Brucella Agar Base w/Hemin and Vitamin K1

Intended Use

Recommended for cultivation of Brucella species, for isolation and subculture of anaerobes with addition of blood.

Typical Composition (g/litre)

Peptone 10.0 ; Tryptone 10.0 ; Dextrose 1.0 ; Yeast extract 2.0 ; Sodium chloride 5.0 ; Sodium bisulphite 0.100 ; Hemin 0.010 ; Vitamin K1 0.010 ; Agar 15.0

Mode of Action

Brucella Agar Base w/ Hemin and Vitamin K1 is a modified and highly enriched medium, which can be used for the isolation of Brucella and other anaerobic bacteria. The medium contain tryptone, peptone and yeast extract serves as sources of carbon, nitrogen, long chain amino acids and essential growth nutrients including B-complex vitamins. Dextrose serves as a source of energy. Addition of blood provides nutrients and helps to differentiate hemolytic organisms. Presence of hemin and Vitamin K1 supports growth of other fastidious bacteria like Bacteroides species and gram-positive spore bearers like Clostridium species.

Preparation

Suspend 43.12 grams in 100 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 5% v/v sterile defibrinated sheep blood. Mix well before pouting into sterile Petri plates.

Final pH (at 25°C) 7.2±0.2

Storage

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Specimen

Clinical samples – Blood sample and tissue of bone marrow samples

Experimental Procedure and Evaluation

The agents of brucellosis, Brucella species are normal flora of the genital and urinary tracts of many animals including goats, pigs, cows and dogs. Most humans acquire the disease through ingestion of contaminating milk or through occupational exposure; the disease is particularly common among abattoir workers.

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Organism	Inoculum	Growth	Recovery
Bacteroides fragilis ATCC 25285	50 - 100	Good-Luxuriant	≥ 50%
Clostridium perfringens ATCC 13124	50 - 100	Good-Luxuriant	≥ 50%

Reference

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