

M17 Broth

Catalog : HB0391-3-500

M17 Broth is used for detection and enrichment of lactic acid bacteria in milk and 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
Final pH 7.2 $\pm$ 0.2 at 25°C	

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

Directions:

Suspend 42.3g of the medium in one liter of distilled or deionized water. Mix well and heat with frequent agitation to completely dissolve the powder. Sterilize in an autoclave at 121°C (15 lbs) for 15 minute.

Principle and Interpretation:

Papaic digest of soybean meal, Pancreatic digest of casein, Peptic digest of animal tissue and Beef extract are sources of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins which stimulate bacterial growth. Sodium β -Glycerophosphate 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.

Appearance:

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

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 Broth 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	Remarks
<i>Lactobacillus acidophilus</i>	CICC 6005	10-100	Luxuriant	Turbid
<i>Streptococcus acidilactici</i>	ATCC 19257	10-100	Luxuriant	Turbid

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.
6. Richter and Vedamuthu 2001. In Downes and Ito (ed.), Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.