CM 20574 – DEXTROSE TRYPTONE BROTH, MODIFIED

INTENDED USE

For the detection and enumeration of mesophilic and thermophilic aerobic microorganisms in foods.

PRODUCT SUMMARY AND EXPLANATION

Canned foodsaremost often prone to flat-sour spoilage due to contamination by either mesophilic or thermophilic aerobic spore-formers. Williams evolved Dextrose Tryptone Agar, a suitable medium for cultivation and enumeration of the thermophilicbacteria. It is also recommended for general cultural studies by Cameron and other associations. Dextrose TryptoneBroth, Modified is more nutritious and well buffered than Dextrose Tryptone Broth due to inclusion of yeast extractand dipotassium phosphate. Dextrose Tryptone Broth, Modified is similar in composition to Dextrose Tryptone Agar,Modified, except agar. This medium is useful for enumeration of mesophilic organisms, thermophiles in cereals and cerealproducts, dehydrated fruits and vegetables and spices.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Dextrose (Glucose)	5.000
Dipotassium hydrogen phosphate	1.250
Yeast extract	1.000
Bromocresol purple	0.040

PRINCIPLE

The mediumconsists of Tryptone and yeast extract which provides nitrogen and carbon compounds, long chain amino acids, vitamins and essential nutrients to the organisms. Dextrose serves as an energy source while bromo cresol purple is a pH indicator. Dipotassium phosphate buffers the medium. Acid producing organisms produce yellow coloured medium. The tubes should be incubated at 55°C for 48 hours in a humid incubator.

INSTRUCTION FOR USE

Dissolve 17.29grams in 1000 ml purified/distilled water.
Heat if necessary to dissolve the medium completely.
Dispense in tube or flasks as desired and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Purple coloured, clear solution in tubes.
pH (at 25°C)	: 6.7 ± 0.2

INTERPRETATION

Culturalcharacteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Incubation Temperature	Incubation Period

Bacillus brevis	8246	50-100	Good-luxuriant (with or without dextrose fermentation)	Yellow	54-56 °C	36-48 Hours
Bacillus coagulans	8038	50-100	Good-luxuriant	Yellow	54-56 °C	36-48 Hours
Bacillus stearothermophilus	7953	50-100	Good-luxuriant	Yellow	54-56 °C	36-48 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.

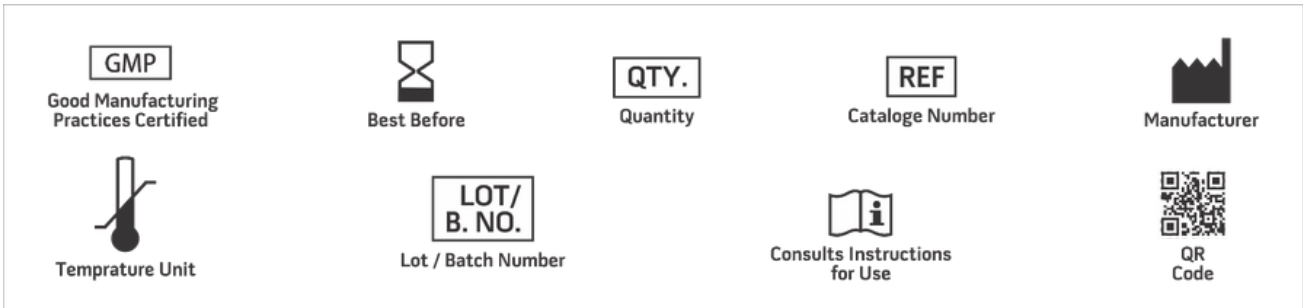
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. American Public Health Association, 1972, Standard Methods for the Examination of Dairy Products, 13th Ed. APHA, Washington, D.C.
2. American Public Health Association, 1976, Compendium of Methods for the Microbiological Examination of Foods, APHA,Washington, D.C.
3. Association of Official Analytical Chemists, 1978, Bacteriological Analytical Manual, 5th Edition, AOAC, Washington, D.C.
4. Cameron E. J., 1936, J .Assoc. Official Agr. Chem., 19:433.
5. Gordon R. E., Haynes and Pang C. H. N., 1973, The Genus Bacillus, Agriculture Handbook No. 407, U.S. Department of Agriculture, Washington, D.C.
6. Hersom A. C., and Hulland E. D., 1964, Canned Foods, An Introduction to Their Microbiology, (Baumgartner) 5th Ed. Chemical Publishing Company, Inc. New York, N.Y.
7. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
8. 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.
9. National Canners Association, 1954, A Laboratory Manual for the Canning Industry, 1st Edition, National Canners Associations, Washington.
10. National Canners Association, 1968, Laboratory Manual for Food Caners and Processors, Vol. I
11. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
12. Williams O. B., 1936, Food Res., 1:217.



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

*For Lab Use Only