



PRODUCT DATA SHEET

LACTIC BACTERIA DIFFERENTIAL BROTH

TM 643

For differentiation of homo-fermentative and hetero-fermentative lactic acid bacteria

Composition

Ingredients	Gms/Ltr.
Casein enzymatic hydrolysate	10.00
Casein acid hydrolysate	3.00
Fructose	2.50
Monopotassium phosphate	2.50
Papaic digest of soyabean meal	1.50
Yeast extract	1.00
Bromocresol green	0.055

* 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 20.5gms in 1000ml of distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes. Cool the medium at 45 – 50°C and dispense into sterile tubes.

Appearance: Blue color, clear solution

pH (at 25°C): 7.0 ± 0.2

Principle

LACTIC BACTERIA DIFFERENTIAL AGAR is used for differentiation of homo-fermentative and hetero-fermentative lactic acid bacteria. This medium is prepared according to the formula recommended by “McDonald et al”. *Lactobacillus* species grow poorly on nonselective culture media and require special nutrients. The homo fermentative species produce lactic acid (<85%) as the sole end product, while the hetero fermentative species produce lactic acid, CO₂ and ethanol/acetate. Medium composed of Casein enzymatic hydrolysate and Casein acid hydrolysate provides the nitrogenous compounds. Fructose acts as a source of carbon for *Lactobacilli*. Sodium chloride maintains the osmotic equilibrium of the medium. Sodium acetate inhibits contaminating bacteria and restricts the swarming of lactic acid bacteria.

Interpretation

Culture characteristics observed after inoculating (10³CFU / ml), for incubation period of 18 – 48 hours at 35 - 37°C.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth
<i>Lactobacillus casei</i>	9595	10 ³	Luxuriant
<i>Lactobacillus lactis</i>	8000	10 ³	Luxuriant
<i>Streptococcus cremoris</i>	19257	10 ³	Luxuriant

References

1. McDonald L.C., McFeters R.F., Daeschel M.A. and Fleming H.P., 1987, Appl. Environ. Microbiol., 53:1382.