Vibrio Agar

M820

Intended Use:

Recommended for selective cultivation of *Vibrio* species.

Composition**

Ingredients	g / L
Tryptone	4.000
Proteose peptone	3.000
Yeast extract	5.000
Sucrose	20.000
Sodium thiosulphate	6.500
Sodium citrate	10.000
Sodium deoxycholate	1.000
Sodium chloride	10.000
Bile #	5.000
Sodium lauryl sulphate	0.200
China blue	0.200
Cresol red	0.020
Agar	15.000
Final pH (at 25°C)	8.5±0.2

**Formula adjusted, standardized to suit performance parameters
Equivalent to Oxgall

Directions

Suspend 79.92 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE.** Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

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) (1). Vibrio Agar is a selective medium for the isolation of *Vibrio cholerae*, *Vibrio parahaemolyticus* and other *Vibrios* (2).

Tryptone, proteose peptone, yeast extract provide nitrogenous, carbonaceous compounds, sulphur, vitamin B complex and other essential growth nutrients. Sodium citrate, sodium deoxycholate and bile 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. cholerae*. China blue and cresol red are the pH indicators.

Type of specimen

Clinical samples- faeces; Food samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens

and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3.Further biochemical tests must be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to greyish yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Reddish purple coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 7.99% w/v aqueous solution at 25°C. pH : 8.5±0.2

pH

8.30-8.70

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Enterococcus faecalis ATCC 29212 (00087*)	50-100	none-poor	<=10%	yellow
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%	-
Pseudomonas aeruginosa ATCC 27853(00025)	50-100	none-poor	<=10%	blue
Salmonella Typhi ATCC 6539	>=10^4	inhibited	0%	-
Shigella flexneri ATCC 12022 (00126*)	>=10^4	inhibited	0%	-
Vibrio cholerae ATCC 15748	50-100	good-luxuriant	>=50%	blue
Vibrio parahaemolyticus ATCC 17802 (00037*)	50-100	good-luxuriant	>=50%	slightly reddish

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. 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.
2. Atlas R. M. 2004, 3rd Ed., Handbook of Microbiological Media, Parks, L.C., (Ed.), CRC Press, Boca Raton.Isenberg, H. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Salfinger., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of, Foods, 5th Ed., American Public Health Association, Washington, D.C.

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HiMedia Laboratories Pvt. Limited,
Plot No.C-40, Road No.21Y,
MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India

IVD ***In vitro*** **diagnostic medical device**

10°C–30°C **Storage temperature**

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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