

TM 439 – TELLURITE GLYCINE AGAR BASE

INTENDED USE

For quantitative detection of coagulase positive Staphylococci from foods and other sources.

PRODUCT SUMMARY AND EXPLANATION

Bacteria in the genus *Staphylococcus* are pathogens of man and other mammals. Traditionally they were divided into two groups on the basis of their ability to clot blood plasma (the coagulase reaction). Coagulase-positive strains of *Staphylococcus aureus* form the most pathogenic staphylococci. The presence of staphylococci in a lesion might first be suspected after examination of a direct gram stain. However, small numbers of bacteria in blood preclude microscopic examination and require culturing first. Tellurite Glycine Agar was originally developed by Ludlam and modified by Zebovitz et al. It is used for the quantitative detection of coagulase-positive staphylococci from foods and other sources like skin, mucous membranes, air and soil etc. This medium supports better growth of coagulase-positive cocci even if present in small numbers.

Coagulase positive staphylococci produce black colonies within 24 hours after an incubation at 37°C. Generally other organisms produce no growth during this incubation period with the exception of an occasional coagulase-negative strain that may produce small grey colonies, not readily confused with black coagulase positive colony.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Yeast extract	5.000
Mannitol	5.000
Dipotassium phosphate	5.000
Lithium chloride	5.000
Glycine	10.000
Agar	16.000

PRINCIPLE

Casein enzymic hydrolysate and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Lithium chloride and potassium tellurite are the inhibitors of the coagulase negative staphylococci and a wide variety of other bacteria. Potassium tellurite also serves as a differential agent since coagulase-positive staphylococci reduce tellurite and form black colonies. Mannitol is a source of fermentable carbohydrate for coagulase positive staphylococci.

INSTRUCTION FOR USE

- Dissolve 56 grams in 1000 ml 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 to each 100 ml of base add 2 ml of 1% Potassium Tellurite Solution. Mix well before pouring into sterile Petri plates.

Caution: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin, wash with plenty of water immediately.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light amber coloured clear to slightly opalescent gel forms in Petri plates
pH (at 25°C) : 7.2±0.2

INTERPRETATION

Cultural characteristics observed after incubation with added 1% Potassium Tellurite Solution.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	≥10 ³	Inhibited	0%	-	35-37°C	24-48 Hours
<i>Salmonella Typhimurium</i>	14028	≥10 ³	Inhibited	0%	-	35-37°C	24-48 Hours
<i>Staphylococcus aureus</i>	25923	50-100	Good-luxuriant	≥50%	Black	35-37°C	24-48 Hours
<i>Staphylococcus epidermidis</i>	12228	50-100	Poor-fair	10-30%	Grey	35-37°C	24-48 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. Easmon C. S. F., Adlam C, 1983, Staphylococci and Staphylococcal infections. Vol. I and II, Academic Press, London.
2. Zebovitz E., Evans J. B. and Niven C. F., 1955, J. Bacteriol., 70:687.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Buckstrasse 10 48163 Muenster, Germany</small>	 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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