

ELLIKER BROTH (LACTOBACILLI BROTH)
TM 316

For cultivation of Lactobacilli & Streptococci which are important in dairy industry

Composition

Ingredients	Gms/Ltr.
Casein enzymatic hydrolysate	20.00
Yeast extract	5.00
Saccharose	5.00
Lactose	5.00
Dextrose	5.00
Sodium chloride	4.00
Gelatin	2.50
Sodium acetate	1.50
Ascorbic acid	0.50

* 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 48.50gms of the medium in 1000ml of purified water or distilled water. Dispense into tubes. Gently heat to dissolve the medium completely. Sterilize by autoclaving at 15psi (at 121°C) for 15 minutes. Cool to room temperature before use.

Appearance: Light amber colour, clear solution

pH (at 25°C): 6.8 ± 0.2

Principle

ELLIKER BROTH (LACTOBACILLI BROTH) is used for cultivation of Lactobacilli & Streptococci which are important in dairy industry. Elliker Broth is specially recommended for *Lactobacillus* & *Streptococcus* species by APHA. Scientists Elliker, Anderson and Hannesson developed Elliker Broth, which was further modified by McLaughlin which is useful for determining the cause of acid defects in products examples cheese, curds, milks etc. This medium contains Casein enzymatic hydrolysate and Gelatin which provides nitrogen to the microorganisms. Yeast extract serves as the source of vitamin (specifically B - complex). Dextrose, Lactose and Saccharose are the fermentable carbohydrates, those serves the energy sources. Sodium acetate has an inhibitory effect on gram-negative bacteria and moulds, without affecting the growth of lactobacilli. Sodium chloride maintains the osmotic equilibrium of the medium. The addition of Ascorbic acid, medium becomes slightly acidic which supports the growth of Lactobacilli.

Interpretation

Cultural characteristics observed after inoculation (10³CFU/ml), on incubation at 35 - 37°C for 24 - 48 hours.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth
<i>Lactobacillus plantarum</i>	8014	10 ³	Good
<i>Lactobacillus casei</i>	7469	10 ³	Good
<i>Streptococcus thermophilus</i>	14485	10 ³	Good

References

1. American Type Culture Collection, Manassas Va., U.S.A.
2. Elliker P. R., Anderson A. W. and Hannesson G., J. Dairy Sci., 39:1611. (1956).
3. McLaughlin, J. Bacteriol., 51:560. (1946).
4. Marshall R., (Ed.), Standard Methods for the Examination of Dairy Products, 16th Ed., American Public Health Association, Washington, D.C. (1946).