

## Technical Information

### Neutral Red Chalk Lactose Agar

**Product Code: DM 1984**

**Application:** - Neutral Red Chalk Lactose Agar is recommended for the detection of lactic Streptococci in milk and milk products.

#### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue	3.000
Beef extract	3.000
Yeast extract	3.000
Lactose	10.000
Calcium carbonate	15.000
Neutral red	0.050
Agar	15.000
Final pH ( at 25°C)	6.8±0.2

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

#### Principle & Interpretation

Lactic Streptococci are normally present in milk and are also used as starter cultures in the production of cultured dairy products (1). The natural microflora of milk is inefficient, uncontrollable, and unpredictable, or is destroyed altogether by the heat treatments given to the milk. A starter culture can provide particular characteristics in a more controlled and predictable fermentation. The primary function of lactic starters is the production of lactic acid from lactose.

Peptic digest of animal tissue, beef extract and yeast extract supply a source of nitrogen and other growth factors. Lactose acts as fermentable carbohydrate. Neutral red act as pH indicator used in this medium. As it is unable to prevent diffusion of acidic or basic byproducts throughout the agar, resulting in an overall color change of the entire medium toward the acidic or basic range, calcium carbonate is often added which acts as a non-diffusible buffer. Thus the acid produced by any colony is localized around it (2).

#### Methodology

Suspend 49.05 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & heat just to boiling. Dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Shake well before pour into sterile Petri plates with intermittent shaking.

**Note:** Due to the presence of calcium carbonate, the prepared medium forms opalescent solution with white precipitate.

#### Quality Control

##### Appearance

Light yellow to beige homogeneous free flowing powder

##### Gelling

Firm, comparable with 1.5% Agar gel

##### Colour and Clarity

Pink coloured opalescent gel with white precipitate forms in Petri plates

##### Reaction

Reaction of 4.91% w/v aqueous solution at 25°C. pH : 6.8±0.2

##### pH Range

6.60-7.00



Dehydrated Culture Media  
Bases / Media Supplements

### Cultural Response

DM 1984: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Streptococcus thermophilus</i> ATCC 14485	50-100	luxuriant	>=50%

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

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

## Further Reading

1. Seppo Salminen, Atte von Wright and Arthur Ouwehand, Lactic Acid Bacteria. Microbiological and Functional aspects, 3<sup>rd</sup> Edition, Marcel and Dekker, NY. Basel.
2. Reddy M. S., Vedamuthu E. R., Washam C. J. and Reinbold G. W., 1969 Appl. Microbiol., 18, 755.

## Disclaimer :

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