TM 295 - SKIM MILK AGAR

INTENDED USE
For cultivation and enumeration of bacteria encountered in dairy industry.

PRODUCT SUMMARY AND EXPLANATION
SM Agar is used for the demonstration of coagulation and proteolysis of casein. The medium is recommended by APHA for cultivation and enumeration of microorganisms encountered in dairy industry. Addition of SM powder to any nutrient-rich medium creates favorable conditions for growth of organisms, which are encountered in milk. The number of bacteria isolated thus is more than the number of organisms isolated on a regular medium. Proteolytic bacteria hydrolyze casein to form soluble nitrogenous compounds indicated as clear zone surrounding the colonies. More clear zones are seen on milk agar if, the bacteria produce acid from fermentable carbohydrates in the medium.

COMPOSITION

Ingredients	Gms / Ltr
Skim Milk powder	28.000
Tryptone	5.000
Yeast extract	2.500
Dextrose (Glucose)	1.000
Agar	15.000

PRINCIPLE
Tryptone provides amino acids and other complex nitrogenous substances. Yeast extract supplies vitamin B complex. Addition of SM powder in the medium makes the conditions optimal for microorganisms encountered in milk. Glucose acts as the carbon source.

INSTRUCTION FOR USE
- Dissolve 51.5 grams of in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Off white coloured opaque gel forms in Petri plates.
pH (at 25°C) : 7.0±0.2

INTERPRETATION
Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Proteolytic Activity	Incubation Temperature	Incubation Period

Bacillus subtilis subsp. spizizenni	6633	50-100	Good-luxuriant	>=50%	Positive Reaction, clear zone surrounding colonies	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	Luxuriant	>=70%	Negative reaction, no clear zone surrounding colonies	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Good-luxuriant	>=50%	Negative reaction, no clear zone surrounding colonies	35-37°C	18-24 Hours
Proteus mirabilis	25933	50-100	Luxuriant	>=70%	Positive Reaction, clear zone surrounding colonies	35-37°C	18-24 Hours
Pseudomonas aeruginosa	27853	50-100	Luxuriant	>=70%	Positive Reaction, clear zone surrounding colonies	35-37°C	18-24 Hours
Serratia marcescens	8100	50-100	Luxuriant	>=70%	Positive Reaction, clear zone surrounding colonies	35-37°C	18-24 Hours

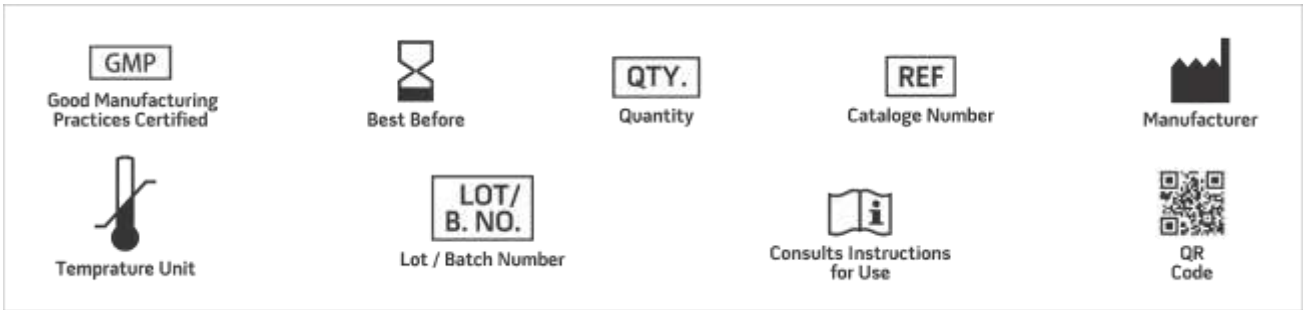
PACKAGING:
In pack size of 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Frazier W. C. and Ripp P., 1928, J. Bacteriol., 16: 57.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
3. Jorgensen, J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015)
4. Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.

6. 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).
7. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,
8. APHA Inc., Washington, D.C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019