

Streptococcus Agalactiae Selective HiVeg™ Agar Base**MV1257**

Streptococcus Agalactiae Selective HiVeg Agar Base is recommended for selective isolation of *Streptococcus agalactiae* from dairy products.

Composition ** :

Ingredients	Grams/Litre
HiVeg peptone	10.0
HiVeg extract No. 1	5.0
Sodium chloride	5.0
Esculin	1.0
Thallos sulphate	0.333
Crystal violet	0.0013
Agar	13.0

Final pH (at 25°C) 7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 34.34 grams in 940 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and add 60 ml defibrinated blood and 25 ml *Staphylococcus β* toxin. Mix well and pour into sterile petri plates

Principle and Interpretation :

This medium is prepared by completely replacing animal based peptones by vegetable peptones making the medium free of BSE/TSE risks. Streptococcus Agalactiae Selective HiVeg Agar Base is the modification of Streptococcus Agalactiae Selective Agar Base formulated by Hauge and Kohler - Ellingsen (1) for the isolation of *Streptococcus agalactiae*, the causative agent of mastitis in cattle.

Thallos sulphate and crystal violet inhibit the accompanying bacterial flora. Differentiation between *Streptococcus* species is done on the basis of esculin hydrolysis seen as dark brown colour due to formation of an esculin - thallium complex. *Staphylococcus* beta- toxin attacks the erythrocytes present in the medium in such a way that they may be completely haemolyzed by *Streptococcus agalactiae*, though this bacterium is not haemolytic on simple blood agar. Thus *Streptococcus agalactiae* can be distinguished from obligate, non-haemolyzing colonies.

Streptococcus agalactiae forms dove - blue coloured, smooth colonies surrounded by zones of haemolysis. Further identification is done by using biochemical and serological methods, but primarily by using CAMP test (2).

Quality Control :**Appearance of powder**

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

Product Profile :

Vegetable based (Code MV)Ⓞ	Animal based (Code M)
MV1257 HiVeg peptone HiVeg extract No. 1	M1257 Peptic digest of animal tissue Meat extract

Recommended for : Selective isolation of *Streptococcus agalactiae* from dairy products.

Reconstitution : 34.34 g/l

Quantity on preparation (500g) : 14.56 L

pH (25°C) : 7.4 ± 0.2

Supplement : Defibrinated blood, *Staphylococcus β* toxin.

Sterilization : Boiling (DO NOT AUTOCLAVE).

Storage : Dry Medium - Below 30°C, Use freshly prepared medium.

Gelling

Firm, comparable with 1.3% Agar gel.

Colour and Clarity

Basal medium forms light purple coloured, clear to slightly opalescent gel. On addition of blood, reddish-purple coloured opalescent gel forms in petri plates.

Reaction

Reaction of 3.43% w/v aqueous solution is pH 7.4 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24 - 48 hours.

Organisms (ATCC)	Inoculum Growth (CFU)	Blue colony	Haemolysis
<i>Enterococcus faecalis</i> (29212)	10 ² -10 ³	luxuriant ±	alpha
<i>Escherichia coli</i> (25922)	10 ² -10 ³	inhibited -	-
<i>Pseudomonas aeruginosa</i> (27853)	10 ² -10 ³	inhibited -	-
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	inhibited -	-
<i>Streptococcus agalactiae</i> (13813)	10 ² -10 ³	luxuriant +	beta
<i>Streptococcus agalactiae</i> (27956)	10 ² -10 ³	luxuriant +	beta
<i>Streptococcus cremoris</i> (19257)	10 ² -10 ³	luxuriant ±	alpha
<i>Streptococcus lactis</i> (19435)	10 ² -10 ³	inhibited -	-
<i>Streptococcus pneumoniae</i> (6301)	10 ² -10 ³	luxuriant -	alpha
<i>Streptococcus pyogenes</i> (19615)	10 ² -10 ³	luxuriant -	beta

Key : ± = variable reaction

References :

- Hauge S. T. and u Kohler-Ellingsen J., 1953, Nord. Vet. Med., 5:539.
- Christie R., Atkins N. E. and Munch-Petersen E., 1944, Aust. J. Exp. Biol. Med. Sci., 22:197.