

MRS Agar

Catalog: HB0384-17

MRS Agar is used for isolation or count of lactic acid bacteria in food.

Approximate Formula:

Ingredients	gm/liter
Peptic Digest of Animal Tissue	10.0
Beef extract	8.0
Yeast extract	4.0
Glucose	20.0
Dipotassium hydrogen phosphate	2.0
Hydrogen diammonium citrate	2.0
Sodium acetate	5.0
Magnesium sulfate	0.2
Manganese sulfate	0.04
Agar	14.0
Tween 80	1.0
Final pH6.5±0.2 at 25°C	

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

Directions:

Suspend 66.2g of the medium in 1L of distilled water. Mix thoroughly. Heat with frequent agitation and boil for 1minute to completely dissolve the powder, dispense, sterilize in an autoclave at 121°C for 15 minutes.

Principle and Interpretation:

Peptic digest of animal tissue, beef extract, yeast extract provide nitrogen source, vitamins, growth factors; Glucose is the fermentable sugar; Dipotassium hydrogen phosphate is acid-base buffer; Triammonium citrate, magnesium sulfate, manganese sulfate, tween-80 and sodium acetate provide growth factors for the culture of various lactic acid bacteria, and their components can also inhibit some miscellaneous bacteria and neutralize cytotoxic substances, providing a good growth environment for lactic acid bacteria. Agar is the solidifying agent of the culture medium.

Appearance:

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

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:

MRS 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 medium per label directions. Inoculate and incubate at 36±1°C for 48±2 hours.

Microorganism	Strains Number	Inoculum (CFU)	Recovery
<i>Bulgarian subspecies of Lactobacillus deri</i>	CICC 6032	20-200	Good
<i>Streptococcus thermophilus</i>	CICC 6038	20-200	Good
<i>Bifidobacterium infantile (anaerobic culture)</i>	CICC 6069	20-200	Good
<i>Lactobacillus acidophilus</i>	CICC 6005	20-200	Good

References:

1. deMan, Rogosa and Sharpe. 1960. J. Appl. Bacteriol. 23:130.
2. Murray, Baron, Jorgensen, Landry and Pfaller (ed.). 2007. Manual of clinical microbiology, 9th ed.American Society for Microbiology, Washington, D.C.
3. Downes and Ito(ed.). 2001. Compendium of methods for the microbiological examination of foods,4th ed. American Public Health Association, Washington, D.C.