

## TRYPTOSE PHOSPHATE BROTH (7278)

### Intended Use

**Tryptose Phosphate Broth** is used for the cultivation of a wide variety of fastidious microorganisms.

### Product Summary and Explanation

Tryptose Phosphate Broth is an infusion-free buffered medium recommended for the cultivation of fastidious, pathogenic microorganisms.

Tryptose Phosphate Broth is valuable in tissue culture procedures, as shown by Ginsberg, Gold, and Jordan. The proteose content of Tryptose Phosphate Broth is considered to be a stimulating factor for cells. Tryptose Phosphate Broth is specified for cell culture procedures.<sup>2</sup>

### Principles of the Procedure

The nitrogen, vitamins, and carbon sources are provided by Enzymatic Digest of Casein. Dextrose is the carbohydrate source. Sodium Chloride maintains the osmotic environment. Disodium Phosphate is the buffering agent.

The addition of 0.1 – 0.2% agar to Tryptose Phosphate Broth facilitates anaerobic growth, and aids in dispersion of reducing substances and CO<sub>2</sub> formed in the environment.<sup>3</sup> The low agar concentration provides suitable conditions for aerobic growth in the upper zone, and microaerophilic and anaerobic growth in the lower zone.

### Formula / Liter

Enzymatic Digest of Casein .....	20 g
Dextrose.....	2 g
Sodium Chloride .....	5 g
Disodium Phosphate.....	2.5 g

Final pH: 7.3 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

### Precautions

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

### Directions

1. Dissolve 29.5 g of the medium in one liter of purified water.
2. Mix thoroughly.
3. Autoclave at 121°C for 15 minutes.

### Quality Control Specifications

**Dehydrated Appearance:** Powder is homogeneous, free flowing, and light beige to beige.

**Prepared Appearance:** Prepared medium is brilliant to clear and gold.

**Expected Cultural Response:** Cultural response in Tryptose Phosphate Broth incubated aerobically at 35 ±2°C and examined for growth after 24 – 48 hours.

Microorganism	Approx. Inoculum (CFU)	Expected Growth
<i>Escherichia coli</i> ATCC® 25922	10 - 300	Good to excellent
<i>Neisseria meningitidis</i> ATCC® 13090	10 - 300	Fair to good
<i>Staphylococcus aureus</i> ATCC® 25923	10 - 300	Fair to excellent
<i>Streptococcus pneumoniae</i> ATCC® 6305	10 - 300	Fair to excellent
<i>Streptococcus pyogenes</i> ATCC® 19615	10 - 300	Good to excellent

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

### **Test Procedure**

Refer to appropriate references for a complete discussion on the application of Tryptose Phosphate Broth.

### **Results**

Refer to appropriate references for results.

### **Storage**

Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

### **Expiration**

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

### **Limitation of the Procedure**

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

### **Packaging**

Tryptose Phosphate Broth	Code No.	7278A	500 g
		7278B	2 kg
		7278C	10 kg

### **References**

1. Ginsberg, Gold, and Jordan. 1955. Proc. Soc. Exp. Biol. Med. **89**:66.
2. Harmon, S. M., D. A. Kautter, D. A. Golden, and E. J. Rhodehamel. 1995. FDA Bacteriological analytical manual, 8<sup>th</sup> ed. AOAC International, Arlington, VA.
3. MacFaddin, J. D. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1, p. 802-804. Williams & Wilkins, Baltimore, MD.

### **Technical Information**

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.