SDS Agar Base (Sodium Dodecyl Sulphate Polymyxin Sucrose Agar Base)

M1155

Intended Use:

Recommended for enrichment, isolation and enumeration of *Vibrio vulnificus* from seafood samples in accordance with APHA, ISO /TS 21872-2 and ISO 11133 :2014 (E) : Amd. 2020.

Composition**

Ingredients	g / L
Proteose peptone	10.000
HM peptone B #	5.000
Sucrose	15.000
Sodium chloride	20.000
Sodium dodecyl sulphate	1.000
Bromothymol blue	0.040
Cresol red	0.040
Agar	15.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters
- Equivalent to Beef extract

Directions

Suspend 33.04 gram in 500 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Polymyxin B Selective Supplement (FD003). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Vibrio vulnificus is a gram-negative, motile, curved, rod-shaped bacterium. Present in marine environments such as estuaries, brackish ponds, or coastal areas, *V.vulnificus* is closely related to *V.cholerae,* the causative agent of cholera (1,2). *V.vulnificus* causes an infection often incurred after eating seafood, especially oysters. The bacteria can also enter the body through open wounds when swimming or wading in infected waters (2). SDS Agar is formulated as described by Bryant et al (3) for differentiation of *V.vulnificus* from other *Vibrio.* SDS Agar is recommended by APHA (4) and ISO / TS 21872-2 (5) and ISO 11133-2014 (6) for isolation and enumeration of *V.vulnificus* from foods. *V.vulnificus* is a causative agent of septicemic shock associated with consumption of raw oysters. *V.vulnificus* forms distinctive colonies which are round, purple/green colonies with an opaque halo about 2 to 3 mm in diameter.

The medium contains proteose peptone and HM peptone B which provide nitrogen and carbon source, long chain amino acids, vitamins and necessary growth nutrients. Sucrose is a fermentable sugar. Addition of 2% sodium chloride to the medium provides necessary salinity for the growth of *Vibrio.* Bromothymol blue and cresol red act as pH indicators. Sodium dodecyl sulphate and polymyxin B sulphate are the selective agents.

Type of specimen

Food samples

Specimen Collection and Handling:

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4-6).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

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 specimens. Safety guidelines may be referred in individual safety data sheets.

Limitation

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.

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

Cream to 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 6.6% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH

7.40-7.80

Cultural Response

Productivity : Cultural characteristics observed after an incubation at 37±1°C for 24±3 hours with added Polymyxin B Selective Supplement (FD003).

Selectivity : Cultural characteristics observed after an incubation at 37±1°C for 24±3 hours with added Polymyxin B Selective Supplement (FD003).

Organism	Inoculum (CFU)	Growth	Characteristic reaction
Productivity			
Vibrio cholerae non-01 / non-0139 ATCC 14733 (00203)	10^3-10^4	good	yellow colonies with an opaque halo
Vibrio vulnificus ATCC 29307 (00187*)	10^3-10^4	good	purple/green colonies with an opaque halo
Selectivity			
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	
Escherichia coli ATCC 8739 (00012*)	>=10^4	inhibited	
Escherichia coli ATCC 11775 (00090*)	>=10^4	inhibited	

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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

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Revision : 03/2024

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