BRUCELLA BROTH ISO 10272

CAT Nº: 1223

For the cultivation of *Brucella* from diverse materials of medical and sanitary interest

FORMULA IN g/l

Enzymatic digest of animal tissue	10.00	Yeast Extract	2.00
Enzymatic digest of casein	10.00	Glucose	1.00
Sodium Chloride	5.00	Sodium hydrogen sulfite	0.10

Final pH 7.0 ± 0.2 at 25ºC

PREPARATION

Suspend 28.1 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. Dispense into tubes and sterilize in autoclave at 121°C for 15 minutes. The prepared medium should be stored at 2-8°C. The color is clear amber, slightly opalescent.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

USES

BRUCELLA BROTH is a general purpose medium elaborated according to the APHA formula. Rich in nutrients and growth factors, it is very suitable to grow and isolate fastidious microorganisms, including *Campylobacter, Streptococcus* and *Neisseria.*

It is used extensively to isolate *Brucella* from diverse specimens contaminated with microflora, both saprophytes and commensals, in clinical samples as well as in foods. It can also be used in the development of many anaerobes, both of human and animal origin. It can also be used in blood culture bottle systems.

The 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.

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.

For cultivation of *Brucella*: inoculate and incubate at 35 ± 2°C in duplicate, one lot under normal conditions and one lot under 5 - 10% CO_2. Observe after 24 - 72 hours. Growth in tubes is indicated by turbidity compared with an uninoculated control.

For cultivation of other microorganisms incubate at the required temperature in a suitable atmosphere to encourage growth.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 35ºC ± 2ºC, under 5-10% CO_2, and observed after 24-72 hours.

Microorganisms	Growth	Inoculum
Brucella abortus ATCC 4315	Good	< 10^3
Brucella melitensis ATCC 4309	Good	< 10^3
Brucella suis ATCC 4314	Good	< 10^3

According ISO 11133: (2 to 5) days/ (41.5 ± 1) °C microaerobic atmosphere

Microorganisms	Inoculum	Productivity Qualitative
Campylobacter jejuni ATCC 29428	≤ 100	Turbidity (1–2)
Campylobacter jejuni ATCC 33291	≤ 100	Turbidity (1–2)
Campylobacter coli ATCC 43478	≤ 100	Turbidity (1–2)

BIBLIOGRAPHY

Isenberg, H.D. (ed.) 1992. Clinical microbiology procedures handbook. American Society for Microbiology, Washington, D.C.
Hausler, W.J. (ed.). 1976. Standard methods for the examination of dairy products, 14th ed. American Public Health Association, Washington, D.C.

STORAGE

Once opened keep powdered medium closed to avoid hydration.