

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

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

Composition

Ingredients	Gms/Ltr.
Agar	16.00
Casein enzymatic hydrolysate	10.00
Mannitol	10.00
Glycine	10.00
Yeast extract	5.00
Potassium phosphate dibasic	5.00
Lithium chloride	5.00
Phenol red	0.025

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 61gms in 980ml of distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes. Cool to 45°C and add 20 ml of sterile 1% Potassium Tellurite Solution (TS 005). Mix properly and pour into sterile plates.

Appearance: Red colour, slightly opalescent may have a slight white precipitate

pH (at 25°C): 7.2 ± 0.2

Principle

VOGEL-JOHNSON AGAR BASE W/O TELLURITE (V.J. AGAR BASE) used for selective isolation of coagulase positive, mannitol fermenting *S.aureus* species. Casein enzymatic hydrolysate, is a source of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins which stimulate bacterial growth. Mannitol is a source of carbohydrate as a differentiated reactant as it is degraded to acid by pathogenic species of *Staphylococci*. Potassium phosphate dibasic provides buffering to the medium. The complete inhibition of non staphylococcal organisms is accompanied by the potassium tellurite additive, lithium chloride and high glycine concentration. Phenol red is the pH indicator and Agar is the solidifying agent. *Staphylococci* may be slightly inhibited by the presence of the inhibitors however; this is compensated by the addition of mannitol and glycine. The degradation of mannitol to acid is indicated by phenol red.

Interpretation

Culture characteristics observed after inoculating (10^2 - 10^3 CFU / ml) on incubation at $35 \pm 2^\circ\text{C}$ for 24 hours.

Microorganism	ATCC	Inoculum (CFU/ml)	Recovery rate	Tellurite Reduction	Mannitol Fermentation
<i>Escherichia coli</i>	25922	10^2 - 10^3	None to poor (complete inhibition)	-, (translucent)	-, (Red)
<i>Proteus mirabilis</i>	25933	10^2 - 10^3	Fair to good	+, (Black)	-, (Red)
<i>Staphylococcus aureus</i>	25923	10^2 - 10^3	$\geq 40\%$	+, (Black)	+, (Yellow)
<i>Staphylococcus epidermidis</i>	12228	10^2 - 10^3	Poor to fair	$\pm$, (Translucent to black)	-, (Red)

References

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