Condalab

Reference: 6032 **Technical Data Sheet**

Product: Selective Supplement for *Burkholderia cepacia* (BCSA)

CE IVD

Specification

Selective supplement for the isolation of *Burkholderia cepacia.*

Presentation

	Packaging Details	Shelf Life	Storage
10 Freeze-dried vials Vial with: 6 ± 0.1 ml	22±0.25 x 55±0.5 mm glass vials, tag labelled, White plastic cap - 10 vials per box.	49 months	2-25 ºC

Composition

Composition (g/vial):

Polymixin B Sulphate..... 75.000 IU
Gentamicin 0.0025
Ticarcillin..... 0.0500

Reconstitute the original freeze-dried vial by adding 1 vial with sterile distilled water..... 5 ml

NOTE: Each vial is sufficient to supplement 500ml of medium Base for *Burkholderia cepacia spp.*

Description /Technique

Description:

Burkholderia Cepacia Agar Base (Cat. 1347) 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 CO_2 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 inihibition 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. Bacteriological agar is the solidifying agent.

Colonies of *B. cepacia* are 1-2 mm 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.

Technique:

Aseptically reconstitute 1 vial with 5 ml of sterile distilled water. Mix gently until complete dissolution and aseptically add to 500 ml of *Burkholderia Cepacia* Agar Base (Cat. 1347), autoclaved and cooled to 50 ºC. Mix well and distribute into sterile containers.

Instructions for use:

- Take a routine respiratory sample from the patient (e.g. sputa, deep pharyngeal swabs or bronchiam washings).
- Dilute the sample if necessary.
- Streak onto Burkholderia cepacia Agar Base and incubate at 37 ºC for 48-72 hours.
- Examine for green colonies and the medium turning to bright pink.
- Re-incubate for a further 24 hours if necessary.

Quality control

Physical/Chemical control

Color : White-Gray pH: at 25ºC

Microbiological control

Reconstitute 1 vial as indicated in COMPOSITION; shake and dissolve completely

Add 1 vial to 500 ml of medium base. DO NOT HEAT once supplemented.

Aerobiosis. Incubation at 30-35 ºC. Reading at 24-48 until 72 h

Microorganism	Growth
Burkholderia cepacea ATCC® 25416	Good (≥ 50 %)
Burkholderia cepacea ATCC® 25608	Good (≥ 50 %)
Ps. aeruginosa ATCC® 27853	Inhibited
Burkholderia cenocepacia ATCC® BAA-245	Good (≥ 50 %)
Burkholderia multivorans ATCC® BAA-247	Good (≥ 50 %)

Sterility Control

Add 5ml of the sample to 100 ml of TSB and to 100 ml Thioglycollate.
Incubation 48 hours at 30-35 ºC and 48 hours at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

Bibliography

Bahame, J. B. and Schroth, M. N. [1989): Spatial-temporal colonization pattems of a rhizobacterium on underground organs of potato Phytopatology. Vol.77:1 093-1100.

Barelmann, I.; Meyer, I.M.; Taraz, K. and Budzikiewicz, D. [1996): Cepacia chelin, a new catecholate siderophore from Burkholderia [Pseudomonas) cepacia. Z Natarfosch. Vol. 51: 627-630.

Bashan, Y. and Holguin, Gina. [1998): Proposal for the Division of plant growth-promoting rhizobacteria into two classifications: biocontrol¬PGPB [plant growth-promoting bacteria) and PGPB. Soil Biol Biochem. Vol. 30[8-9): 1225-1228.