

**Columbia Blood Agar Base / w/ 1% Agar, HiVeg™ MV144/MV144A**

Columbia Blood Agar Base HiVeg is used as an efficient base for preparation of blood agar, chocolate agar and for various selective and identification media.

**Composition \*\* :**

Ingredients	MV144	MV144A
	Grams/Litre	Grams/Litre
HiVeg special peptone	23.0	23.0
Corn starch	1.0	1.0
Sodium chloride	5.0	5.0
Agar	15.0	10.0

Final pH (at 25°C ) 7.3 ± 0.2

\*\* Formula adjusted, standardized to suit performance parameters.

**Directions :**

Suspend 44 grams of MV144 or 39 grams of MV144A 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. Cool to 45-50°C before adding heat sensitive compounds. For Blood Agar: Add 5% v/v sterile defibrinated sheep blood to sterile cool base. For Chocolate Agar: Add 10% v/v sterile defibrinated sheep blood to sterile cool base. Heat to 80°C for 10 minutes with constant agitation. The medium can be made selective by adding different antimicrobials to sterile base. **For Brucella species :** Add rehydrated contents of 1 vial of Brucella Selective Supplement, (FD005) to 500 ml sterile molten base. **For Campylobacter species :** Add rehydrated contents of 1 vial of Campylobacter Supplement - I (Blaser - Wang, FD006) or Campylobacter Supplement - II, (Butzler, FD007) or Campylobacter Supplement - III (Skirrow, FD008) or Campylobacter Growth Supplement (FD009) or Campylobacter Selective Supplement (FD090) or Campylobacter Supplement - VI (Butzler, FD106) to 500 ml sterile molten base.

**For Gardnerella species :** Add rehydrated contents of 1 vial of G. Vaginalis Selective Supplement (FD056) to 500 ml sterile molten base. For **Cocci :** Add rehydrated contents of 1 vial of Staph - Strepto Supplement (FD030) or Strepto Supplement (FD031) to 500 ml sterile molten base or add rehydrated contents of 1 vial of Streptococcus Selective Supplement (FD119) to 500 ml of sterile, molten Columbia Blood Agar Base w/ 1% Agar, HiVeg.

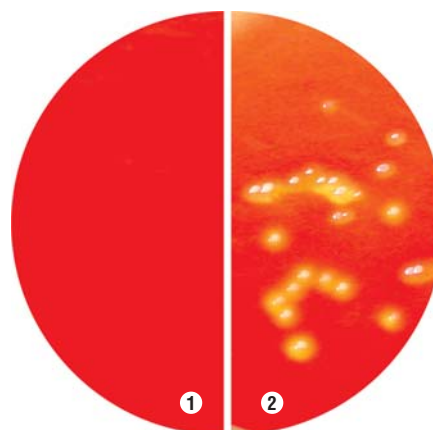
**Principle and Interpretation :**

These media are prepared by using HiVeg special peptone which is free from BSE/TSE risks. Columbia Blood Agar Base/ w/ 1% Agar HiVeg is the modification of Columbia Blood Agar Base/ w/ 1% Agar which was originally developed by Ellner et al (1).

Media contains HiVeg special peptone to support luxurious growth of fastidious and non fastidious organism. Also, these media promotes typical colonial morphology, better pigment production and more sharply defined haemolytic activity. Columbia Blood Agar Base/ w/ 1% Agar. HiVeg is

Product Profile :	
Vegetable based (Code MV)☉	Animal based (Code M)
MV144/MV144A HiVeg special peptone	M144/M144A Peptone special
<b>Recommended for</b>	: Preparation of blood agar, and for various selective and identification media.
<b>Reconstitution</b>	: (MV144) : 44.0 g/l : (MV144A) : 39.0 g/l
<b>Quantity on preparation (500g)</b>	: (MV144) : 11.36 L : (MV144A) : 12.82 L
	<b>(100g) :</b> (MV144) : 2.27 L
<b>pH (25°C)</b>	: 7.3 ± 0.2
<b>Supplement</b>	: Defibrinated sheep blood, FD's as desired
<b>Sterilization</b>	: 121°C / 15 minutes.
<b>Storage</b>	: Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

used as a base for preparing media containing blood and for selective media formulations in which different combinations of antimicrobial agents are used as additives. Corn starch serves as an energy source and also neutralizes toxic metabolites. Sheep blood permits the detection of haemolysis and also provides heme (X factor) which is



**MV144 Columbia Blood Agar Base, HiVeg**

- 1. Control
- 2. *Streptococcus pyogenes*

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required for the growth of many fastidious bacteria. However it is devoid of V factor (Nicotinamide adenine dinucleotide) and hence *Haemophilus influenzae* which needs both X and V factors, will not grow on this media. As these media has a relatively high carbohydrate content beta-haemolytic *Streptococci* may exhibit a greenish haemolytic reaction which may be mistaken for alpha haemolysis therefore confirmatory tests for all the colonies should be carried out.

**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 of MV144 or 1.0% Agar gel of MV144A.

**Colour and Clarity**

Basal medium yields light amber coloured, clear to slightly opalescent gel. Addition of 5% sterile defibrinated blood to the basal medium gives cherry red opaque gel in petri plates.

**Reaction**

Reaction of 4.4% w/v of MV144 or 3.9% w/v of MV144A aqueous solution is pH  $7.3 \pm 0.2$  at 25°C.

**Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth w/5% Blood	Recovery	Haemolysis
<i>Neisseria meningitidis</i> (13090)	$10^2$ - $10^3$	luxuriant	>70%	none
<i>Staphylococcus aureus</i> (25923)	$10^2$ - $10^3$	luxuriant	>70%	beta or gamma
<i>Staphylococcus epidermidis</i> (12228)	$10^2$ - $10^3$	luxuriant	>70%	gamma
<i>Streptococcus pneumoniae</i> (6303)	$10^2$ - $10^3$	luxuriant	>70%	alpha
<i>Streptococcus pyogenes</i> (19615)	$10^2$ - $10^3$	luxuriant	>70%	beta

**References :**

1. Ellner, Stoessel, Drakeford and Vasi, 1966, Am.J. Clin. Pathol., 45:68.