

TM 2210 - M16 AGAR (MODIFIED ROGOSA AGAR)

INTENDED USE

For cultivation and enumeration of lactic streptococci used in manufacture of cheddar cheese.

PRODUCT SUMMARY AND EXPLANATION

Streptococcus is a genus of spherical, gram-positive bacteria, and a member of the phylum Firmicutes. M16 Agar is a modification of Rogosa Sodium Lactate Agar recommended by APHA. This medium was developed to support growth of lactic streptococci used in cheddar cheese manufacturing in New Zealand. This medium can also be used as selective medium for the cultivation of oral and faecal lactobacilli. Since some lactobacilli do not grow on this medium if incubated aerobically, incubation in a CO₂-enriched atmosphere is recommended. The large number of media proposed for lactic acid bacteria, particularly for streptococci and /or lactobacilli, is an indicative of the variability in growth features of different species, thereby the difficulties encountered in growing some strains of this group of organisms. While the lactic acid bacteria in general are tolerant to low pH, they can be very sensitive to other adverse conditions. Freezing and thawing prior to analysis may be detrimental to cell growth. Dilution process may also damage lactic acid bacteria in samples, thus it is best to use sterile 0.1% Peptone Water as the diluent.

COMPOSITION

Ingredients	Gms / Ltr
Papaic digest of soyabean meal	5.000
Tryptose	5.000
Beef extract	5.000
Yeast extract	2.500
Dextrose	5.000
Ascorbic acid	0.500
Sodium acetate	3.000
Agar	10.000

PRINCIPLE

The medium consists of Papaic digest of soyabean meal, tryptose and beef extract which provide the essential nutrients like amino acids, minerals etc. Yeast extract supplies vitamin B complex to the lactic streptococci. Dextrose is the fermentable carbohydrate and energy source. Sodium acetate inhibits other contaminating bacteria and suppresses swarming growth. Ascorbic acid provides vitamin C to the organisms. The samples to be tested are processed to enumerate bacteria by pour plate technique.

INSTRUCTION FOR USE

- Dissolve 36 grams 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.
- 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 : Light amber coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.2±0.2

INTERPRETATION

Cultural characteristics observe after incubation in CO₂ enriched atmosphere.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Lactobacillus lactis	8000	50-100	Good-luxuriant	≥50%	35-37°C	18-48 Hours
Streptococcus cremoris	19257	50-100	Good-luxuriant	≥50%	35-37°C	18-48 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 2-8°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.







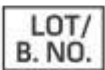


Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

- Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
- Lowrie R. J. and Pearce L. E., 1971, New Zealand, J. Dairy Sci. Technol., 6: 166.
- Rogosa M., Mitchell J. A. and Wiseman R. F., 1951, J. Bacteriol., 62 : 132-133.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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



***For Lab Use Only**
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