

Technical Information

APT Broth

Product Code: DM 1227

Application: APT Broth is recommended for the cultivation of heterofermentative lactic acid bacteria requiring high thiamine content.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	12.500
Yeast extract	7.500
Dextrose	10.000
Sodium citrate	5.000
Sodium chloride	5.000
Dipotassium phosphate	5.000
Magnesium sulphate	0.800
Manganese chloride	0.140
Ferrous sulphate	0.040
Polysorbate 80	0.200
Thiamine hydrochloride	0.001
Final pH (at 25°C)	6.7±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Evans and Niven ⁽¹⁾ formulated APT (All purpose Tween 80) Broth for cultivation and maintenance of *Lactobacillus viridescens* ATCC 12706 which is used in the microbiological assay of thiamine. APT Broth is recommended for the cultivation of hetero fermentative lactic acidbacteria requiring high thiamine content. The composition of APT Broth is similar to APT Agar, which has been recommended by APHA for the microbiological examination of different diary products such as cured meats, souerkraut, etc. ⁽²⁾. Although this medium was used for Lactobacilli, yet being rich in nutriencnts like casein enzymic hydrolysate, yeast extract, dextrose, and polysorbate 80 that support growth of commensal microflora including coliform bacteria. The metallic salts are essential for the replication of Lactobacilli or lactic Streptococci. Polysorbate 80 acts as fatty acid source.

Methodology

Suspend 46.2 grams of powder media in 1000 ml distilled water. Shake well and heat if necessary to dissolve the medium completely.

Dispense as pre requirement. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. AVOID EXCESSIVE HEATING.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured clear solution in tubes

Reaction

Reaction of 4.62% w/v aqueous solution at 25°C. pH : 6.7±0.2

pH Range:- 6.50-6.90

Cultural Response/Characteristics

DM 1227: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth
<i>Lactobacillus acidophilus</i> ATCC 4356	50-100	good-luxuriant
<i>Lactobacillus viridescens</i> ATCC 12706	50-100	good-luxuriant
<i>Leuconostoc mesenteroides</i> ATCC 12291	50-100	good-luxuriant
<i>Lactobacillus casei</i> ATCC 9595	50-100	good-luxuriant
<i>Lactobacillus plantarum</i> ATCC 8014	50-100	good-luxuriant

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: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1. Evans and Niven, 1951, J. Bact., 62:599.
2. Downes F. P. and Ito K. (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th ed., APHA, Washington D.C.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specifications for identity and performance parameters.

