

## Technical Information

### XLT4 MiVeg Agar Base

#### Product Code : VM2147

**Application:-** XLT4 MiVeg Agar Base is recommended for selective isolation of *Salmonella* species other than *Salmonella* serotype Typhi.

#### Composition\*\*

Ingredients	Grams/Litre
MiVeg peptone No. 3	1.6
Yeast extract	3.0
L-Lysine	5.0
Xylose	3.75
Lactose	7.5
Saccharose	7.5
Ferric ammonium citrate	0.8
Sodium thiosulphate	6.8
Sodium chloride	5.0
Phenol red	0.08
Agar	18.0
Final pH (at 25°C)	7.4 ± 0.2

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

#### Principle & Interpretation

XLT4 MiVeg Agar is prepared by adding MiVeg peptone No.3 in place of Proteose peptone thereby making the medium BSE/TSE risks free. This medium is the modification of XLT4 Agar Base which was formulated as described by Miller and Tate (1) for isolating *Salmonella* from faecal contaminated farm samples. XLT4 Agar enhances the recovery of *Salmonella* species other than *Salmonella* serotype Typhi.

MiVeg peptone No.3 and yeast extract supply nitrogenous compounds and vitamins. This medium differentiates *Salmonella* from other organisms on the basis of fermentation of xylose, sucrose and lactose alongwith lysine decarboxylation and Hydrogen sulphide production. Ferric ions help to detect hydrogen sulphide production. Sodium thiosulphate provides inorganic sulphur. Sodium chloride maintains osmotic equilibrium. Phenol red serve as pH indicator of the medium. Tergitol 4 from the supplement, inhibits growth of non-*Salmonella* organisms.

#### Methodology

Suspend 59.0 grams of powder media in 1000 ml distilled water containing 4.6 ml XLT4 Supplement (MS2152). Mix thoroughly and heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and then pour into sterile petri plates.

#### Quality Control

##### Physical Appearance

Pink coloured, homogeneous, free flowing powder.

##### Gelling

Firm, comparable with 1.8% Agar gel.

##### Colour and Clarity of prepared medium

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

##### Reaction

Reaction of 5.9% w/v aqueous solution of the medium at 25°C pH 7.4 ± 0.2.

#### pH range

7.2-7.6

#### Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Colour of Colony	Recovery
<i>Enterococcus faecalis</i> (29212)	10 <sup>2</sup> -10 <sup>3</sup>	Inhibited	–	0%
<i>Escherichia coli</i> (25922)	10 <sup>2</sup> -10 <sup>3</sup>	Luxuriant	yellow	>50%
<i>Salmonella</i> serotype Enteritidis (13076)	10 <sup>2</sup> -10 <sup>3</sup>	Luxuriant	Red with black centres	> 50%
<i>Salmonella</i> serotype Typhimurium (14028)	10 <sup>2</sup> -10 <sup>3</sup>	Luxuriant	Red with black centres	>50%
<i>Staphylococcus aureus</i> (25923)	10 <sup>2</sup> -10 <sup>3</sup>	Inhibited	–	0%
<i>Proteus mirabilis</i> (25933)	10 <sup>2</sup> -10 <sup>3</sup>	None-poor	–	<20%

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days

## Further Reading

1. Miller R.G. and Tate CR(1990) The Maryland Poultryman 2 - 7.

## Disclaimer

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
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