Brucella Agar

Cat. 1012

For the cultivation of Brucella from foods and dairy products samples.

Practical information

Aplications	Categories
Selective enrichment	Brucella

Industry: Food / Dairy products

Principles and uses

Brucella Agar, being rich in nutrients and growth factors, is very suitable to grow and isolate fastidious microorganisms.

It is used to successfully isolate Brucella from diverse specimens contaminated with microflora, both saprophytes and commensals, in foods samples. This medium is also used to produce clostridial toxins. It can also be utilized in the isolation of many anaerobes both of human and animal origin. Food samples can be inoculated directly on the plates of Brucella Agar.

Meat peptone and casein peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly of the B-group. Sodium bisulfite is the reducing agent; Sodium chloride supplies essential electrolytes for transport and osmotic balance. Dextrose is the fermentable carbohydrate providing carbon and energy. The addition of blood provides extra growth factors for fastidious microorganisms. Bacteriological agar is the solidifying agent. The addition of the Brucella Supplement (Cat. 6017) enhances the medium's selectivity for the growth of Brucella. For a better growth, Polyenrichment Supplement (Cat. 6011) and Polyenrichment CC Supplement (Cat. 6071) may be added if required.

Brucella species are level 3 pathogens and cause brucellosis, a zoonotic disease. It is usually transmitted through milk, dairy products, meat and direct contact with infected animals.

Note: To obtain an excellent medium for anaerobes, add 5 mg/ml of hemin and 10 µg/ml of vitamin K1 (fitomenadione) to the basal medium. Inoculate and incubate in anaerobic conditions

Formula in g/L

Bacteriological agar	15	Casein peptone	10
Dextrose	1	Meat peptone	10
Sodium bisulfite	0,1	Sodium chloride	5
Yeast extract	2		

Typical formula g/L * Adjusted and/or supplemented as required to meet performance criteria.

Preparation

Suspend 43,1 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121 ºC for 15 minutes. Cool to 45-50 ºC and aseptically add 5% sterile sheep defibrinated blood. Rotate the flask or bottle slowly to create a homogeneous solution. Homogenize gently and dispense into Petri dishes. Brucella Agar can be made selective aseptically adding two vials of Brucella Supplement (Cat. 6017).

Instructions for use

- Inoculate on surface. Parallel striae with the handle or hyssop.
- Incubate at 35±2 ºC in duplicate: one plate under normal conditions and the other under anaerobic conditions in a 5-10% CO2 atmosphere.
- Observe after 24-72 hours.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)

w/o rests	Fine powder	Light beige	Amber, slightly opalescent	7,0±0,2

Microbiological test

The microbiological test should be carried out by the end-user laboratory.

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

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Smith Louis Ds. The Pathogenic Anaerobic Bacteria. C. Thomas Pub. Springfield, Il, 1975.
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