



Yeast Glucose Beef Broth

M965

Yeast Glucose Beef Broth is used for the cultivation of lactic Streptococci for determining growth characteristics.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Beef extract	10.000
Yeast extract	3.000
Sodium chloride	5.000
Dextrose	5.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 33 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely and dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

The Lactic Acid Bacteria (LAB) 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 (GRAS) 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* , *Carnobacterium* , *Enterococcus* , *Oenococcus* , *Teragenococcus* , *Vagococcus* and *Weisella* (1, 2).

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 Broth is used for the cultivation of actic Streptococci (3).

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.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear solution without any precipitate in tubes.

Reaction

Reaction of 3.3% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

M965: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism

Leuconostoc dextranicum

Growth

good-luxuriant

Streptococcus cremoris

good-luxuriant

ATCC 19257

Lactobacillus lactis ATCC 8000 good-luxuriant
Streptococcus thermophilus ATCC 14485 good-luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

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

Revision : 02 / 2015

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.