APT Agar

M226

Intended Use:

Recommended for cultivation of heterofermentative Lactobacilli and other organisms requiring a high thiamine content.

Composition**

Ingredients	Gms / Litre
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
Final pH (at 25°C)	6.7±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 61.18 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. AVOID EXCESSIVE HEATING.

Principle And Interpretation

APT (All purpose Tween 80) Agar is formulated as per Evans and Niven (1) 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 (2). APT Agar is also used as a maintenance medium since it preserves the viability and sensitivity of *Weissella viridescens* ATCC12706 (formerly *Lactobacillus viridescens*)

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.

Type of specimen

Food samples- cured meat products, tinned foods, fruit juices.

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (2).
After use, contaminated materials must be sterilized by autoclaving before discarding.