



# PRODUCT SPECIFICATION SHEET

## Yeast Glucose Beef Broth (DM1011)

### Intended Use

Yeast Glucose Beef Broth (DM1011) is recommended for cultivation and determination of growth characteristics of *lactic Streptococci*.

### Product Summary and Explanation

Lactic Acid Bacteria (LAB) or Lactobacillales are a clad of gram positive low-GC, acid tolerant, generally non-sporulating, non-respiring, either rod or cocci shaped bacteria that share common metabolic and physiological characteristics. Lactic acid is a major metabolic end product produced by these bacteria by fermentation of carbohydrate. 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 mainstay *Lactobacillus*, *Leuconostoc*, *Pediococcus*, *Lactococcus*, and *Streptococcus* as well as the more peripheral *Aerococcus*, *Carnobacterium*, *Enterococcus*, *Oenococcus*, *Teragenococcus*, *Vagococcus* and *Weisella* these belong to the order Lactobacillales.<sup>(1, 2)</sup>

In dairy fermentations, Lactococci (formerly Lancefield group N streptococci) are extensively used as a starter inocula, with humans estimated to consume 1018 lactococci annually. Both *Lactococcus lactis* subspecies (*lactis* and *cremoris*) are widely used as generic LAB models for research partially due to their industrial relevance. Yeast Glucose Beef Broth is designed for the cultivation of Lactic Streptococci.<sup>(3)</sup>

### Principles of the Procedure

Yeast Glucose Beef Broth contains dextrose which is an energy and carbon 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 maintains the osmotic balance of the cells.

### Formula / Liter

Ingredients	Gms / Liter
Peptic digest of animal tissue	10.00
Beef extract	10.00
Yeast extract	3.00
Sodium chloride	5.00
Dextrose	5.00
Final pH : 7.0 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

### Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

### Directions

1. Suspend 33 grams of the medium in one litre distilled water.
2. Heat if necessary to dissolve the medium completely and dispense as desired.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.





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### Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light amber coloured clear solution without any precipitate in tubes
Reaction of 3.3% Solution	pH : 7.0 ± 0.2 at 25°C
Gel Strength	Not Applicable

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

Sr. No.	Organisms	Results to be achieved
		Growth
1.	<i>Leuconostoc dextranicum</i>	good-luxuriant
2.	<i>Streptococcus cremoris ATCC 19257</i>	good-luxuriant
3.	<i>Lactobacillus lactis ATCC 8000</i>	good-luxuriant
4.	<i>Streptococcus thermophilus ATCC 14485</i>	good-luxuriant

The organisms listed are the minimum that should be used for quality control testing.

### Test Procedure

Refer to appropriate references for standard test procedures.

### Results

Refer to appropriate references for interpretation of results.

### Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

### Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

### Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

### Packaging

**Product Name :** Yeast Glucose Beef Broth

**Product Code :** DM1011

**Available Pack sizes :** 500gm

### References

1. Holzappel, 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, 3<sup>rd</sup> ed., New York: Marcel Dekker, Inc.
3. Atlas R.M, 2004, Handbook of Microbiological Media, Lawrence C. Parks (Ed.), 3rd Edition, CRC Press.





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## Further Information

For further information please contact your local MICROMASTER Representative.



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