

Kohn Two Tube HiVeg™ Medium No.1 Base**MV142**

Kohn Two Tube HiVeg Medium No. 1 Base is used for the identification of *Enterobacteriaceae* on the basis of dextrose and mannitol fermentation and urease production.

Composition ** :

Ingredients	Grams/Litre
HiVeg peptone	15.0
HiVeg extract	2.0
Yeast extract	2.0
Dextrose	1.0
Mannitol	10.0
Phenol red	0.05
Agar	16.0

Final pH (at 25°C) 7.2 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 46 grams in 975 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 10 lbs pressure (115°C) for 15 minutes. Cool to 60°C and aseptically add 25 ml of sterile 40% (w/v) Urea solution (FD048). Mix well and make slants with a generous butt.

Principle and Interpretation :

Kohn Two Tube HiVeg Medium No. 1 Base is prepared by using HiVeg peptone and HiVeg extract which is free of BSE/TSE risks. Russell (1) first introduced Double Sugar Medium. Kohn (2) developed a technique employing two tubes of composite media for study of culture reactions for the identification of the *Enterobacteriaceae*. Gillies (3) made minor modification in Kohn's media. Kohn Two Tube HiVeg Medium No. 1 Base is the modification of this medium and serves the same purpose. Inoculate pure culture of organisms with a straight wire by stabbing the butt and smearing the surface of the slope. Incubate at 37°C for 18 hours. Organisms capable of fermenting only dextrose show a yellow butt with or without gas formation and the slant remains unchanged (red). A yellow slant indicates the fermentation of mannitol. A positive urease reaction is shown by a deep cerise (light red) colour of whole medium.

Quality Control :**Appearance of powder**

Pink coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.6% Agar gel.

Colour and Clarity

Pink coloured, clear to slightly opalescent gel forms in tubes as slants with a generous butt.

Reaction

Reaction of 4.6% w/v aqueous solution is pH 7.2 ± 0.2 at 25°C.

Product Profile :

Vegetable based (Code MV)©	Animal based (Code M)
MV142 HiVeg peptone HiVeg extract	M142 Peptic digest of animal tissue Beef extract

Recommended for : The identification of *Enterobacteriaceae* on the basis of dextrose and mannitol fermentation and urease production.

Reconstitution : 46.0 g/l

Quantity on preparation (500g) : 10.86 L

(100g) : 2.17 L

pH (25°C) : 7.2 ± 0.2

Supplement : 40% Urea Solution (FD048)

Sterilization : 115°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 with added sterile 40% w/v Urea Solution (FD048).

Organisms (ATCC)	Fermentation of Dextrose	Fermentation of Mannitol	Urease production
<i>Proteus vulgaris</i> (13315)	(-)	(-)	+
<i>Salmonella</i> serotype Typhi (6539)	A	A	-
<i>Salmonella</i> serotype Enteritidis (13076)	AG	A	-
<i>Shigella flexneri</i> (12022)	A	A	-
<i>Shigella sonnei</i> (25931)	A	A	-

Key : A = Acid production, yellow colour

AG = Acid and gas production

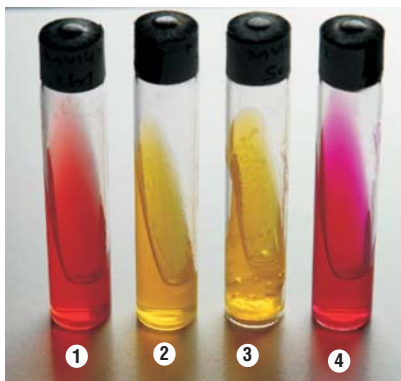
- = Negative reaction, no colour change

(-) = Apparent negative reaction, urease activity masks fermentation reaction.

+ = positive, Cerise colour

References :

- Russell F. F., 1911, J. Med. Res., 25:217.
- Kohn J., 1954, J. Path. Bact., 67(1):286.
- Gillies R. R., 1956, J. Clin. Path., 9(4):368.



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- Control
- Salmonella* serotype Typhi
- Salmonella* serotype Enteritidis
- Proteus vulgaris*