CM 20520 – CRYSTAL VIOLET TETRAZOLIUM AGAR BASE

INTENDED USE

For detection of gram-negative psychrotrophic bacteria causing food spoilage.

PRODUCT SUMMARY AND EXPLANATION

Microorganisms which are able to growat refrigeration temperatures are usually referred to as psychrophilic. Species of Achromobacter, Alcaligens, Flavobacterium and Pseudomonas are included among the psychrotrophic bacteria as these organisms are able to grow relatively rapidly at commercial refrigeration temperatures. Many psychrotrophic microorganisms when present in large numbers can cause a variety of off-flavors as well as physical defects in foods. Their growth rate is highly dependent on temperature, and therefore, if the temperature is reduced, their growth rate is also slowed down. Thus the spoilage of refrigerated food is very much dependent on temperature. Crystal Violet Tetrazolium Agar Base is used for the detection of gram-negative psychrophilic bacteria causing food spoilage. It is based on the formulation by Olson and recommended by APHA for detecting gram-negative psychrotrophic bacteria. Standard methods for the detection of gram-negative psychrotrophic bacteria should be followed.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	5.000
Yeast extract	2.500
Dextrose (glucose)	1.000
Crystal violet	0.001
Agar	15.000

PRINCIPLE

Tryptone and yeast extract provide various nitrogenous nutrients to the organisms while dextrose serves as the carbon source. Crystal violet inhibits most of the gram-positive organisms and therefore inclusion of crystal violet in the medium does not affect the growth of psychrotrophic organisms, which are mostly gram-negative.

INSTRUCTION FOR USE

Dissolve 23.5gramsin 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 and aseptically add 5 ml of sterile 1% solution of 2, 3, 5-Triphenyl Tetrazolium Chloride.
Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

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

INTERPRETATION

Culturalcharacteristics observed after incubation with added 1% T.T.C. solution.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Pseudomonas aeruginosa	27853	50-100	Good-luxuriant	>=50%	Maroon	20-30°C	18-48 Hours
Staphylococcus aureus subsp.aureus	25923	>=10^3	Inhibited	0%	-	20-30°C	18-48 Hours
Yersinia enterocolitica	27729	50-100	Good-luxuriant	>=50%	Maroon	20-30°C	18-48 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.

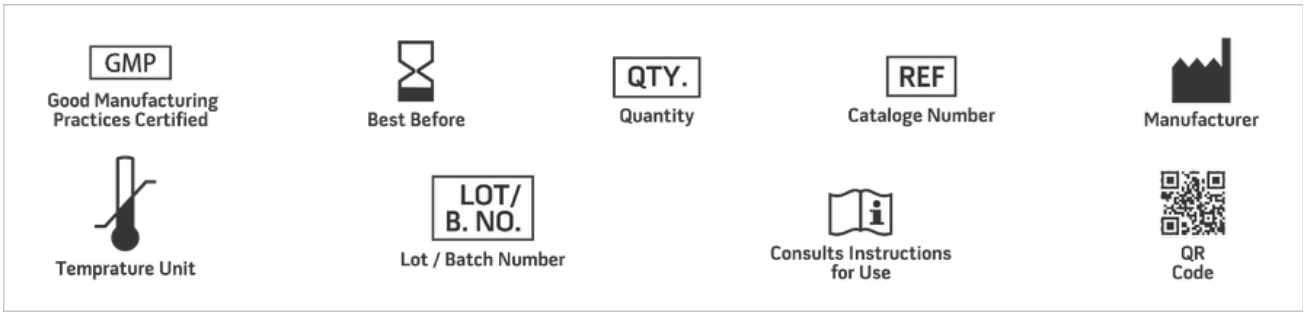
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Elliott R. P. and Michener H. D., 1965, U.S. Dept. Agr. Tech. Bull.No. 1320, p. 110, Washington, D.C.
2. Mossel D. A. A., and Zwart H., 1960, J. Appl. Bacteriol., 23:185-188.
3. Olson H. C., 1963, J. Dairy Sci., 46:362.
4. 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.
5. Tomkin R. B., 1973, Food Technol., 27:54.



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

*For LabUse Only