Tellurite Glycine Agar Base

Intended Use
Tellurite Glycine Agar Base is used for quantitative detection of coagulase-positive Staphylococci from foods and other sources like skin, mucous membranes, faeces, air and soil.

Summary
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 strainsof *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.

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 negativestaphylococci and a wide variety of other bacteria. Potassium tellurite also serves as a differential agent sincecoagulase-positive staphylococci reduce tellurite and form black colonies. Mannitol is a source of fermentablecarbohydrate for coagulase positive staphylococci.

Formula*

Ingredients	**g/L**
Casein enzymic hydrolysate	10.0
Yeast extract	5.0
Mannitol	5.0
Dipotassium hydrogen phosphate	5.0
Lithium chloride	5.0
Glycine	10.0
Agar	16.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoidfreezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Clinical samples – faeces, scrappings; Food and dairy samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 56.00 g of the powder in 1000 mL purified / distilled water and mix thoroughly.
2. Boil with frequent agitation to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool to 45°C-50°C and to each 100 mL of base add 2 mL of Potassium Tellurite Solution 1%(204160730010)
5. Mix well before pouring into sterile petridishes.

Quality Control

Dehydrated Appearance: Cream to yellow homogeneous free flowing powder.
Prepared Appearance: Light amber coloured clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation at 35°C-37°C for 24-48 hours with added Potassium Tellurite Solution 1% (204160730010).

Organism (ATCC)	Growth	Colour of colony
Escherichia coli (25922)	Inhibited	–
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	Inhibited	–
Staphylococcus aureus subsp. *aureus* (25923)	Good	Black
Staphylococcus epidermidis strain PCI 1200 (12228)	Poor-fair	Grey

Interpretation of Results

1. Coagulase-positive staphylococci produce black colonies within 24 hours after an incubation at 37°C.
2. 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.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

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.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200070500	Dehydrated Culture Media	500 g