Technical Information

Vibrio Parahaemolyticus Sucrose Agar

Product Code: DM 2153

Application: - Veillonella Agar Base with added antibiotic is used for selective isolation of *Veillonella* species.

Composition**

Ingredients	Gms / Litre
Tryptose	5.000
Casein enzymic hydrolysate	5.000
Yeast extract	7.000
Sucrose	10.000
Sodium chloride	30.000
Bile salts mixture	1.500
Bromo thymol blue	0.025
Agar	15.000
Final pH (at 25°C)	8.6±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Vibrio parahaemolyticus is a halophilic estuarine organism isolated from a variety of seafood products and marine environments. The organism, when isolated from fresh seafood, is usually found in low numbers (< 100/g) and is sensitive to refrigeration and heat.
Vibrio parahaemolyticus Sucrose Agar (VPSA) is recommended by APHA [1] for isolating and enumerating *V. parahaemolyticus* from seafoods. It is a differential medium and to some extent also selective that distinguishes *V.parahaemolyticus* from other marine Vibrios. This medium is used in the final steps of Hydrophobic Grid Membrane Filtration enumeration procedure (HGMF) [2].
Tryptose, casein enzymic hydrolysate and yeast extract provide the necessary nitrogen compounds, growth factors and vitamin B complex for the growth of *V.parahaemolyticus.* Sucrose is the fermentable carbohydrate. Bromothymol blue is the pH indicator. Bile salts mixture inhibits the contaminating gram-positive bacteria. High salt content and alkaline pH of the medium provides conditions that favour easy recovery of *Vibrio* 's. *V. parahaemolyticus* does not ferment sucrose and forms green to blue colonies which differentiates it from other sucrose fermenting *Vibrio* species.
Suspected seafood sample when diluted and blended with sterile peptone tween salt diluent, is filtered through HGMF using sterile diluent as a carrier. HGMF is then aseptically transferred to the Tryptic Soya Salt Agar with Magnesium Sulphate (TSAMS) (DM1990) plates and incubated for 4 hours at 3 5°C. HGMF is then transferred from TSAMS to the dry VPSA (DM2153) plate and incubated for 18-20 hours at 42°C.

Methodology

Suspend 73.52 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. DO NOT AUTOCLAVE. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance
Light yellow to pale green homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium
Blue coloured clear to slightly opalescent gel forms in Petri plates.

Reaction
Reaction of 7.3 5% w/v aqueous solution at 25°C. pH : 8.6±0.2

pH Range:-
8.40-8.80

Cultural Response/Characteristics
DM2153: Cultural characteristics observed after an incubation at 42°C for 18-24 hours.

Organism	Inoculum(CFU)	Growth	Recovery
Staphylococcus aureus ATCC 25923	>=10^3	inhibited	-
Vibrio parahaemolyticus ATCC 17802	50-100	inhibited	blue-green

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
2. Entis P. and Boleszczuk P., 1983, J. Food Prot., 46:783.

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