

**KCN HiVeg™ Broth Base w/o KCN****MV936**

Potassium Cyanide HiVeg Broth Base with KCN supplementation is used for differentiation of the members of *Enterobacteriaceae* on the basis of Potassium Cyanide tolerance.

**Composition \*\* :**

Ingredients	Grams/Litre
HiVeg peptone No. 3	3.0
Disodium phosphate	5.64
Monopotassium phosphate	0.225
Sodium chloride	5.0

Final pH (at 25°C ) 7.6 ± 0.2

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

**Directions :**

Suspend 13.9 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense in 100 ml amounts and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to room temperature and aseptically add sterile 1.5 ml of 0.5% Potassium Cyanide solution to each 100 ml of basal medium. Mix thoroughly and dispense in 1 ml amounts.

**CAUTION:** Being fatally toxic extreme care is needed while handling Potassium Cyanide solution. Never mouthpipette Potassium Cyanide solution.

**Principle and Interpretation :**

Potassium Cyanide HiVeg Broth Base is prepared by using HiVeg peptone No.3 which is free of BSE/TSE risks. This medium is the modification of Potassium Cyanide Broth Base which was formulated by Moeller (1) and further modified by Edwards and Ewing (2) and Edwards and Fife (3) for differentiation of the members of *Enterobacteriaceae*. HiVeg peptone No.3 provides nitrogenous compounds, sulphur and trace elements essential for growth. Phosphates buffer the medium. Sodium chloride maintains the osmotic equilibrium. Potassium cyanide inhibits many bacteria including *Salmonella*, *Shigella* and *Escherichia* while members of the group *Klebsiella*, *Citrobacter*, *Proteus* grow well. Potassium cyanide medium usually remains stable upto 4 weeks at 4°C (3). Elevated temperature leads to accelerated deterioration of KCN in the medium or evaporation of cyanide (4). The KCN should be destroyed before autoclaving by the addition of a crystal of ferric sulphate and 0.1 ml of 40% potassium hydroxide per tube (5).

**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)	
<b>MV936</b>	HiVeg peptone No. 3	<b>M936</b>	Proteose peptone
<b>Recommended for</b>	:	Differentiation of the members of <i>Enterobacteriaceae</i> on the basis of potassium cyanide tolerance.	
<b>Reconstitution</b>	:	13.9 g/l	
<b>Quantity on preparation (500g)</b>	:	35.97 L	
<b>pH (25°C)</b>	:	7.6 ± 0.2	
<b>Supplement</b>	:	0.5% Potassium Cyanide Solution	
<b>Sterilization</b>	:	121°C / 15 minutes.	
<b>Storage :</b> Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.			

**Colour and Clarity**

Light amber coloured, clear solution without any precipitate.

**Reaction**

Reaction of 1.39% w/v aqueous solution is pH 7.6 ± 0.2 at 25°C.

**Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 24 - 48 hours with added sterile 0.5% Potassium Cyanide Solution.

Organisms (ATCC)	Growth
<i>Citrobacter freundii</i> (8090)	luxuriant
<i>Escherichia coli</i> (25922)	inhibited
<i>Klebsiella pneumoniae</i> (13883)	luxuriant
<i>Proteus vulgaris</i> (13315)	luxuriant
<i>Pseudomonas aeruginosa</i> (27853)	luxuriant
<i>Salmonella</i> serotype Enteritidis (13076)	inhibited
<i>Shigella flexneri</i> (12022)	inhibited

**References :**

- Moeller V., 1954, Acta. Pathol. Microbiol. Scand., 34:115.
- Edwards P.R. and Ewing W.H., 1955, Minneapolis, Burgess Publishing Co.
- Edwards P.R. and Fife M.A., 1956, Appl.Microbiol., 4:46.
- Munson T.E., 1974, Appl.Microbiol., 27:262.
- Cowan S.T. and Steel K.J., 1966, Manual for the Identification of Medical Bacteria, Cambridge, Cambridge University Press.