Liver Infusion Agar (i23095)

Used for the cultivation of a variety of organisms, particularly *Brucella* and anaerobes.

Industry: Clinical

Principles & Uses

Brucellosis, a zoonotic disease, primarily spreads through contact with infected animals, consumption of contaminated milk, milk products, and meat. To isolate *Brucella* strains, specific media like Liver Infusion Agar, rich in nutritive factors, is preferred for its ability to support the growth of fastidious pathogens. Crystal violet can be added to suppress gram-positive organisms when isolating *Brucella* from contaminated milk. Additionally, heated horse or rabbit serum, when present at 5%, enhances *Brucella* growth on this agar. Liver Infusion Agar, at half strength, serves as a base for Entamoeba medium used in cultivating *Entamoeba histolytica*. The essential components of Liver Infusion media include peptones and infusions for nitrogen, amino acids, vitamins, and carbon sources, while sodium chloride ensures osmotic balance. Agar serves as the solidifying agent, facilitating the formation of a medium conducive to the growth of various microorganisms.

Composition (gr/L)

Beef liver infusion 20, Proteose Peptone 10, Sodium Chloride 5, Agar 20.

Final pH at 25°C 6.9 ± 0.2

Preparation from dehydrated Powder

Suspend 55 grams of the powder in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Autoclave at 121°C for 15 minutes.

Quality Control

Dehydrated Appearance: Light yellow to light brown, free-flowing, homogeneous.

Prepared Appearance: Amber, slightly opalescent.

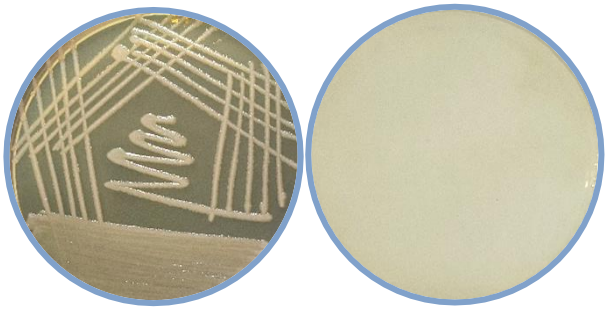
Reaction of 5.5 % Solution at 25°C: pH 6.9 ± 0.2

Cultural Response

Cultural characteristics were observed after incubation at 35 ± 2°C for 24 - 48 hours (anaerobic condition for *Clostridium* species).

Organism (ATCC*)	Growth
Streptococcus mitis (9895)	Very good
Clostridium sporogenes (11437)	Good
Brucella suis (6597)	Inhibited

*ATCC is a registered trade mark of the American Type Culture Collection.



Clostridium sporogenes (left). Prepared Culture Media (right).

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.