

Klebsiella Chromogenic Agar Base

Cat. 2119

For the selective isolation of Klebsiella sp.

Practical information

| Applications | Categories |
|---------------------|------------|
| Selective isolation | Klebsiella |

Industry: Clinical



Principles and uses

Klebsiella Chromogenic Agar Base is a selective medium for the isolation of Klebsiella. These Gram negative bacteria can cause different types of health-associated infections, including pneumonia, bloodstream infections, wounds or surgical infections and meningitis.

Klebsiella is usually found in human intestines (where it does not cause disease) and feces. Healthy people rarely suffer from Klebsiella infections, whereas in health centres they often occur in patients who are being treated. Patients requiring ventilation devices or intravenous catheters have a higher risk of contracting this type of infection.

Casein peptone is a source of nitrogen, vitamins and amino acids essential for growth. Sorbitol is the fermentable carbohydrate providing carbon and energy. The buffering capacity is provided by the disodium phosphate and monosodium phosphate. Sodium chloride maintains the osmotic equilibrium of the medium. Chromogenic mixture incorporated in the media is cleaved specifically by Klebsiella species to produce pink colonies. Tryptophan promotes the indole reaction when adding Kovac's reagent to detect the capability of the microorganism to cleave tryptophan. Agar is the solidifying agent.

Formula in g/L

| | | | |
|----------------------|------|--------------------|-----|
| Bacteriological agar | 10 | Casein peptone | 3 |
| Chromogenic mixture | 0,22 | Disodium phosphate | 2,7 |
| Sodium chloride | 5 | Sodium pyruvate | 1 |
| Sorbitol | 1 | Tryptophan | 1 |
| Monosodium Phosphate | 2,2 | | |

Preparation

Suspend 13,06 grams of the medium in 500 ml of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. AVOID OVERHEATING. DO NOT AUTOCLAVE. Cool to 45-50 °C and add the Klebsiella Selective Supplement (Cat. 6045) previously reconstituted with 5 ml of distilled water. Mix well and pour into Petri dishes.

Instructions for use

» For clinical diagnosis, the type of sample is any sample of clinical origin.

The collection, handling and processing of the samples are carried out according to the recommendations and standards in Clinical Microbiology.

- Inoculate on surface making parallel striae with the handle or swab.
- Incubate at 35±2 °C for 24-48 hours.
- Reading and interpretation of the results.

Quality control

| Solubility | Appearance | Color of the dehydrated medium | Color of the prepared medium | Final pH (25°C) |
|------------|-------------|--------------------------------|----------------------------------|-----------------|
| w/o rests | Fine powder | Light beige | Clear amber, slightly opalescent | 6,8±0,2 |

Microbiological test

Incubation conditions: (35±2 °C / 24-48 h).

| Microorganisms | Specification | Characteristic reaction |
|-----------------------------------|------------------|-------------------------|
| Klebsiella aerogenes ATCC 13048 | Inhibited growth | |
| Klebsiella oxytoca ATCC 13182 | Good growth | Pink colony |
| Klebsiella pneumoniae ATCC 13883 | Good growth | Pink colony |
| Salmonella typhimurium ATCC 14028 | Inhibited growth | |
| Klebsiella BAA 1705 | Good growth | Pink colony |
| Escherichia coli ATCC 25922 | Inhibited growth | |
| Staphylococcus aureus ATCC 25923 | Inhibited growth | |
| Proteus mirabilis ATCC 25933 | Inhibited growth | |
| Enterococcus faecalis ATCC 29212 | Inhibited growth | |
| Citrobacter freundii ATCC 8090 | Inhibited growth | |
| Pseudomonas aeruginosa ATCC 9027 | Inhibited growth | |

Storage

Temp. Min.: 2 °C
Temp. Max.: 25 °C

Bibliography

H.Y. Reynolds, Pneumonia due to Klebsiella (Friedlander's pneumonia), J.B. In Wyngaarden, L.H. Smith. (eds) : Cecil Text book of Medicine, 16th ed, pp 1430, 1432. Philadelphia, W.B. Saunders (1982).