

Technical Specification Sheet



Tomato Juice Agar SKU: 700003648, 700003649, 700003650, 700003651 NCM0280

Intended Use

Tomato Juice Agar is used for the cultivation of lactobacilli in a laboratory setting. Tomato Juice Agar is not intended for use in the diagnosis of disease or other conditions in humans.

Description

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

Typical Formulation

Tomato Juice Solids	20.0 g/L
Enzymatic Digest of Casein	10.0 g/L
Peptonized Milk	10.0 g/L
Agar	11.0 g/L

Final pH: 6.1 ± 0.2 at 25°C

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

Precaution

Refer to SDS

Preparation

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.
4. Cool to 45-50°C.

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.



Technical Specification Sheet



Results

Refer to appropriate references and procedures for results.

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.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. 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.

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.

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