

## Liver Infusion Broth (i23364)

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

Industry: Clinical

## Principles & Uses

Liver Infusion Broth is designed to create an anaerobic environment, especially suitable for the growth of anaerobic microorganisms like *Clostridium* species. In the context of *Brucella*, a gram-negative intracellular parasite causing infections in animals and humans, Tryptose Agar with 5% serum is commonly used for isolation. However, *Brucella* growth is significantly enhanced on Liver Infusion media, which provides essential nutrients such as beef liver Infusion and proteose peptone which provide nitrogen, amino acids, vitamins, and carbon sources. Sodium chloride maintains osmotic balance, and the reducing substances in beef liver Infusion contribute to an anaerobic setting, accommodating even fastidious anaerobes. Half-strength Liver Infusion Broth is applicable for isolating *Entamoeba histolytica*. The infectious nature of *Brucella* necessitates careful handling of cultures.

## Composition (gr/L)

Beef liver (infusion from 500 gr) 20, Proteose Peptone 10, Sodium Chloride 5.

Final pH at 25°C 6.9 ± 0.2

## Preparation from dehydrated Powder

Suspend 35 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 yellow, free-flowing, homogeneous.

Prepared Appearance: Amber, slightly opalescent.

Reaction of 3.5 % 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
<i>Streptococcus mitis</i> (6305)	Good
<i>Clostridium sporogenes</i> (11437)	Good
<i>Brucella suis</i> (4314)	Good

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



*Clostridium sporogenes* (left). Prepared culture Medium (right).

## Storage

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