TM 1820 - VOGEL JOHNSON AGAR MEDIUM (as per IP)

INTENDED USE

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

PRODUCT SUMMARY AND EXPLANATION

Vogel-Johnson Agar Medium is prepared according to the formula of Vogel and Johnson and. Originally it was developed by Zebovitz as a Tellurite Glycine Agar, a selective medium for the detection of coagulase positive Staphylococci. This medium is used to detect *Staphylococcus* in pharmaceutical and cosmetics products. *Staphylococcus* in prevalent pathogen in food borne poisoning due to its enterotoxin production. It is commensal found on skin and scalp of human body.

COMPOSITION

Ingredients	Gms / Ltr
Pancreatic digest of Casein	10.000
Yeast extract	5.000
Mannitol	10.000
Dibasic potassium phosphate	5.000
Lithium chloride	5.000
Glycine	10.000
Phenol red	0.025
Agar	16.000

PRINCIPLE

Vogel-Johnson modified the medium by adding phenol red as a pH indicator and increased the mannitol quantity. Tryptone and yeast extract provide nitrogenousand carbonaceous compounds, long chain amino acids, vitamin B complex and other growth nutrients. Dibasic potassium phosphate gives buffering capacity to the medium. During first 24 hours of incubation, contaminating organisms are almost inhibited by tellurite, lithium chloride and high glycine content. *Staphylococcus aureus* may be inhibited by these inhibitors but get compensated by 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, which turns yellow in acidic condition by the fermentation of mannitol. Prolonged incubation may result in the 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°C and add 20 ml of sterile 1% Potassium Tellurite solution.
- Mix gently and pour into sterile Petri plates.

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

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	Color of the colony	Incubation Temperature	Incubation Period
Staphylococcus aureus	6538	50 -100	Luxuriant	>=70 %	Black colony surrounded by yellow zone	30-35°C	18-48 Hours
Staphylococcus aureus subsp. aureus	25923	50 -100	Luxuriant	>=70 %	Black surrounded by yellow zone	30-35°C	18-48 Hours
Staphylococcus epidermidis	12228	50 -100	Fair - good	20-40 %	Translucent to blackish	30-35°C	18-48 Hours
Proteus mirabilis	25933	50 -100	None-poor	0-10 %	Yellow	30-35°C	18-48 Hours
Escherichia coli	8739	>=10^3	Inhibited	0 %	-	30-35°C	>=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.

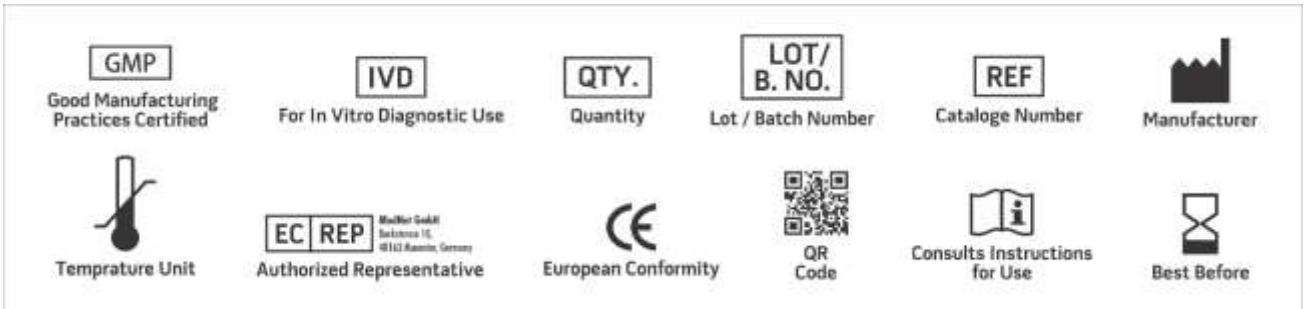
DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Vogel and Johnson, 1960, Public Health Lab., 18:131.
2. The United States Pharmacopoeia, 2018. United States Pharmacopoeial Convention, Inc. Rockville, MD.
3. Zebovitz, Evans and Niven, 1955, J. Bacteriol., 70:686.

4. Bacteriological Analytical Manual, 8th Edition, Revision A, 1998. AOAC, Washington D.C.



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

***For Lab Use Only**

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