

M17 Agar

Catalog : HB0390-1

M17 Agar is used for isolating and enumerating lactic streptococci in yogurt, cheese starters and other dairy products.

Approximate Formula:

Ingredients	gm/liter
Papaic Digest of Soybean Meal	5.0
Pancreatic Digest of Casein	2.5
Peptic Digest of Animal Tissue	2.5
Yeast Extract	2.5
Beef Extract	5.0
Lactose	5.0
Ascorbic Acid	0.5
Sodium β -glycerophosphate	19.0
Magnesium sulfate	0.25
Agar	12.75
Final pH 7.2 $\pm$ 0.2 at 25°C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 55.0g of the medium in one liter of distilled water or deionized water. Mix well and heat with frequent agitation to completely dissolve the powder. Dispense into flasks. Sterilize in an autoclave at 121°C (15 lbs.) for 15 minutes.

Principle and Interpretation:

M17 Agar contains peptones and meat derivatives as sources of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins which stimulate bacterial growth. Sodium β -glycero phosphate buffers the medium as acid is produced from fermentation of lactose. Ascorbic acid stimulates growth of lactic streptococci. Magnesium sulfate provides essential ions for growth. Agar is the solidifying agent.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish solid.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

M17 Agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36 $\pm$ 1°C in an anaerobic atmosphere for 24-72h.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery
<i>Lactobacillus acidophilus</i>	CICC 6005	20-100	Luxuriant	$\geq 70\%$
<i>Streptococcus acidilactici</i>	ATCC 19257	20-100	Luxuriant	$\geq 70\%$

References:

1. Reiter and Oram. 1962. J. Dairy Res. 29:63.
2. Lowrie and Pearce. 1971. J. Dairy Sci. Technol. 6:166.
3. Terzaghi and Sandine. 1975. Appl. Microbiol. 29:807.
4. Shankar and Davies. 1977. J. Soc. Dairy Tech. 30:28.
5. International Dairy Federation. 1981. Identification and enumeration of microorganisms in fermented milks. Joint IDF/ISO/AOAC Group E44.