

XLD HiVeg™ Agar (Xylose Lysine Deoxycholate HiVeg™ Agar)

MV031

Xylose Lysine Deoxycholate HiVeg Agar is recommended for the selective isolation and enumeration of *Salmonella* serotype Typhi and other *Salmonella* species.

Composition ** :

Ingredients	Grams/Litre
Yeast extract	4.0
L-Lysine	5.0
Lactose	7.5
Sucrose	7.5
Xylose	3.5
Sodium chloride	5.0
Synthetic detergent No. III	1.5
Sodium thiosulphate	6.8
Ferric ammonium citrate	0.8
Phenol red	0.08
Agar	15.0

Final pH (at 25°C) 7.4 ± 0.2

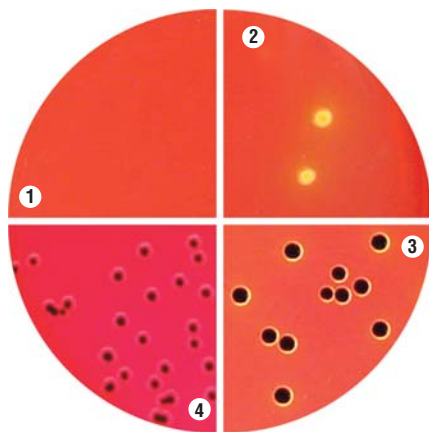
**Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 56.68 grams in 1000 ml distilled water. Heat with frequent agitation until the medium boils. DO NOT AUTOCLAVE OR DO NOT OVERHEAT. Transfer immediately to a water bath at 50°C. After cooling, pour into sterile petriplates. It is advisable not to prepare large volumes which will require prolonged heating and may produce precipitate.

Principle and Interpretation :

Xylose Lysine Deoxycholate HiVeg Agar is prepared by replacing sodium deoxycholate by synthetic detergent No.III which makes the medium free of BSE/TSE risks.



MV031 XLD HiVeg Agar

1. Control
2. *Escherichia coli*
3. *Salmonella* serotype Enteritidis
4. *Salmonella* serotype Typhimurium

Product Profile :

Vegetable based (Code MV)Ⓞ	Animal based (Code M)
MV031 Synthetic detergent No. III	M031 Sodium deoxycholate
Recommended for	: Isolation of <i>Salmonella</i> species
Reconstitution	: 56.68 g/l
Quantity on preparation (500g):	8.82 L
(100g):	1.76 L
pH (25°C)	: 7.4 ± 0.2
Supplement	: None
Sterilization	: Boiling (DO NOT AUTOCLAVE).
Storage	: Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Xylose Lysine Deoxycholate HiVeg Agar is modification of Xylose Lysine Deoxycholate Agar which is a selective as well as differential medium formulated by Taylor (1) for the isolation and identification of enteric pathogens especially *Shigellae* from stool samples.

Synthetic detergent No. III inhibits gram-positive microorganisms. Xylose is fermented by almost all the enteric bacteria except *Shigellae* which enables the differentiation of *Shigellae* from *Salmonellae*.

Salmonellae metabolize the xylose and after *Salmonellae* exhaust the supply of xylose, they decarboxylate lysine and thus change the pH to alkaline and mimic *Shigellae* reaction. However to prevent this reaction by lysine positive coliforms, lactose and sucrose are added in excess to produce acid and hence nonpathogenic hydrogen sulphide (H₂S) producers do not decarboxylate lysine. Thiosulphate and ferric ammonium citrate are the hydrogen sulphide (H₂S) indicators in the medium. Phenol red is the pH indicator.

This medium like the conventional medium is an ideal medium for screening samples containing mixed flora of enteric pathogens as recovery of *Salmonellae* and *Shigellae* is not conspicuous by even profuse growth of other species (2, 3). This medium can be used as a diagnostic aid in the identification of *Enterobacteriaceae*.

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XLD HiVeg™ Agar (Xylose Lysine Deoxycholate HiVeg™ Agar)**MV031****Quality Control :****Appearance of powder**

Pink coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity

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

Reaction

Reaction of 5.67% 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 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of Colony
<i>Enterobacter aerogenes</i> (13048)	10 ² -10 ³	fair	>10%	yellow
<i>Escherichia coli</i> (25922)	10 ² -10 ³	fair-good	>10%	yellow
<i>Proteus mirabilis</i> (25933)	10 ² -10 ³	good-luxuriant	>50%	yellow
<i>Proteus vulgaris</i> (13315)	10 ² -10 ³	good-luxuriant	>50%	yellow
<i>Salmonella</i> serotype Paratyphi A	10 ² -10 ³	good-luxuriant	>50%	red
<i>Salmonella</i> serotype Paratyphi B	10 ² -10 ³	good-luxuriant	>50%	red with black centres
<i>Salmonella</i> serotype Enteritidis (13076)	10 ² -10 ³	good-luxuriant	>50%	red with black centres
<i>Salmonella</i> serotype Typhi (6539)	10 ² -10 ³	good-luxuriant	>50%	red with black centres
<i>Salmonella</i> serotype Typhimurium (14028)	10 ² -10 ³	good-luxuriant	>50%	red with black centres
<i>Shigella dysenteriae</i> (13313)	10 ² -10 ³	good-luxuriant	>50%	red
<i>Shigella flexneri</i> (12022)	10 ² -10 ³	good	>30%	red
<i>Shigella sonnei</i> (25931)	10 ² -10 ³	good	>30%	red
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	inhibited	0%	-

References :

1. Taylor W.I. 1965, Am. J. Clin. Path. 44:471.
2. McCarthy M.D., 1966, N.Z. J. Med. Lab. Technol., 20:127.
3. Isenberg H.D., Kominos S. and Siegal M., 1969, Appl. Microbiol., 18:656.