

TM 1323 – APT AGAR

INTENDED USE

For cultivation of hetero-fermentative Lactobacilli and other organisms by extra thiamine content.

PRODUCT SUMMARY AND EXPLANATION

APT (All purpose Tween 80) Agar is formulated as per Evans and Niven for cultivation and maintenance of Lactobacilli. This medium is also used in the microbiological assay of thiamine. *Lactobacillus* forms a major part of lactic acid bacteria group which are abundant in nature. They convert lactose and other sugars to lactic acid and therefore are named as *Lactobacillus*. They are responsible for spoilage of foods like meat, dairy etc. However APT Agar can also be used for cultivation of heterofermentative lactic acid bacteria requiring high thiamine content. APT Agar is also used as a maintenance medium since it preserves the viability and sensitivity of *Weissella viridescens* ATCC 12706 (formerly *Lactobacillus viridescens*)

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
Agar	15.000

PRINCIPLE

APT Agar contains tryptone, which acts as a source of carbon, nitrogen, vitamins and minerals. Yeast extract provides vitamin and B-complex nutrients, which is required for the growth of bacteria. Dextrose is the carbohydrate source. Manganese chloride, magnesium sulphate and ferrous sulphate provide ions used in replication by lactobacilli. Polysorbate 80 is a source of fatty acids required by lactobacilli.

INSTRUCTION FOR USE

- Dissolve 61.18 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- AVOID EXCESSIVE HEATING. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates or tubes or as desired.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 6.7±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

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



 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**
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