Introducing

Burkholderia Cepacia Selective Agar

As per USP<60> Microbiological Examination of Nonsterile Products- Tests for Burkholderia Cepacia Complex

HiMediaLaboratories™
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BURKHOLDERIA CEPACIA COMPLEX (Bcc)

Burkholderia cepacia complex (Bcc) or *Burkholderia cepacia* is a group of gram negative, rod shaped bacteria composed of atleast 20 different species. The organism may lead to *Burkholderia cepacia* syndrome, a neutralizing pneumonia associated with fever that culminates in to a rapid and fatal clinical deterioration. *Burkholderia cepacia* is an opportunistic pathogen and may cause severe infection in individuals with cystic fibrosis and immunosuppressed individuals.

Burkholderia cepacia have the potential of overcoming antimicrobial preservative systems and antiseptics, and can grow in preserved aqueous oral liquids and topical products.

Recent U.S. recall surveys have found that the presence of objectionable microorganisms, represent the vast majority of microbiologically related FDA recalls of non-sterile drug products and among the objectionable microorganisms *Burkholderia cepacia* is the major contaminant.

A dedicated chapter is described in USP for testing of pharmaceutical articles for absence of Bcc. The culture based method describes use of selective media, recommended standard ATCC strains for the growth promoting and inhibitory properties of the media.

MU2089 - Burkholderia Cepacia Selective Agar

Intended use

A selective medium used for isolation of *Burkholderia cepacia* from the pharmaceutical products, clinical and other non-clinical specimens.

Burkholderia Cepacia Agar is based on PC medium, which was originally devised by Gilligan. This medium was found to be superior to MacConkey Agar for growth of *B. cepacia*. Casitose and yeast extract in the medium provides the carbonaceous, nitrogenous, long chain amino acids, vitamin B source and other essential nutrients. Crystal violet and antimicrobial agents are used as selective agents. Crystal violet and vancomycin inhibits gram-positive cocci including Enterococci and Staphylococci. The antibiotics namely polymyxin B and gentamicin inhibits gram-negative bacteria. *B. cepacia* metabolizes pyruvate forming alkaline end products. Sucrose and lactose are the fermentable carbohydrate. The phenol red indicator changes colour from pink orange to pink red in alkaline pH. The possible presence of Bcc is indicated by the growth of greenish-brown colonies with yellow halos, or white colonies surrounded by a pink zone.

Composition**

Ingredients	Gms / Litre
Casitose #	10.000
Lactose	10.000
Sucrose	10.000
Sodium chloride	5.000
Yeast extract	1.500
Phenol red	0.080
Crystal violet	0.002
Agar	14.000
pH after sterilization (at 25°C)	6.8±0.3
Supplement	♦BCSA Selective supplement (FD361)
Sterlization temperature & time	autoclaving at 121°C for 15 minutes

** Formula adjusted, standardized to suit performance parameters
# Equivalent to Casein peptone
♦ Each vial contains Gentamicin - 0.010 units, Vancomycin - 0.0025 units, Polymyxin B - 600000.0 units

Testing of products as per USP<60>

Sample Preparation

1gm or 1ml in 10ml of Soyabean Casein Digest Medium (MH011/GMH011).
Incubate at 30-35°C for 48-72 h.

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Selection & Subculture

Burkholderia Cepacia Selective Agar (MU2089 + FD361)
Incubate at 30-35°C for 48-72 h.

Culture Media Solutions for Bcc

Product	Code	Packaging
Burkholderia Cepacia Selective Agar	MU2089-500G	500 gm
BCSA Selective supplement	FD361-5VL	5 vials
Burkholderia Cepacia Selective Agar Plate	MP2089-20PT	20 plates
Burkholderia Cepacia Selective Agar Plate	MP2089-50PT	50 plates

Isotonic Solution recommended for Growth Promotion Test of Bcc

Product	Code	Packaging
Rehydration Fluid for GPT	LQ254IX-25X9ML	25x9ml

Bcc culture resources with HiMedia

The strains of Bcc available with Microbiologics-HiMedia

Code	Microorganism	Format
0488A	*Burkholderia cepacia* ATCC® 25416™	EZ-Accu Shot™
0488-CRM		Lab Elite™
0488X		KWIK-STIK™ Plus
0488P		KWIK-STIK™ 2 Pack
0488K		KWIK-STIK™ 6 Pack
01269A	*Burkholderia cenocepacia* ATCC® BAA-245™	EZ-Accu Shot™
01269P		KWIK-STIK™ 2 Pack
01269K		KWIK-STIK™ 6 Pack
01270P	*Burkholderia multivorans* ATCC® BAA-247™	KWIK-STIK™ 2 Pack
01270K		KWIK-STIK™ 6 Pack

The strains of Bcc available with ATCC-HiMedia (Zero passage strains)

Code	Microorganism	Format
25416™	*Burkholderia cepacia* ATCC® 25416™	Freeze dried 0.4 ml vials
BAA-245™	*Burkholderia cenocepacia* ATCC® BAA-245™	Freeze dried 0.2 ml vials
BAA-247™	*Burkholderia multivorans* ATCC® BAA-247™	Freeze dried 0.2 ml vials

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