Bile Esculin Azide HiVeg™ Agar MV493

Bile Esculin Azide HiVeg Agar is recommended for selective isolation and presumptive identification of faecal *Streptococci*.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	20.0
HiVeg extract	5.0
HiVeg peptone No. 3	5.0
Synthetic detergent No. II	5.0
Esculin	1.0
Ferric ammonium citrate	0.5
Sodium chloride	5.0
Sodium azide	0.15
Agar	15.0

Final pH (at 25°C) 7.1 ± 0.2
** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 56.65 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.
Warning: Sodium azide has a tendency to form explosive metal azides with plumbing materials. It is advisable to use enough water to flush off the disposables.

Principle and Interpretation :

This medium is prepared by completely replacing animal based peptones with vegetable peptones. Bile Esculin Agar was formulated by Swan (1) and evaluated by Facklam and Moody (2). Bile Esculin Azide Agar is modification of Bile Esculin Agar as per Isenberg (3). Bile Esculin Azide HiVeg Agar is the modification of Bile Esculin Azide Agar. This medium is selective and provides rapid growth of Group D *Streptococci*. *Enterococci* and group D *Streptococci* hydrolyze the esculin to esculetin and dextrose. Esculetin reacts with an iron salt, ferric ammonium citrate, to from dark brown-black complex.
This is highly nutritious media because of presence of HiVeg hydrolysate, HiVeg peptone No. 3 and HiVeg extract. Sodium azide inhibits growth of gram-negative organisms and permits the cultivation of faecal *Streptococci*. Esculin hydrolysis permits isolation and identification of group D *Streptococci* in 24 hours.

Quality Control :

Appearance of powder
Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.
Gelling
Firm, comparable with 1.5% Agar gel.
Colour and Clarity
Medium amber coloured, clear to slightly opalescent gel with a bluish tinge forms in petri plates.
Reaction
Reaction of 5.67% w/v aqueous solution is pH 7.1 ± 0.2 at 25°C.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV493 HiVeg hydrolysate HiVeg peptone No.3 HiVeg extract Synthetic detergent No.II	**M493** Casein enzymic hydrolysate Proteose peptone Beef extract Oxgall

Recommended for	:	Isolation and presumptive identification of faecal *Streptococci*.
Reconstitution	:	56.65 g/l
Quantity on preparation (500g)	:	8.82 L
pH (25°C)	:	7.1 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.

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

Cultural Response

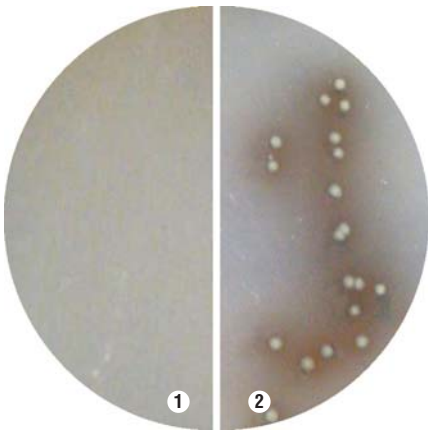
Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Esculin Hydrolysis
Enterococcus faecalis (29212)	10^2 -10^3	luxuriant	>50%	+
Escherichia coli (25922)	10^2 -10^3	inhibited	0%	-
Proteus mirabilis (25933)	10^2 -10^3	good	> 30%	-
S. pyogenes (19615)	10^2 -10^3	none-poor	<10%	-
Staphylococcus aureus (25923)	10^2 -10^3	good	>30%	-

Key : + = blackening of medium
- = no change

References :

1. Swan, 1954, J. Clin. Pathol., 7:160.
2. Facklam and Moody, 1970, Appl. Microbiol., 20:245.
3. Isenberg, 1970, Clin. Lab. Forum, July.



MV493 Bile Esculin Azide HiVeg Agar
1. *Control*
2. *Enterococcus faecalis*

◉ Prepared from GMO free Vegetable proteins replacing Animal based peptones. Freedom from BSE/TSE worries.