APT Broth | AS-1121

Used for cultivating heterofermentative lactic acid bacteria with high thiamine content requirement.

APT (All-purpose Tween 80) Broth is a nutrient-rich medium used to cultivate lactic acid bacteria like *Lactobacillus viridescens* ATCC 12706, which is necessary for thiamine microbiological assays.

APT Broth's composition is like APT Agar. The American Public Health Association (APHA) recommends it for microbiological examination of lactic acid bacteria in meat, dairy products, and vegetable.

APT Broth includes yeast extract, dextrose, polysorbate 80, and casein enzymic hydrolysate to supports the growth of a wide variety of microorganisms, including potential contaminations like *coliform* bacteria, even though it was originally intended for these fastidious microorganisms. For lactic acid bacteria to grow, metallic salts must be present.

Composition (gr/L)	
Casein enzymic hydrolysate	12.5
Yeast extract	7.5
Dextrose	10
Sodium citrate	5
Sodium chloride	5
Dipotassium phosphate	5
Magnesium sulphate	0.8
Manganese chloride	0.14
Ferrous sulphate	0.04
Polysorbate 80	0.2
Thiamine hydrochloride	0.001
Final pH at 25°C	6.7 ± 0.2

Preparation

Dissolve 46.2 g of the powder into 1 litter distilled water. If necessary, heat the medium to dissolve completely. Autoclave at 121 °C for 15 minutes. DO NOT OVERHEAT.

Quality Control

Dehydrated Appearance: Cream to yellow, free-flowing, homogeneous.
Prepared Appearance: Yellow, Clear solution.
Reaction of 4.62% Solution at 25°C: pH 6.7 ± 0.2

Microbial Test Results

Incubate at 35±2 °C for 18 to 24 hours.

Organism (ATCC)	**Recovery**
Lactobacillus acidophilus (4356)	Good
Lactobacillus viridescens (12706)	Good
Leuconostoc mesenteroides (12291)	Good
Lactobacillus casei (9595)	Good
Lactobacillus plantarum (8014)	Good

Storage

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