17216 Tomato Juice Agar NutriSelect® Plus

For the cultivation and enumeration of lactobacilli.

Composition:

Ingredients	Grams/Litre
Tomato juice (400 ml)	20.0
Casein enzymic hydrolysate	10.0
Peptonized milk	10.1
Agar	11.0

Final pH 6.1 +/- 0.2 at 25°C

Store granulated media between 10-30°C in tightly closed container and the prepared medium at 2-8°C. Avoid freezing and overheating. Once opened keep powdered medium closed to avoid hydration. Use before expiry date on the label.

Appearance(color): Faint yellow and Faint beige and Faint brown, free flowing powder
Gel strength: Firm, comparable with 1.1% agar gel
Color and Clarity: Medium amber coloured clear to slightly opalescent gel forms in Petri plates.

Directions:
Suspend 51 g in 1 litre distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:
Tomato juice was included in media for lactobacilli (2) and was found to be advantageous for its growth, particularly *Lactobacillus acidophilus* (3). Later, Tomato Juice Agar is modified by Kulp and White (1) and is recommended for the isolation, cultivation, and enumeration of lactobacilli, especially *L. acidophilus* from clinical specimens and foodstuffs (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.

Cultural characteristics observed after an incubation at 35-37°C for 40-48 hrs.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Lactobacillus acidophilus (4356/00098)	50-100	+++	≥70%
Lactobacillus casei (9595/-)	50-100	+++	≥70%
Lactobacillus leichmannii (4797)	50-100	+++	≥70%
Staphylococcus aureus subsp. Aureus (25923/00034)	50-100	+++	≥70%

References:
1. Kulp W. L. and White V., 1932, Science 76:17.
2. Mickle F. L. and Breed R. S., 1925, Technical Bulletin 110, N.Y. State Agriculture Exp. Station, Geneva, N.Y.
3. Kulp W. L., 1927, Science 66:512.
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, Md.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.