

CAL HiVeg™ Agar/Broth **MV893/MV894**
(Cellobiose Arginine Lysine HiVeg™ Agar/Broth)

CAL (Cellobiose Arginine Lysine) HiVeg Agar/Broth is used for selective isolation and biochemical differentiation of *Yersinia enterocolitica*.

Composition :**

Ingredients	MV893	MV894
	Grams/Litre	Grams/Litre
Yeast extract	3.00	3.00
Sodium chloride	5.00	5.00
Cellobiose	3.50	3.50
L-Arginine	6.50	6.50
L-Lysine hydrochloride	6.50	6.50
Synthetic detergent No. III	1.50	1.50
Neutral red	0.03	0.03
Agar	20.00	—

Final pH (at 25°C) 7.1 ± 0.2

** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 46 grams of MV893 or 26 grams of MV894 in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT OVERHEAT OR AUTOCLAVE. Dispense as desired.

Principle and Interpretation :

CAL HiVeg Agar/ Broth is prepared using Synthetic detergent No. III in place of sodium deoxycholate which is free from BSE/TSE risks.

CAL HiVeg Agar/Broth is the modifications of CAL Agar / Broth which is prepared according to the formula described by Dudley and Shotts (1) for selective isolation and biochemical differentiation of *Yersinia enterocolitica*.

The medium contains cellobiose as the fermentable carbohydrate. Amino acids L-Arginine and L-Lysine are also added in the medium. CAL Agar / Broth is a differential medium as it differentiates *Yersinia* on the basis of cellobiose fermentation and arginine or lysine decarboxylation (2). CAL HiVeg Agar/Broth serves the same above mentioned purpose. Neutral red is the pH indicator which turns red under acidic condition. Yeast extract provides the necessary nutrients to the organisms while sodium chloride maintains the osmotic balance. Synthetic detergent No. III inhibits gram-positive bacteria which may cause contamination during cultivation.

Quality Control:

Appearance of Powder

Pinkish beige coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 2.0% Agar gel of MV893.

Colour and Clarity

Red coloured, clear to slightly opalescent gel forms in petri plates, clear solution in tubes.

Reaction

Reactions of 4.6% w/v of MV893 or 2.6% w/v of MV894 aqueous solution is pH 7.1 ± 0.2 at 25°C.

Product Profile :

Vegetable based (Code MV)Ⓞ		Animal based (Code M)
MV893/MV894	Synthetic detergent No. III	M893/M894 Sodium deoxycholate
Recommended for	:	Selective isolation and biochemical differentiation of <i>Yersinia enterocolitica</i> .
Reconstitution	:	(MV893) : 46.0 g/l (MV894) : 26.0 g/l
Quantity on preparation (100g)	:	(MV893) : 2.17 L (MV894) : 3.84 L
pH (25°C)	:	7.1 ± 0.2
Supplement	:	None
Sterilization	:	Boiling (DO NOT AUTOCLAVE)
Storage	:	Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Cultural Response

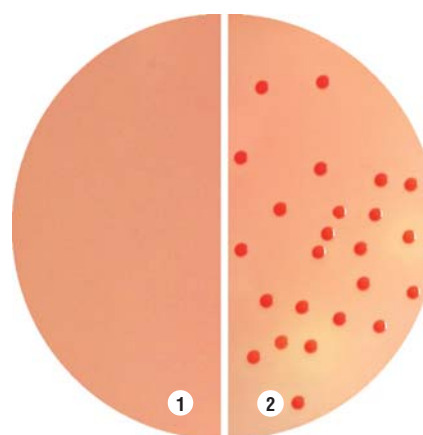
Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Cellobiose	Arginine	Lysine
<i>Yersinia enterocolitica</i> (27729)	10 ² -10 ³	good-luxuriant	>50%	+	—	—
<i>Escherichia coli</i> (25922)	10 ² -10 ³	good	>30%	—	v	v
<i>Pseudomonas aeruginosa</i> (27853)	10 ² -10 ³	good	>30%	—	—	+
<i>Proteus mirabilis</i> (25933)	10 ² -10 ³	good	>30%	—	—	—

Key: + = positive reaction
 — = negative reaction
 v = variable

References :

- Dudley M.V. and Shotts E.B., 1979, J. Clin. Microbiol., 10(2):180.
- MacFaddin J.F., 2000(ed), Biochemical Tests for Identification of Medical Bacteria, 3rd edition, Lippincott Williams and Wilkins, New York.



MV893 CAL HiVeg Agar
 1. Control
 2. *Yersinia enterocolitica*