

TM 1462 – APT BROTH

INTENDED USE

For cultivation of hetero-fermentative Lactic acid bacteria by extra thiamine content.

PRODUCT SUMMARY AND EXPLANATION

APT (All purpose Tween 80) Broth is formulated as per Evans and Niven for cultivation and maintenance of *Lactobacillus viridescens* ATCC 12706 used in the microbiological assay of thiamine. APT Broth is recommended for the cultivation of hetero fermentative lactic acid bacteria requiring high thiamine content. The composition of APT Broth is similar to APT Agar, which is formulated as recommended by APHA for the microbiological examination of cured meats, souerkraut, except agar. APT Broth is used for growing *Weissella viridescens* ATCC 12706 (formerly *Lactobacillus viridescens*) and also for preparing the inoculum for thiamine assay.

COMPOSITION

| Ingredients | Gms / Ltr |
|--------------------------------|-----------|
| Tryptone | 12.500 |
| Yeast extract | 7.500 |
| Dextrose (Glucose) | 10.000 |
| Sodium citrate | 5.000 |
| Sodium chloride | 5.000 |
| Dipotassium hydrogen phosphate | 5.000 |
| Magnesium sulphate | 0.800 |
| Manganese chloride | 0.140 |
| Ferrous sulphate | 0.040 |
| Polysorbate 80 (Tween 80) | 0.200 |
| Thiamine hydrochloride | 0.001 |

PRINCIPLE

Although this medium was devised for Lactobacilli, it is rich due to nutrients like Tryptone, yeast extract, dextrose, polysorbate 80 and hence can 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.

INSTRUCTION FOR USE

- Dissolve 46.2 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- AVOID EXCESSIVE HEATING.

QUALITY CONTROL SPECIFICATIONS

| | |
|--------------------------------------|--|
| Appearance of Powder | : Cream to yellow homogeneous free flowing powder. |
| Appearance of prepared medium | : Yellow coloured clear solution in tubes. |
| pH (at 25°C) | : 6.7±0.2 |



INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Incubation Temperature | Incubation Period |
|----------------------------------|-------|-------------------|----------------|------------------------|-------------------|
| <i>Lactobacillus acidophilus</i> | 4356 | 50-100 | Good-luxuriant | 35-37°C | 18-24 Hours |
| <i>Weissella viridescens</i> | 12706 | 50-100 | Good-luxuriant | 35-37°C | 18-24 Hours |
| <i>Leuconostoc mesenteroides</i> | 12291 | 50-100 | Good-luxuriant | 35-37°C | 18-24 Hours |
| <i>Lactobacillus casei</i> | 9595 | 50-100 | Good-luxuriant | 35-37°C | 18-24 Hours |
| <i>Lactobacillus plantarum</i> | 8014 | 50-100 | Good-luxuriant | 35-37°C | 18-24 Hours |

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.










DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Evans and Niven, 1951, J. Bact., 62:599.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.



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|  GMP Good Manufacturing Practices Certified |  Best Before |  Quantity |  Catalogue Number |  Manufacturer |
|  Temperature Unit |  Lot / Batch Number |  Consults Instructions for Use |  QR Code | |

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
Revision: 08 Nov., 2019