

Technical Information

Tomato Juice Agar, Special

Product Code: DM 1879

Application: - Tomato Juice Agar is used for the cultivation and enumeration of Lactobacilli from saliva and other acidophilic bacteria.

Composition**

Ingredients	Gms / Litre
Tomato juice (400 ml)	20.000
Peptic digest of animal tissue	10.000
Peptonized milk	10.000
Agar	20.000
Final pH (at 25°C)	5.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Lactic acid bacteria are acid-tolerant, non-sporulating rods or cocci widely distributed in nature. They are historically linked to food fermentation. Lactobacilli form the normal flora of the human mouth, intestinal tract and vagina and may therefore be recovered from pathological specimens in the form of contaminants ⁽¹⁾. Tomato juice was included in media for lactobacilli ⁽²⁾ and was found to be good for its growth, particularly *Lactobacillus acidophilus* ⁽³⁾.

Tomato Juice Agar, Special is formulated as per Jay ^(4,6) for the direct plate count of lactobacilli and other acidophilic bacteria, especially from saliva ⁽⁵⁾. Tomato Juice Agar, Special is similar to Tomato Juice Agar, except that the agar concentration is increased to 20 grams per liter and the pH is adjusted to 5.0.

Tomato juice provides an acid environment and is also a source of carbon, and other essential nutrients. Peptonized milk provides lactose, which acts as the energy source. Peptic digest of animal tissue provides nitrogenous, carbonaceous compounds, trace elements and other essential growth nutrients. The low pH of medium inhibits many commensal bacteria and encourages growth of Lactobacilli.

Tomato Juice Agar, Special is more selective than Tomato Juice Agar ⁽⁵⁾.

Methodology

Suspend 60 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

Medium amber coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 6.0% w/v aqueous solution at 25°C. pH : 5.0±0.2

pH range

4.80-5.20

Cultural Response/Characteristics

DM 1879: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Lactobacillus acidophilus</i> ATCC 4356	50-100	luxuriant	>=50%
<i>Lactobacillus casei</i> ATCC 9595	50-100	luxuriant	>=50%
<i>Lactobacillus leichmannii</i> ATCC 4797	50-100	luxuriant	>=50%
<i>Staphylococcus aureus</i> ATCC 25923	>=10 ³	inhibited	0%



Dehydrated Culture Media
Bases / Media Supplements

Storage and Shelf Life

Further Reading

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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