

## Technical Information

### Streptococcus Lactis Differential MiVeg Agar Base

**Product Code : VM1925**

**Application:-** Streptococcus Lactis Differential MiVeg Agar Base is used for differentiation of citrate utilizing lactic *Streptococci-Lactococcus lactis* (*Streptococcus lactis*) subspecies *diacetylactis* from citrate non-utilizing *Lactococcus lactis* (*Streptococcus lactis*) and *Lactococcus lactis* (*Streptococcus lactis*) subspecies *cremoris*.

### Composition

Ingredients	Gms / Litre
Nonfat (Skim) Milk	10.0
MiVeg hydrolysate No.3	2.5
Dextrose	5.0
Agar	15.0
Final pH (at 25°C)	6.6 ± 0.2

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

### Principle & Interpretation

Streptococcus Lactis Differential MiVeg Agar Base is prepared by using vegetable peptones instead of animal based peptones thereby making the medium BSE/TSE risks. Streptococcus Lactis Differential MiVeg Agar Base is the modification of Streptococcus Lactis Differential Agar Base which is formulated as described by Kempler and McKay (1) and also recommended by APHA (2) for the differentiation of citrate utilizing lactic *Streptococci-Lactococcus lactis* (*Streptococcus lactis*) subspecies *diacetylactis* from citrate non-utilizing *Lactococcus lactis* (*Streptococcus lactis*) and *Lactococcus lactis* (*Streptococcus lactis*) subspecies *cremoris*. Skim milk and MiVeg hydrolysate in the medium provides the essential growth nutrients. Dextrose serve as an energy source.

### Methodology

Suspend 32.5 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling with stirring to dissolve the medium completely. Sterilize by autoclaving at 10 lbs pressure (115°C) for 12 minutes. Cool to 45°C and aseptically add (30 minutes steam sterilized solutions) 10 ml of 10% potassium ferricyanide and 10 ml of citrate solution containing 0.25 g ferric citrate and 0.25g sodium citrate. Mix thoroughly before pouring into sterile petri plates. Dry the plates in dark for 24 hours at 30°C.

### Quality Control

#### Physical Appearance

Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

#### Gelling

Firm, comparable with 1.5% Agar Base gel.

#### Colour and Clarity of prepared medium

Light yellow coloured, opaque gel with white precipitate forms in petri plates.

#### Reaction

Reaction of 3.25% w/v aqueous solution is pH 6.6± 0.2 at 25°C.

#### pH Range

6.4 - 6.8

### Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 30°C for 18-48 hours with added 10% Potassium ferricyanide and citrate solution.

Organisms (ATCC)	Growth
<i>Streptococcus cremoris</i> (19257)	luxuriant
<i>Streptococcus lactis</i> (8000)	luxuriant
<i>Streptococcus lactis</i> subsp. <i>diacetylactis</i>	luxuriant

## 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 day.

## Further Reading

1. Kempler G.M. and McKay L.L., 1980, Appl. Environ. Microbiol., 39:926.
2. Vanderzant C. and Splittstoesser D. (Eds.) 1992, Compendium of Methods for The Microbiological Examination of Foods, 3<sup>rd</sup> ed., APHA, Washington, D.C.

## Disclaimer :

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