

TM 2078 – FERMENTATION MEDIUM FOR STAPHYLOCOCCUS AND MICROCOCCUS

INTENDED USE

For studying fermentation by *Staphylococcus* and *Micrococcus* species.

PRODUCT SUMMARY AND EXPLANATION

Several methods are available for differentiating *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 CO₂ and water, and it does not produce acid from glucose anaerobically as well as it does not synthesize or possess arginine dihydrolase or β-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 do so. 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

The medium 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
<i>Micrococcus luteus</i>	10240	50-100	Good-luxuriant	Negative reaction, no colour change	35-37°C	18-24 Hours
<i>Staphylococcus aureus subsp. aureus</i>	25923	50-100	Good-luxuriant	Positive reaction, yellow colour	35-37°C	18-24 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. 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).

 Good Manufacturing Practices Certified	 For In Vitro Diagnostic Use	 Quantity	 Lot / Batch Number	 Catalogue Number	 Manufacturer
 Temperature Unit	 Authorized Representative MedNet GmbH Bockstrasse 10 48163 Münster, Germany	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

***For Lab Use Only**
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