

## TM 184 -M 17 AGAR W/ SODIUM GLYCEROPHOSPHATE

### INTENDED USE

For cultivation of lactic Streptococci and plaque assay of lactic bacteriophages.

### PRODUCT SUMMARY AND EXPLANATION

M 17 AGAR W/ SODIUM GLYCEROPHOSPHATE (DOUBLE PACK) is used for cultivation of lactic Streptococci and plaque assay of lactic bacteriophages. This medium is based on the formulation of Terzaghi and Sandine. M17 Agar is recommended by the International Dairy Federation for selective enumeration of Streptococcus thermophilus from yoghurt. Lactic Streptococci are nutritionally fastidious and require complex media for optimal growth. Disodium glycerophosphate maintains the pH above 5.7. The maintenance of pH is very important as lower pH results in injury and reduced recovery of lactic Streptococci. Glycerophosphate does not form precipitate with calcium which is needed for the plaque assay of lactic bacteriophages.

### COMPOSITION

Ingredients	Gms / Ltr
Disodium-β-glycerophosphate	19.000
Agar	10.000
Papaic digest of soyaben meal	5.000
Beef extract	5.000
Peptic digest of animal tissue	5.000
Lactose	5.000
Yeast extract	2.500
Ascorbic acid	0.500
Magnesium sulphate	0.250

### PRINCIPLE

Peptic digest of animal tissue, papaic digest of soyabean meal, yeast extract, beef extract provide carbonaceous, nitrogenous compounds, vitamin B complex and other essential growth factors. Lactose is the fermentable carbohydrate and ascorbic acid is stimulatory for the growth of lactic Streptococci. Magnesium sulphate provides essential ions to the organisms. Disodium- β-glycerophosphate maintains the pH above 5.7. The maintenance of pH is very important as lower pH results in injury and reduced recovery of lactic Streptococci. Disodium glycerophosphate suppresses Lactobacillus bulgaricus. This medium helps in detecting streptococcal mutants that are lactose non-fermenters.

### INSTRUCTION FOR USE

- Dissolve 52.25 grams in 1000 ml distilled water.
- Heat 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 Dehydrated powder	Medium amber coloured clear to slightly opalescent
Prepared Medium	Light yellow coloured slightly opalescent gel forms in Petri plates
pH (at 25°C)	7.1± 0.2

### INTERPRETATION

Cultural characteristics observed after incubation at 35 - 37°C for 24 - 48 hours

Microorganism	ATCC	Inoculum (CFU/ml)	Growth
<i>Enterococcus faecalis</i>	29212	50-100	Good-Luxuriant
<i>Lactobacillus bulgaricus</i>	11842	50-100	None-Poor
<i>Lactobacillus leichmannii</i>	4797	50-100	Good-Luxuriant
<i>Lactobacillus plantarum</i>	8014	50-100	Good-Luxuriant
<i>Streptococcus thermophilus</i>	14485	50-100	Good-Luxuriant

### PACKAGING

In 500 gm packaging size.

### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 10-25°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.

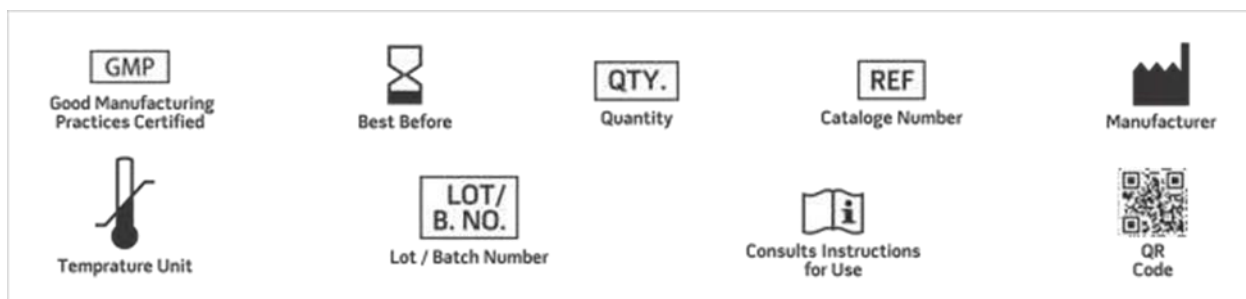
**Product Deterioration:** Do not use, if powder show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

### DISPOSAL

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

### REFERENCES

1. Terzaghi B.E. and Sandine W.E., 1975, Appl. Microbiol., 29:807.
2. Reiter B. and Oran J.D., 1962, J. Dairy Res., 29:63.
3. Anderson A.W. and Elliker P.R., 1953, J. Dairy Sci., 36:161.
4. International Dairy Federation, 1981, Joint IDF/ISO/AOAC Group E44.
5. Shankar P.A. and Davies F.L., 1977, Soc. Dairy Technol., 30:28.
6. Downes F. P. and Ito K. (Eds.), 2001, Compendium of Methods for Microbiological of Food, 4th Ed., APHA, Washington, D.C.



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

**\*For Lab Use Only**

Revision: 05<sup>th</sup> May. 2022