CM 20690 – FERMENTATION MEDIUM FOR STAPHYLOCOCCUS AND MICROCOCCUS

INTENDED USE

Forstudyingfermentation by Staphylococcus and Micrococcus species.

PRODUCT SUMMARY ANDEXPLANATION

Several methodsare available fordifferentiating Micrococcus and Staphylococcus species. These two are the most frequently encountered catalase-positive genera in the clinical laboratory. Staphylococcus aureus is a primary pathogen, which may be associated with severe infection. Micrococci are gram-positive organisms that are generally strict aerobes and can reduce nitrate. Micrococcus luteus oxidizes carbohydrates to CO_2 and water, and it does not produce acid from glucose anaerobically as well as it does not synthesize or possess arginine dihydrolase or ß-galactosidase. The defining characteristics of Micrococcus are its ability to aerobically produce acid from glucose, esculin hydrolysis, major pigment production, motility, and conversion of nitrate to nitrite.

Fermentation Medium for Staphylococcus and Micrococcus is recommended for differentiation of these two organisms on the basis of fermentation reaction. Staphylococcus produces acid from glucose anaerobically whereas Micrococcus fails to doso. This test is performed in a manner similar to the oxidation fermentation tests for non-fermentative organisms.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	1.000
Dextrose (Glucose)	10.000
Bromo cresol purple	0.040
Agar	2.200

PRINCIPLE

Themedium consists of Tryptone and yeast extract which provide necessary nitrogenous nutrients for the organisms. Glucose is the fermentable carbohydrate source in the medium. Bromo cresol purple is the pH indicator. Incorporation of small amount of agar in this medium helps to create anaerobic condition in the depths of the tubes.

INSTRUCTION FOR USE

Dissolve 23.24 grams in 1000 ml purified / distilled water.
Heat to boiling to dissolve the medium completely.
Dispense in tubes and Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
Allow tubed medium to cool in an upright position.

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 tubes as butts.
pH (at 25°C)	: 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid production	Incubation Temperature	Incubation Period
Micrococcus luteus	10240	50-100	Good-luxuriant	Negative reaction, no colour change	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Good-luxuriant	Positive reaction, yellow colour	35-37°C	18-24 Hours

PACKAGING:

Inpacksizeof500 gm bottles.

STORAGE

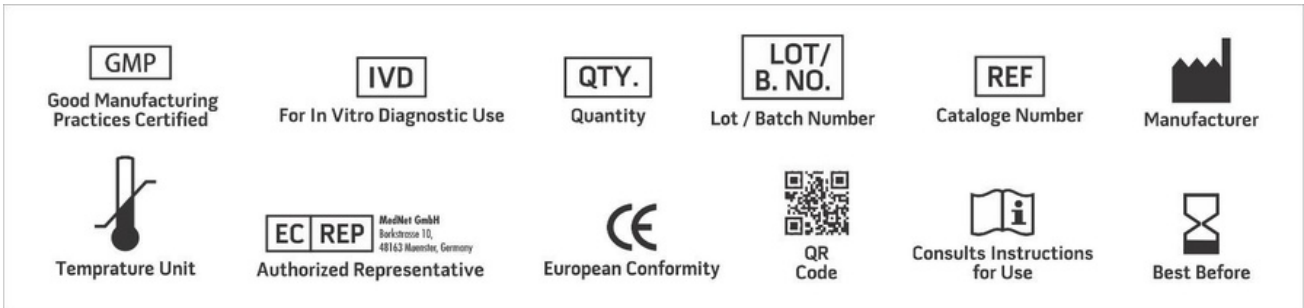
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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.Finegold S. M.and Martin W. J., 1982, Bailey and Scotts Diagnostic Microbiology, 6th Ed., The C.V. Mosby Co., St.Louis.
2. Smith K. J., Neafie R., Yeager J., and Skelton H. G., 1999, British Journal of Dermatology, Vol. 141, No. 3, British Association of Dermatologists, (558-561).



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

*For LabUse Only