

TM 497 - YEAST GLUCOSE BEEF AGAR

INTENDED USE

For cultivation of lactic Streptococci for determining growth characteristics.

PRODUCT SUMMARY AND EXPLANATION

The Lactic Acid Bacteria comprise a clad of gram positive low-GC, acid tolerant, non-sporulating, non-respiring rod or cocci that are associated by their common metabolic and physiological characteristics. These bacteria produce lactic acid as the major metabolic endproduct of carbohydrate fermentation. The industrial importance of the LAB is evidenced by their generally regarded safe status, due to their ubiquitous appearance in food and their contribution to the healthy microflora of human mucosal surfaces. The genera that comprise the LAB are at its core *Lactobacillus*, *Leuconostoc*, *Pediococcus*, *Lactococcus*, and *Streptococcus* as well as the more peripheral *Aerococcus*, *Teragenococcus*, *Vagococcus*, and *Weisella*. *Lactococci* (formerly Lancefield group N streptococci) are used extensively as starter inocula in dairy fermentations, with humans estimated to consume 1018 lactococci annually. Partly due to their industrial relevance, both *Lactococcus lactis* subspecies (lactis and cremoris) are widely used as generic LAB models for research. Yeast Glucose Beef Agar is used for the cultivation of lactic Streptococci.

COMPOSITION

| Ingredients | Gms / Ltr |
|--------------------------------|-----------|
| Peptic digest of animal tissue | 10.000 |
| Beef extract | 10.000 |
| Yeast extract | 3.000 |
| Sodium chloride | 5.000 |
| Dextrose | 5.000 |
| Agar | 15.000 |

PRINCIPLE

Dextrose provides an energy source for the growth of microorganisms. Yeast extract, peptic digest of animal tissue and beef extract provide the necessary growth factors and nutrients. Sodium chloride helps to maintain osmotic balance of the cells.

INSTRUCTION FOR USE

- Dissolve 48 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely and dispense as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

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)** : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.



| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Incubation Temperature | Incubation Period |
|-----------------------------------|-------|-------------------|----------------|----------|------------------------|-------------------|
| <i>Streptococcus cremoris</i> | 19257 | 50-100 | Good-luxuriant | >=50 % | 35-37°C | 18-24 Hours |
| <i>Lactobacillus lactis</i> | 8000 | 50-100 | Good-luxuriant | >=50 % | 35-37°C | 18-24 Hours |
| <i>Streptococcus thermophilus</i> | 14485 | 50-100 | Good-luxuriant | >=50 % | 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

- Holzappel, WH; Wood, BJB (eds.). (1998). The genera of lactic acid bacteria, 1st ed., London Blackie Academic & Professional.
- Salminen, S.; von Wright, A; and Ouwehand, AC (eds.). (2004). Lactic Acid Bacteria: Microbiological and Functional Aspects, 3rd ed., New York: Marcel Dekker, Inc.
- Atlas R. M, 2004, Handbook of Microbiological Media, Lawrence C. Parks (Ed.), 3rd Edition, CRC Press.

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|  GMP Good Manufacturing Practices Certified |  IVD For In Vitro Diagnostic Use |  QTY. Quantity |  LOT/ B. NO. Lot / Batch Number |  REF Catalogue Number |  Manufacturer |
|  Temperature Unit |  EC REP Authorized Representative |  CE European Conformity |  QR Code |  Consults Instructions for Use |  Best Before |

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

***For Lab Use Only**
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