

# TRYPTOSE BROTH (7367)

## Intended Use

**Tryptose Broth** is used for the cultivation of *Brucella* spp. and other fastidious microorganisms.

## Product Summary and Explanation

Tryptose Broth is prepared with Tryptose, and recommended for the cultivation and isolation of pathogenic and saprophytic bacteria. Historically, it was considered necessary to include meat extract or infusion as a nutritional supplement in culture media. Tryptose was developed while studying growth requirements of *Brucella* spp. Huddleson found Tryptose media to be equal or superior to meat infusion media, providing uniformity for the cultivation and differentiation of fastidious organisms.<sup>1</sup>

Tryptose Broth can be used a complete basal medium or supplemented with enrichment. Huddleson used a broth containing 2% Tryptose as an enrichment medium in the isolation of *Brucella* spp. from clinical specimens.<sup>2</sup> McCullough et al. reported that addition of thiamine, dextrose, and iron salts increased growth of *Brucella suis*.<sup>3</sup> Addition of 0.1% agar to Tryptose Broth can increase growth of aerobes and anaerobes in liquid media. Tryptose media are recommended in standard methods for food testing.<sup>4</sup>

## Principles of the Procedure

The nitrogen, vitamins, and carbon sources are provided by Tryptose in Tryptose Broth. Dextrose is the carbohydrate source. Sodium Chloride maintains the osmotic environment.

## Formula / Liter

Tryptose ..... 20 g  
Sodium Chloride ..... 5 g  
Dextrose..... 1 g

Final pH: 7.2 ± 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 26 g of the medium in one liter of purified water.
2. Heat with frequent agitation to obtain solution.
3. Autoclave at 121°C for 15 minutes.

## Quality Control Specifications

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

**Prepared Appearance:** Prepared medium is light to medium yellow-gold and clear to slightly hazy.

**Expected Cultural Response:** Cultural response in Tryptose Broth at 35°C after 48 hours incubation.

Microorganism	Response
<i>Brucella abortus</i> ATCC® 4315	growth
<i>Brucella melitensis</i> ATCC® 4309	growth
<i>Brucella suis</i> ATCC® 4314	growth
<i>Neisseria meningitidis</i> ATCC® 13090	growth
<i>Streptococcus pneumoniae</i> ATCC® 6305	growth
<i>Streptococcus pyogenes</i> ATCC® 19615	growth

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 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**

<b>Tryptose Broth</b>	<b>Code No.</b>	<b>7367A</b>	<b>500 g</b>
		<b>7367B</b>	<b>2 kg</b>
		<b>7367C</b>	<b>10 kg</b>

### **References**

1. **Huddleson, I. F.** 1943. Brucellosis in man and animals. Rev. Ed. The Commonwealth Fund, New York.
2. **Huddleson, I. F.** 1939. Brucellosis in man and animals. 14. Oxford University Press, Oxford, Eng.
3. **McCullough, W. G., R. C. Mills, E. J. Herbst, W. G. Roessler, and C. R. Brewer.** 1947. Studies on the nutritional requirements of *Brucella suis*. J. Bacteriol. **53**:5-15.
4. **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.

### **Technical Information**

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (410)780-5120 or fax us at (410)780-5470.