CM 20364 – CALCIUM CARBONATE AGAR

INTENDED USE

For the differentiation of microorganisms especially yeasts based on the production of acid from glucose.

PRODUCT SUMMARY AND EXPLANATION

Yeastsand Mouldsformavery large groupof microorganisms, with most coming from the air, water or soil. Yeasts are unicellular, eukaryotic, budding cells that are generally round oval or elongate in shape. They multiply principally by the production of blastoconidia (buds). Yeast colonies are moist and creamy or glabrous to membranous in texture and are considered opportunistic pathogens. Moulds are microscopic, plant-like organisms, composed of long filaments called hyphae. Calcium Carbonate Agar is differentiation agar recommended by Kurtzman and Fell for the identification of yeasts. Yeast extract provide the nitrogen, vitamins and amino acids for growth. Yeasts from the genus Dekkera (Brettanomyces) forms acetic acid and show a positive result. Sometimes the acid production is quite weak. Also some other yeasts like Candida species produce some citric acid and show a weak positive reaction.

COMPOSITION

Ingredients	Gms / Ltr
Calcium Carbonate (fine, granulated)	5.000
Dextrose (Glucose)	50.000
Yeast extract	5.000
Agar	15.000

PRINCIPLE

Glucoseis the fermentable carbohydrate. Calcium carbonate serves as indicator as it makes the plate milky and turbid and in case of acid is produced the media clears up. The acid is produced due to characteristic fermentation of glucose, which along with calcium carbonate results in forming, calcium acetate, that gets soluble in water.

INSTRUCTIONFOR USE

Dissolve 75 grams in 1000 ml purified / distilled water.
Heat to boiling to digest the agar completely. DO NOT AUTOCLAVE.
A residue of calcium may remain. Cool to 45-50°C.
Mix well and pour into sterile Petri plates, by evenly distributing the residue.

Note: Dueto the presence of calciumcarbonate, the prepared medium forms opalescent solution with a white precipitate.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder :Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium :Light yellow coloured clear to slightly opalescent gel forms in Petri plates.

INTERPRETATION

Culturalcharacteristics observed afterincubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Acid production	Incubation Temperature	Incubation Period

Candida albicans	10231	10-100	Good	40-50%	Weakly positive	25-30°C	24-72 Hours
Saccharomyces cerevisiae	9763	50-100	Good	40-50%	Negative	25-30°C	24-72 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.

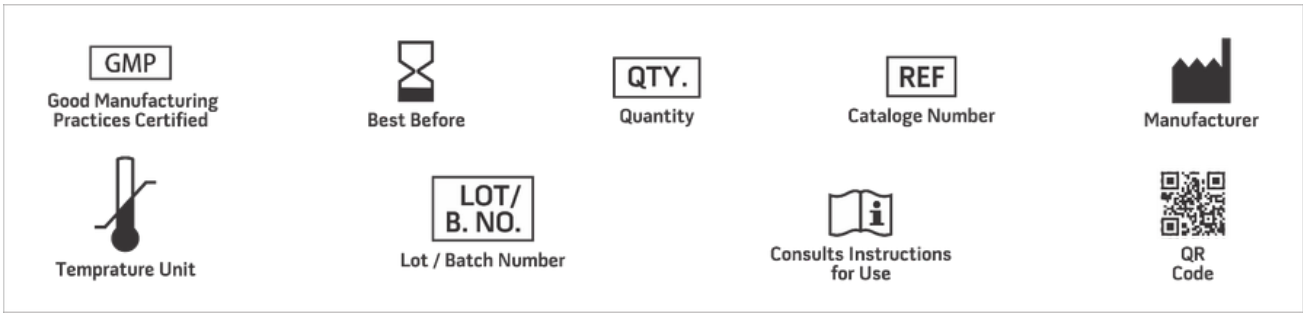
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1.C.P.Kurtzman, J.D. Fell (ed.), The yeast, a taxonomic study, 4th edition, Elsevier (1998).
2.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.) 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.



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

*For LabUse Only