

## TOMATO JUICE AGAR (7349)

### Intended Use

Tomato Juice Agar is used for the cultivation of lactobacilli.

### Product Summary and Explanation

In 1925, Mickle and Breed reported the use of tomato juice in culture media used for cultivating lactobacilli.<sup>1</sup> Kulp investigated tomato juice on bacterial development and found growth of *L. acidophilus* was enhanced.<sup>2</sup> Tomato Juice Agar, prepared according to Kulp and White's<sup>3</sup> modification, is especially useful in cultivating *L. acidophilus* from clinical specimens and foodstuffs.<sup>4</sup>

### Principles of the Procedure

Tomato Juice Solids is a source of carbon, protein, and nutrients. Enzymatic Digest of Casein provides nitrogen, amino acids, and carbon used for general growth requirements. Peptonized Milk contains lactose as an energy source. Agar is the solidifying agent.

### Formula / Liter

Tomato Juice Solids ..... 20 g  
 Enzymatic Digest of Casein ..... 10 g  
 Peptonized Milk ..... 10 g  
 Agar ..... 11 g

Final pH: 6.1 ± 0.2 at 25°C

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

### Precaution

1. For Laboratory Use.

### Directions

1. Suspend 51 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.

### Quality Control Specifications

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

**Prepared Appearance:** Prepared medium is trace to slightly hazy, and light to dark amber.

**Expected Cultural Response:** Cultural response on Tomato Juice Agar incubated aerobically at 35 ± 2°C and examined for growth after 1 – 3 days.

Microorganism	Approx. Inoculum (CFU)	Expected Results
<i>Lactobacillus casei</i> ATCC® 393	10 - 300	Growth
<i>Lactobacillus fermentum</i> ATCC® 9338	10 - 300	Growth
<i>Lactobacillus plantarum</i> ATCC® 8014	10 - 300	Growth
<i>Saccharomyces cerevisiae</i> ATCC® 9763	10 - 300	Growth

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

### Test Procedure

Refer to appropriate references for specific procedures.

### Results

Refer to appropriate references and procedures 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.

### Limitations of the Procedure

1. Due to varying nutritional requirements, some strains may be encountered that grow poorly or fail to grow on this medium.
2. Organisms other than lactobacilli may grow on this medium. Isolates must be confirmed by appropriate biochemical tests.

### Packaging

<b>Tomato Juice Agar</b>	<b>Code No.</b>	<b>7349A</b>	<b>500 g</b>
		<b>7349B</b>	<b>2 kg</b>
		<b>7349C</b>	<b>10 kg</b>

### References

1. **Mickle and Breed.** 1925. Technical Bulletin 110. NY State Agriculture Exp. Station.
2. **Kulp, W. L.** 1927. Scientific apparatus and laboratory methods. An agar medium for plating *L. acidophilus* and *L. bulgaricus*. Science. **66**:512-513.
3. **Kulp, W. L., and V. White.** 1932. Modified medium for plating *L. acidophilus*. Science. **76**:17-18.
4. **MacFaddin, J. D.** 1985. Media for the isolation-cultivation-identification-maintenance of medical bacteria, vol 1, p. 776-778. 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.