

**LACTOBACILLUS SELECTION AGAR BASE****TM 1003**

For isolation and enumeration of *Lactobacillus* from foods

Composition

Ingredients	Gms/Ltr.
Sodium acetate	25.00
Dextrose	20.00
Agar	15.00
Casein enzymatic hydrolysate	10.00
Monopotassium hydrogen phosphate	6.00
Yeast extract	5.00
Ammonium citrate	2.00
Polysorbate 80	1.00
Magnesium sulphate	0.575
Manganese sulphate	0.12
Ferrous sulphate	0.034

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 84.73gms in 1000ml of distilled water containing 1.32 ml glacial acetic acid. Gently heat to boiling with gentle swirling and dissolve the medium completely. DO NOT AUTOCLAVE. Avoid overheating. Dispense the medium into Petri plates.

Appearance: Yellow colour, clear to slightly opalescent gel

pH (at 25°C): 5.5± 0.2

Principle

LACTOBACILLUS SELECTION AGAR BASE is used for isolation and cultivation of *Lactobacillus* from foods. "Rogosa et al" developed this medium. Medium contains Casein enzymatic hydrolysate, Dextrose and Yeast extract are the carbon, nitrogen and vitamin sources used to satisfy general growth requirements in Lactobacilli. Tween 80 is a surfactant, which supplies fatty acids required for facilitating metabolism uptake of nutrients by *Lactobacilli*. Sodium acetate and Ammonium citrate acts as a selective inhibitory agent for e.g., *Streptococci*, moulds and many other microorganisms. Magnesium sulphate and Manganese sulphate provide cations used in metabolism. Monopotassium hydrogen phosphate provides good buffering action in the media. The low pH is tolerated by lactobacilli not by many other organisms. Phosphate, together with acetate and acetic acid, stabilizes the pH. Lactobacilli are micro aerophillic and generally require layer plates for aerobic cultivation on solid media. Organisms other than lactobacilli may grow in these media. Isolates of Lactobacilli confirmation must be done by biochemical testing.

Interpretation

Culture characteristics observed after inoculating (10³CFU/ml), for incubation at 35 - 37°C for 48 hours.

PRODUCT DATA SHEET

Microorganism	ATCC	* Inoculum (CFU)	Growth
<i>Lactobacillus casei</i>	9595	85	Luxuriant
<i>Lactobacillus fermentum</i>	9338	83	Good
<i>Lactobacillus acidophilus</i>	4356	82	Luxuriant
<i>Lactobacillus plantarum</i>	8014	80	Luxuriant
<i>Escherichia coli</i>	25922	80	Inhibited

References

1. Ellis and Sarles, 1958, J. Bacteriol., 75:272.
2. Rogosa, Mitchell and Wiseman, 1951, J. Bacteriol., 62:132.
3. Rogosa, Mitchell and Wiseman, 1951, J. Dental Res., 30:682.