

For the selective isolation of *Burkholderia cepacia* from respiratory secretions of Cystic Fibrosis patients, and for the routine testing of non-sterile inorganic salts containing preservatives.

Formula in g/L

Peptone.....	5,00	Yeast extract.....	4,00
Bile salts.....	1,50	Sodium pyruvate.....	7,00
Potassium dihydrogen phosphate.....	4,40	Disodium hydrogen phosphate.....	1,40
Ammonium sulphate.....	1,00	Magnesium sulphate.....	0,20
Ferric ammonium citrate.....	0,01	Phenol red.....	0,02
Crystal violet.....	0,001	Agar.....	12,00

Final pH at 25°C: 6,2 ± 0,2

Principle:

Burkholderia cepacia LAB-AGAR™ BASE is a selective medium especially formulated for the isolation of *Burkholderia cepacia* (*Pseudomonas cepacia*), from clinical and non-clinical specimens. *Burkholderia cepacia* is a Gram-negative, oxidase positive, mobile and aerobic bacillus. It is normally found in water deposits and damp environments. This bacillus is an important opportunist pathogen and causes pulmonary infections in Cystic Fibrosis patients.

The organism may be present in small numbers in many non sterile products used in hospitals. It has been isolated from a number of water sources and can grow in distilled water with a nitrogen source because of its capacity to fix CO₂ from air. Suction catheters rinsed in a solution of acetic acid have reduced the transmission of *Burkholderia cepacia* and other *Pseudomonas*.

The medium contains Peptone which provides nitrogen, vitamins, minerals and amino acids essential for growth. Selective agents are added to improve *B. cepacia* recovery through the inhibition of common contaminants. Crystal violet inhibits Gram-positive cocci, especially enterococci and staphylococci. Bile salts inhibit most Gram-positive cocci except for enterococci, and Ticarcillin and Polymyxin B inhibit Gram-negative bacilli. Phenol red facilitates detection of *B.cepacia*.

Alkaline end products from the metabolism of pyruvate raise the pH of the medium, causing the color of the indicator to change from light orange to pink, or pink-red, in the growth area. In areas of heavy *B. cepacia* growth, the pink color intensifies. Magnesium sulphate, Ammonium sulphate and Ferrous sulfate provide sources of sulfates and metallic ions. Phosphate salts act as a buffer system.

Preparation: suspend 18,25 grams of the medium in 500 ml of distilled water. Mix well and dissolve by heating with frequent agitation until complete dissolution. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50 °C and add one vial of *Burkholderia cepacia* Supplement (ref. SL 0068). Mix mix well and pour into Petri dishes.

Procedure

Inoculate and incubate at 37 ± 1°C for 48 to 72 hours .

Result

Colonies of *B. cepacia* are 1-2mm in diameter and turn the medium to pink. Low numbers of colonies may not produce a color change of the medium. Occasional growth of some strains of *Candida* species, *Stenotrophomonas maltophilia*, *Pseudomonas aeruginosa* and other *Pseudomonas* species may occur.



Storage / Shelf life

- ★ Once opened keep powdered medium closed to avoid hydration at 2 - 30°C
- ★ The expiration date is indicated on the label.

Microbiological control:

The following results were obtained from type cultures in the performance of the medium, with supplement added, after incubation at a temperature of 37±1°C, and observed after 48-72 hours.

Microorganism	Growth
Burkholderia cepacia ATCC 25608	Good
Pseudomonas aeruginosa ATCC 27853	No growth

Packaging: 500 g

Supplement: Burkholderia cepacia Supplement 10 vials. 1 vial/500 ml ref. SL 0068