

CM 20572 – DEXTROSE TRYPTONE AGAR, MODIFIED

INTENDED USE

For the isolation and cultivation of aciduric and thermophilic aerobic flat-sour spore formers from canned food, sugar etc.

PRODUCT SUMMARY AND EXPLANATION

Canned foods are most 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 thermophilic bacteria. It is also recommended for general cultural studies by Cameron and other associations. Dextrose Tryptone Agar, Modified is more nutritious and well buffered than Dextrose Tryptone Agar due to inclusion of yeast extract and dipotassium phosphate. Dextrose Tryptone Agar, Modified is used for the examination of canned food, sugar and starch for thermophilic bacteria such as *Bacillus stearothermophilus* (flat sour spoilage bacteria) and also for plate count of mesophilic or thermophilic aerobes in sweetening agents used in frozen desserts and for counts of aerobic microorganisms in liquid sugar.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	1.000
Dextrose (Glucose)	5.000
Dipotassium hydrogen phosphate	1.250
Bromocresol purple	0.040
Agar	15.000

PRINCIPLE

The medium consists of Tryptone and yeast extract which provides 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 colony. The plates should be incubated at 55°C for 48 hours in a humid incubator. This media is useful for enumeration of mesophilic organisms, thermophiles in cereals and cereal products, dehydrated fruits and vegetables and spices.

INSTRUCTION FOR USE

- Dissolve 32.29 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 : Light yellow to greenish yellow homogeneous free flowing powder.
- Appearance of prepared medium : Purple coloured, clear to slightly opalescent gel forms in Petri plates.
- pH (at 25°C) : 6.7 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Bacillus brevis	8246	50-100	Good-luxuriant (with or without dextrose fermentation)	50-70%	Yellow	54-56 °C	48-72 Hours
Bacillus coagulans	8038	50-100	Good-luxuriant	50-70%	Yellow	54-56 °C	48-72 Hours
Bacillus stearothermophilus	7953	50-100	Good-luxuriant	50-70%	Yellow	54-56 °C	48-72 Hours

PACKAGING:

In pack size of 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. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
2. Association of Official Analytical Chemists, 1978, Bacteriological Analytical Manual, 5th Edition, AOAC, Washington, D.C.
3. Cameron E.J., 1936, J. Assoc. Official Agr. Chem., 19:433.
4. National Canners Association, 1954, A Laboratory Manual for the Canning Industry, 1st Edition, National Canners Associations, Washington.
5. National Canners Association, 1968, Laboratory Manual for Food Canners and Processors, Vol. I.
6. Tanner F.W., 1944., The Microbiology of Foods, 2nd ed., Garrard Press, Champaign, P.762 and 1127.
7. 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.
8. Williams O.B., 1936, Food Res., 1:217.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	



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

*For LabUse Only

