

## Technical Information

### Skim Milk

**Product Code: DM 1530**

**Application:** Skim Milk is used for cultivation dairy organisms and differentiation of *Clostridium* species.

### Composition\*\*

Ingredients	Gms / Litre
Skim milk powder	1 100.000

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

### Principle & Interpretation

Skim Milk is used for the demonstration of coagulation and proteolysis of casein<sup>(1)</sup> and is sometimes used as a complete medium or as an ingredient in other media used for propagation of organisms occurring in milk products like *Mycobacterium tuberculosis*, *Corynebacterium diphtheriae* etc. Addition of skim milk to any nutrient-rich medium provides favourable conditions for growth of organisms, found in milk. The number of bacteria isolated on skim milk thus is more than the number of organisms isolated on a regular medium<sup>(2)</sup>. Proteolytic bacteria hydrolyze casein to form soluble nitrogenous compounds indicated as clear zone surrounding the colonies on the agar medium. More clear zones are seen on milk agar if, the bacteria produce acid from fermentable carbohydrates in the medium. In case of Skim Milk, proteolytic organisms hydrolyse the casein and form a clear solution with the precipitated casein at the bottom of the tube. Skim milk serves as a good source of casein.

### Methodology

Suspend 100 grams of powder media in a little amount of distilled water to make a smooth paste. Gradually add more distilled water to make a final volume of 1000 ml. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 5 minutes.

### Quality Control

#### Physical Appearance

White to cream homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Off white coloured opaque solution in tubes

#### Cultural Response/Characteristics

DM 1530: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum(CFU)	Growth	Proteolytic activity
<i>Bacillus subtilis</i> ATCC 6633	50-100	Good-luxuriant	positive reaction
<i>Escherichia coli</i> ATCC 25922	50-100	Good-luxuriant	negative reaction
<i>Enterococcus faecalis</i> ATCC 29212	50-100	luxuriant	negative reaction
<i>Proteus mirabilis</i> ATCC 25933	50-100	luxuriant	positive reaction
<i>Proteus vulgaris</i> ATCC 13315	50-100	luxuriant	positive reaction
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	luxuriant	positive reaction
<i>Serratia marcescens</i> ATCC 8100	50-100	luxuriant	positive reaction
<i>Clostridium perfringens</i> ATCC 12924	50-100	luxuriant	positive reaction

### 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.



Dehydrated Culture Media  
Bases / Media Supplements

## Further Reading

1. Frazier W.C. and Ripp P., 1928, J. Bact., 16 : 57.
2. Terplan G. Rundfeldt, H.u. Zaadhof, K.J. Zur Eignung verschiedener Nährböden für die Bestimmung der Gesamtkeimzahl der Milch. - Arch. Lebensmittelhyg., 18; 9-11 (1967).

## Disclaimer :

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