

Sulphite HiVeg™ Agar**MV311**

Sulphite HiVeg Agar is used for detection of thermophilic sulphide producing anaerobic microorganisms.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	10.0
Sodium sulphite	1.0
Agar	20.0

Final pH (at 25°C) 7.6 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 31 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in screw capped tubes containing a clean iron nail in 15 ml amounts and cap the tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. As an alternate to iron nail, 10 ml of 5% ferric citrate solution may be used per litre of the medium.

Principle and Interpretation :

Sulphite HiVeg Agar is developed by using HiVeg hydrolysate which is free from BSE/TSE risks associated with animal based peptones. Sulphite HiVeg Agar is the modification of Sulphite Agar which is prepared according to the formula described by Clark and Tanner (1) and is recommended by APHA (2) for detecting the thermophilic hydrogen sulphide producing anaerobic microorganisms. HiVeg hydrolysate provides nitrogenous compounds. Sodium sulphite is reduced and thus contribute in H₂S production by the thermophilic anaerobic bacteria. Agar acts as solidifying agent. Iron nails or ferric citrate combines with dissolved oxygen in the medium and provides anaerobic conditions. Incubation at high temperature (55°C) favours growth of thermophilic organisms. Sulphite reduction is indicated by blackening of medium.

Quality Control :**Appearance of powder**

Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Product Profile :

Vegetable based (Code MV)©	Animal based (Code M)
MV311 HiVeg hydrolysate	M311 Casein enzymic hydrolysate

Recommended for : Detection of thermophilic sulphide producing anaerobic microorganisms.

Reconstitution : 31.0 g/l

Quantity on preparation (500g): 16.12 L

pH (25°C) : 7.6 ± 0.2

Supplement : Iron nail / 5% Ferric citrate solution.

Sterilization : 121°C / 15 minutes.

Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity

Light amber coloured, clear to slightly opalescent gel forms in tubes.

Reaction

Reaction of 3.1% w/v aqueous solution is pH 7.6 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 55±2°C for 18 - 48 hours under anaerobic conditions.

Organisms (ATCC)	Inoculum (CFU)	Growth	Sulphide reduction
<i>Bacillus stearothermophilus</i> (10149)	30-100	good	-
<i>Clostridium thermosaccharolyticum</i> (7956)	30-100	good	+
<i>Desulfotomaculum nigrificans</i> (19858)	30-100	good	+

References :

- Clark and Tanner, 1937, Food Research, 2:27.
- Marshall R. (Ed.) Standard Methods for the Examination of Dairy Products. 16th Edition, 1992 APHA, Washington, DC.