TM 911 - VIBRIO AGAR

INTENDED USE

For selective cultivation of *Vibrio* species.

PRODUCT SUMMARY AND EXPLANATION

Vibrio species, like many other gram-negative bacteria, grow in the presence of relatively high levels of bile salts. They are facultatively anaerobic and grow best in alkaline conditions. Isolation is facilitated by the use of media formulated with an alkaline pH due to the tolerance of this condition by *Vibrio* species. Media can be made selective for Vibrios by adding appropriate selective agents. The main agents employed are bile salts, teepol, tellurite and polymyxin B and E (Colistin). Vibrio Agar is a selective medium for the isolation of *Vibrio cholera, Vibrio parahaemolyticus* and other *Vibrios*.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	4.000
Yeast extract	5.000
Proteose peptone	3.000
Sucrose	20.000
Sodium thiosulphate	6.500
Sodium citrate	10.000
Sodium deoxycholate	1.000
Sodium chloride	10.000
Oxgall	5.000
Sodium lauryl sulphate	0.200
China blue	0.200
Cresol red	0.020
Agar	15.000

PRINCIPLE

Casein enzymic hydrolysate, proteose peptone, yeast extract provides nitrogenous, carbonaceous compounds, sulphur, vitamin B complex and other essential growth nutrients. Sodium citrate, sodium deoxycholate and oxgall inhibit gram-positive organisms and coliforms. Sucrose is the fermentable carbohydrate. Sucrose fermentative bacteria such as *V. cholerae* and *V. alginolyticus* form blue colonies due to the indicator china blue. *V. parahaemolyticus* forms slightly reddish and transluscent colonies. Sodium thiosulphate in combination with ferric citrate detects H2S production. Thiosulphate also acts as a sulphur source. Alkaline pH of this medium helps in recovery of *V. cholera.* China blue and cresol red are the pH indicators.

INSTRUCTION FOR USE

- Dissolve 80.10 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely, do not autoclave.
- Cool to 45-50°C and pour into sterile Petri plates

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to greyish yellow homogeneous free flowing powder.
Appearance of prepared medium : Reddish purple coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 8.5±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of the colony	Incubation Temperature	Incubation Period
Enterococcus faecalis	29212	50-100	None-poor	0-10%	Yellow	35-37°C	18-24 Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	-	35-37°C	18-24 Hours
Pseudomonas aeruginosa	27853	50-100	None-poor	0-10%	Blue	35-37°C	18-24 Hours
Salmonella Typhi	6539	>=10^3	Inhibited	0%	-	35-37°C	18-24 Hours
Shigella flexneri	12022	>=10^3	Inhibited	0%	-	35-37°C	18-24 Hours
Vibrio cholerae	15748	50-100	Good-luxuriant	>=50%	Blue	35-37°C	18-24 Hours
Vibrio parahaemolyticus	17802	50-100	Good-luxuriant	>=50%	Slightly reddish	35-37°C	18-24 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.

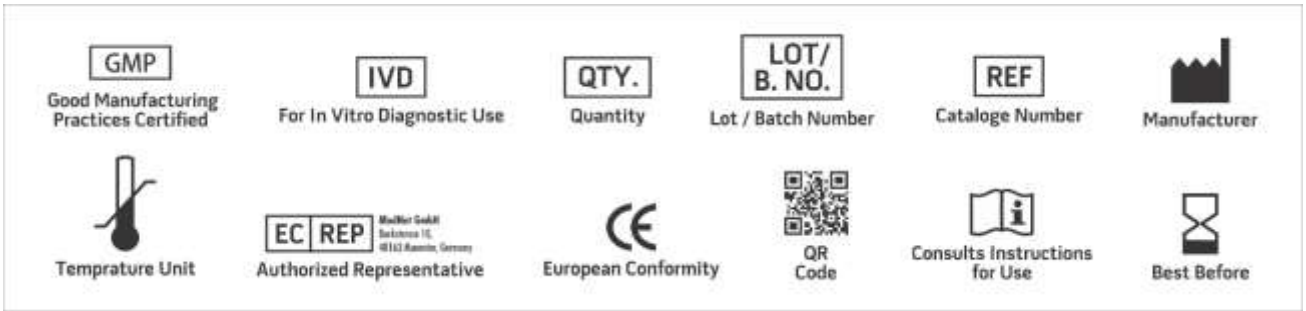
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Atlas R. M. 2004, 3rd Ed., Handbook of Microbiological Media, Parks, L.C., (Ed.), CRC Press, Boca Raton.
2. Gomez-Gil B. and Roque A., Isolation, Enumeration and Preservation of the Vibrionaceae, Thompson F. L., Austin B. and Swings J., The Biology of Vibrios, ASM press.



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

***For Lab Use Only**

Revision: 08 Nov., 2019