

## TM 2378 – TOMATO JUICE BROTH

### INTENDED USE

For cultivation of yeasts and other aciduric microorganisms.

### PRODUCT SUMMARY AND EXPLANATION

Mickle and Breed first described the use of tomato juice in the culture media for Lactobacilli. Tomato Juice Broth is recommended for the cultivation of yeast and other aciduric organisms and is based on the formula of Kulp and White for cultivation of yeasts and other aciduric microorganisms. Ability of tomato juice to enhance the recovery of Lactobacilli was observed by Kulp.

### COMPOSITION

Ingredients	Gms / Ltr
Tomato juice	20.000
Yeast extract	10.000
Dextrose	10.000
Dipotassium phosphate	0.500
Monopotassium phosphate	0.500
Magnesium sulphate	0.200
Sodium chloride	0.010
Ferrous sulphate	0.010
Manganese sulphate	0.010

### PRINCIPLE

Tomato juice acts as a source of carbon, nutrients and proteins. Yeast extract provides nitrogenous compounds and amino acids which stimulate the growth of spoilage strains. Low pH of the medium encourages growth of Lactobacilli while inhibiting the growth of accompanying bacteria. Phosphates buffer the medium. Magnesium sulphate, manganese sulphate and ferrous sulphate provide inorganic ions. Sodium chloride maintains osmotic balance in the medium.

### INSTRUCTION FOR USE

- Dissolve 41.23 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in tubes and 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 opalescent solution may contain slight precipitate.  
**pH (at 25°C)** : 6.7±0.2

### INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Lactobacillus casei</i>	9595	50-100	Luxuriant	35-37°C	40-48 Hours
<i>Lactobacillus leichmannii</i>	4797	50-100	Luxuriant	35-37°C	40-48 Hours
<i>Saccharomyces cerevisiae</i>	9763	50-100	Luxuriant	35-37°C	40-48 Hours
<i>Saccharomyces uvarum</i>	28098	50-100	Luxuriant	35-37°C	40-48 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 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**

1. Mickle and Breed, 1925, Technical Bulletin 110, NY State Agricultural Exp. Station
2. Atlas R. M., 2004, Handbook of Microbiological Media, Lawrence C. Parks (Ed.), 3rd Edition, CRC Press.
3. Kulp J. W. L. and White V., 1932, Science, 76:17
4. Kulp J. W. L., 1927, Science 66:512.
5. Carr J. G., Cutting C. V. and Whiting G. C., (Eds.), 1975, Lactic Acid Bacteria and Food, Academic Press London, UK, pp. 87-102.

 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**  
Revision: 08 Nov., 2019



