TM 395 - VOGEL-JOHNSON AGAR BASE W/O TELLURITE (V. J. AGAR BASE)

INTENDED USE

For selective isolation of coagulase positive, mannitol fermenting *S. aureus* from foods & clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Staphylococcus aureus, a gram-positive, spherical bacterium, is a common colonizer of the human skin and mucosa. It causes skin and wound infections, urinary tract infections, pneumonia and bacteremia. It is also commonly implicated in food poisoning. It is also found as a common contaminant in pharmaceutical and cosmetics products. Vogel-Johnson Agar is prepared according to the formula devised by Vogel and Johnson and is recommended for the microbial limit test in USP. Originally it was developed by Zebovitz, as a Tellurite Glycine Agar, a selective medium for the detection of coagulase-positive staphylococci. Vogel-Johnson modified the medium in 1960 by the addition of phenol red as a pH indicator and by increasing the quantity of mannitol. Selection and differentiation of coagulase-positive staphylococci on V.J. Agar is based on mannitol fermentation and tellurite reduction. V.J. Agar is specified in the standard methods for examination of cosmetics, pharmaceutical articles and nutritional supplements. In addition, the formulation complies with recommendations by the USP for microbial limit testing.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	5.000
Mannitol	10.000
Dipotassium hydrogen phosphate	5.000
Lithium chloride	5.000
Glycine	10.000
Phenol red	0.025
Agar	16.000

PRINCIPLE

Tryptone and yeast extract provide nitrogenous and carbonaceous compounds, vitamin B complex and other growth nutrients. Dipotassium hydrogen phosphate provides buffering to the medium. During the first 24 hours, contaminating organisms are almost inhibited by tellurite, lithium chloride and high glycine content. The effect of inhibitors on *S.aureus* is reduced because of the presence of mannitol and glycine. Coagulase-positive staphylococci reduce potassium tellurite to metallic free tellurium and thus produce black colonies surrounded by yellow zones. This yellow colour is due to phenol red indicator that turns yellow in acidic condition due mannitol fermentation. If mannitol is not fermented, yellow zones are not formed. Also the colour of the medium around the colonies may even be a deeper red than normal due to utilization of the peptones in the medium. Prolonged incubation may result in growth of black coagulase-negative colonies.

INSTRUCTION FOR USE

- Dissolve 61.02 grams in 1000 ml purified / 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 add 20 ml of sterile 1% Potassium Tellurite solution.
- Mix gently and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

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

INTERPRETATION

Cultural characteristics observed with added 1% Potassium Tellurite solution, after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Mannitol fermentation	Incubation Temperature	Incubation Period
Escherichia coli	25922	>=10^3	Inhibited	0%	-	-	35-37°C	24-48 Hours
Proteus mirabilis	25933	50-100	Poor	10-20%	Black	Negative	35-37°C	24-48 Hours
Staphylococcus aureus subsp.aureus	25923	50-100	Luxuriant	>=70%	Black with Yellow halo	Positive	35-37°C	24-48 Hours
Staphylococcus epidermidis	12228	>=10^3	Fair-good	20 -40 %	Translucent to Blackish	Negative	35-37°C	24-48 Hours
Escherichia coli	8739	>=10^3	Inhibited	0%	-	-	35-37°C	24-48 Hours
Staphylococcus aureus subsp. *aureus*	6538	50-100	Luxuriant	>=70%	Black with Yellow halo	Positive	35-37°C	24-48 Hours

PACKAGING:

In pack size of 100 gm and 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

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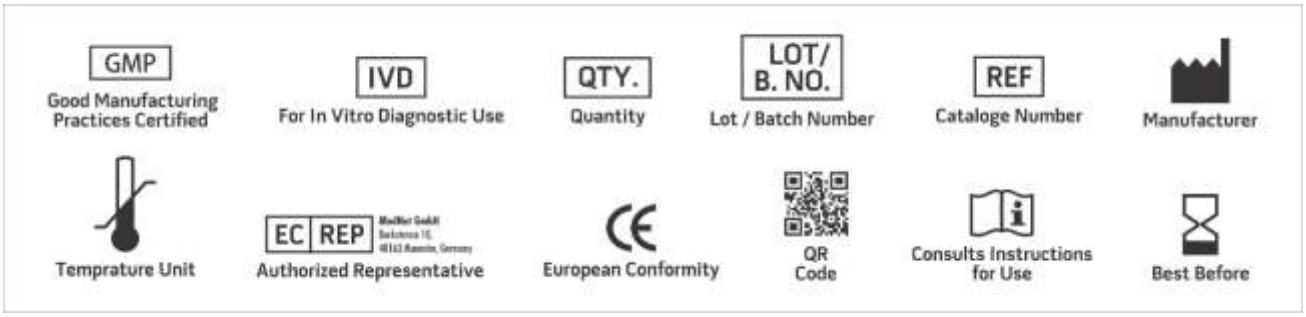

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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