



M17 Agar | AS-1280

Used for cultivation and enumeration of lactic *streptococci* in milk and dairy products, also used for the differentiation of bacteriophages infecting lactic *streptococci*.

M17 Agar is a culture medium that is designed for the selective culture and enumeration of lactic *streptococci*. It was created by Terzaghi and Sandine and offers these fastidious bacteria the ideal growing condition. To provide vital nutrients, the medium contains a well-balanced blend of peptones, yeast extract, and lactose. The di-sodium-β-glycerophosphate serves as a buffer to preserve pH stability, which is essential for the growth and recovery of lactic *streptococci*. Ascorbic acid and magnesium sulfate are two other ingredients that enhance bacterial growth and metabolic activity.

The dairy industry uses M17 Agar to isolate and enumeration lactic *streptococci*, especially *Streptococcus thermophilus*. It is an essential instrument for quality control and the generation of starting cultures due to its selective nature and ability for strong growth.

Composition (gr/L)

Peptone from Casein	2.5
Peptone from Soymeal	5
Peptone from Meat	2.5
Yeast Extract	2.5
Meat Extract	5

Lactose	5
Ascorbic Acid	0.5
Sodium β-glycerophosphate	19
Magnesium Sulfate	0.25
Agar	12.75
Final pH at 25°C	7.2 ± 0.2

Preparation

Dissolve 55 g of the powder into 1 liter distilled water. Autoclave at 121 °C for 15 minutes.

Quality Control

Dehydrated Appearance: Beige to medium tan, free flowing, homogeneous.

Prepared Appearance: Light to medium amber, very slightly to slightly opalescent, no significant precipitate.

Reaction of 5.5% Solution at 25°C: pH 7.2 ± 0.2

Microbial Test Results

incubate at 30 ± 2°C for *Lactococcus lactis* subsp. *Cremoris* and the remaining organisms at 35 ± 2°C for 40 – 48 hours.

Organism (ATCC)	Recovery
<i>Lactobacillus delbrueckii</i> subsp. <i>Bulgaricus</i> (11842)	None to poor
<i>Lactococcus lactis</i> subsp. <i>Cremoris</i> (19257)	Good
<i>Lactococcus lactis</i> subsp. <i>Cremoris</i> (9625)	Good
<i>Streptococcus thermophilus</i> (19258)	Good

Storage

Keep the container at 15-30 °C and prepared medium at 2-8 °C.