M17 Broth | AS-1281

Used for isolating lactic *streptococci* from yogurt, cheese starters and other dairy products.

A nutrient-rich medium developed especially for the cultivation and counting of lactic *streptococci* is M17 broth. M17 broth provides better growth conditions than M16 medium, based on the initial research of Terzaghi and Sandine. Lactic *streptococci* are fastidious organisms that need a complicated nutritional environment for optimal growth. Di-sodium-β-glycerophosphate must be added to keep the buffering condition for pH, avoid bacterial damage, and ensure strong cell recovery. The critical nutrients for the growth and metabolism of lactic *streptococci* are provided by the medium's composition, which includes peptones, yeast extract, beef extract, lactose, ascorbic acid, and magnesium sulfate. In the dairy sector, M17 broth is frequently used to cultivate starter cultures and isolate lactic *streptococci* from a variety of samples.

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 Sulphate	0.25
Final pH at 25°C	7.2 ± 0.2

Preparation

Dissolve 42.5 g of the powder into 1 litter distilled water. Autoclave at 121 °C for 15 minutes.

Quality Control

Dehydrated Appearance: Beige to medium tan, free-flowing, homogeneous.
Prepared Appearance: Light medium to medium amber, clear to very slightly opalescent, no significant precipitate.
Reaction of 4.25% 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**
Lactobacillus delbrueckii subsp. Bulgaricus (11842)	None to poor
Lactococcus lactis subsp. Cremoris (19257)	Good
Lactococcus lactis subsp. Cremoris (9625)	Good
Streptococcus thermophiles (19258)	Good

Storage

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