The unique property of *B. coagulans* of forming spores helps them to remain dormant stage. As recommended by APHA, in routine diagnosis for spoilage in canned foods, microbiological cultural procedures involve the use of primary recovery media and subculture media to identify spoilage bacteria and study its growth characteristics. Recovery media for aerobes generally include DTA (Dextrose Tryptone Agar) or DTB (Dextrose Tryptone Bromocresol Broth). Use of Cooked Meat Medium is recommended for recovery of anaerobic organisms.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Yeast extract	5.000
Dextrose (Glucose)	5.000
Di-Potassium hydrogen phosphate	0.500
Potassium dihydrogen phosphate	0.500
Magnesium sulphate	0.300
Trace mineral solution	1.0 ml
Agar	15.00

Trace mineral solution	mg/ml
Sodium chloride	10.00
Iron (II) sulfate, 7H2O	18.00
Manganese (II) sulfate, H2O	16.00
Zinc sulfate, 7H2O	1.600
Copper (II) sulfate, 5H2O	1.60
Cobalt (II) sulfate, 7H2O	1.600

PRINCIPLE

The medium consists of peptone and yeast extract provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and essential growth nutrients. variety of salts like sulphates, phosphates to support the growth of

Bacillus. Glucose (Dextrose) is the source of fermentable carbohydrate. Manganese is known to influence and enhance sporulation in *Bacillus* species.

INSTRUCTION FOR USE

- Dissolve 31.30 grams in 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 yellow homogeneous free flowing powder.
Appearance of prepared medium : Light amber coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 6.3±0.2

INTERPRETATION

Cultural characteristics observe after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Bacillus coagulans	7050	50-100	Luxuriant	>=70%	40±2°C	48 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

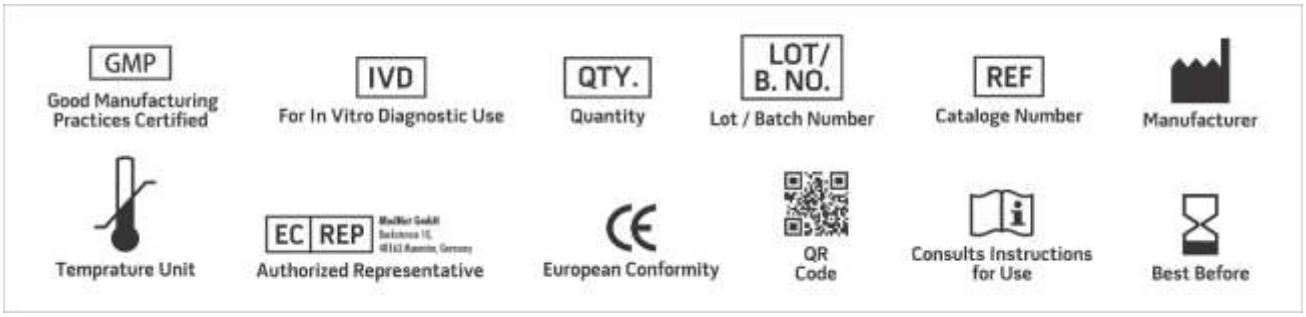
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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

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

REFERENCES

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L. , 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Sanders, M. E.; Morelli, L.; Tompkins, T. A. (2003). "Sporeformers as Human Probiotics: Bacillus, Sporolactobacillus, and Brevibacillus". Comprehensive Reviews in Food Science and Food Safety. 2 (3): 101–110.



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

***For Lab Use Only**

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