Technical Information

Tomato Juice Agar

Product Code: DM 1048

Application: Tomato Juice Agar is used for the cultivation and enumeration of *Lactobacilli.*

Composition**

Ingredients	Gms / Litre
Tomato juice (400 ml)	20.000
Casein enzymic hydrolysate	10.000
Peptonized milk	10.000
Agar	11.000
Final pH (at 25°C)	6.1±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Tomato Juice Agar is based on modified formula of Kulp and White [3] recommended for the isolation, cultivation and enumeration of Lactobacilli, especially *L. acidophilus* from clinical specimens and foodstuffs [1,2,4].

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. Casein enzymic hydrolysate 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.*

Methodology

Suspend 51 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 1.1% Agar gel.

Colour and Clarity of prepared medium
Medium amber coloured clear to slightly opalescent gel forms in Petri plates.

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

pH Range:- 5.90-6.30

Cultural Response/Characteristics
DM 1048: Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Lactobacillus acidophilus ATCC 4356	50-100	luxuriant	>=70%
Lactobacillus casei ATCC 9595	50-100	luxuriant	>=70%
Lactobacillus leichmannii ATCC 4797	50-100	luxuriant	>=70%
Staphylococcus aureus ATCC 25923	50-100	luxuriant	>=70%

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Mickle F. L. and Breed R. S., 1925, Technical Bulletin 110, N.Y. State Agriculture Exp. Station, Geneva, N.Y. 2.Kulp W. L., 1927, Science 66:5 12.
3. Kulp W. L. and White V., 1932, Science 76:17.
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, Md.

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