Burkholderia Cepacia Selective Agar Base USP

Intended use
Burkhloderia cepacia Selective Agar base is a medium used for the selective detection and isolation of *Burkholderia cepacia* complex from non-sterile and aqueous pharmaceuticals and cosmetic products in compliance with USP.

Summary
Burkhloderia cepacia Selective Agar is an opportunistic human pathogen that most often causes pneumonia in immunocompromised individuals with underlying lung disease (Such as cystic fibrosis or chronic granulomatous disease). *B. cepacia* is difficult to isolate on routinely used laboratory media like MacConkey Agar, since *B. cepacia* is a slow grower and therefore it is usually outgrown by the faster growing *Escherichia coli, Staphylococcus aureus,* and *Pseudomonas aeruginosa*. Burkhloderia Cepacia Selective 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*. The medium is made selective for *B. cepacia* by the incorporation of bile salts, crystal violet and antibiotics. The antibiotics included are Polymyxin B, Gentamycin, Vancomycin in the form of freeze-dried supplement.

Principle
Casein Peptone and yeast extract in the medium provide nitrogenous, vitamin B source and other essential nutrients. Crystal violet, vancomycin, polymyxin B and gentamycin agent is used as selective agents, which inhibit organisms commonly found in respiratory secretions other than *B. cepacian* complex. Sucrose and Lactose are carbohydrates for enrichment and differentiation with phenol red as a pH indicator (changes colour from pink orange to pink red in alkaline pH).

Formula*

Ingredients	**g/L**
Casein Peptone	10.0
Lactose	10.0
Sucrose	10.0
Sodium Chloride	5.0
Yeast Extract	1.5
Phenol Red	0.08
Crystal Violet	0.002
Agar	14.0
Final pH (at 25°C)	6.8 ± 0.3

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Pharmaceuticals samples, Food and dairy sample.

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding

Directions

1. Suspend 50.58 g of the powder in 990 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool to 45°C-50°C and aseptically add the rehydrated contents of 1 vial of Burkholderia Selective Supplement I (204020770005).
5. Mix well and pour in sterile petridishes.

Quality Control

Dehydrated Appearance: Light yellow to pink coloured, homogenous free flowing powder.
Prepared Appearance: Reddish orange coloured, clear to slightly opalescent gel forms in petridishes.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30- 35°C for 18 to 72 hours.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30-35°C for 18 hours.
Inhibitory Properties: No growth of the test microorganism occurs for the specified temperature and not less than the longest period of the time specified, inoculating >100 cfu of the appropriate microorganism at 30-35°C for 72 hours.

Organism (ATCC)	**Growth**
Growth Promoting	
Burkholderia cepacia (25416)	Good
Burkholderia cenocepacia (BAA-245)	Good
Burkholderia multivorans (BAA-247)	Good
Inhibitory	
Pseudomonas aeruginosa (9027)	inhibited
Staphylococcus aureus subsp. *aureus* (6538)	inhibited

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Use and Disposal of Dehydrated Media

Inoculation of culture media with bacteria, deliberately and accidentally, leads to a very great number of organisms being produced. High concentrations of any organisms are potentially hazardous and must be disposed off safely. Therefore, after use, prepared plates, samples, sample containers or other contaminated material must be sterilized or incinerated before discarding. All autoclaved biohazards should be disposed off in accordance with state and local environmental regulations.
Only qualified personnel who have been trained in microbiological procedures should handle all infected specimens and inoculated culture media. User should ensure that any machinery or apparatus used and by chance contaminated must be safely disinfected or sterilized. The environment in which microbiological cultures are handled must also be considered.

Warranty

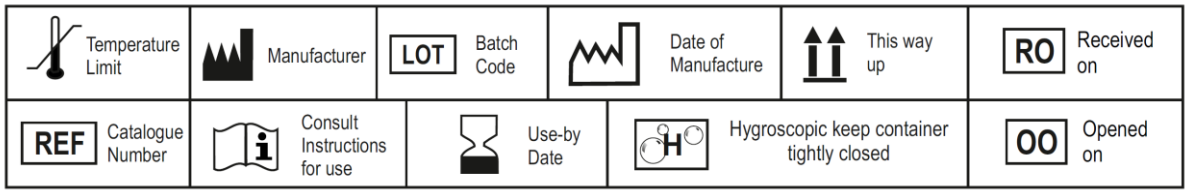
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Whitby P. W., 1998, J. Clin. Microbiol., 36:1642 1645 '
2. Gilligar, Gage, Bradshaw, schidlow and Deciscco, 1985, J. Clin. Microbiol., 22:5.
3. MacDonald Gilligan, Welch, Reller and Menegus, 1994, Vol. 5:1, Cystic Fibrosis Foundation, Washington, D.C.
4. Gilligan, 1996. Clin. Microbiol. Newsl. 18:83.
5. Christensen et al, 1980, J. Clin. Microbiol., 27:270.
6. The United States Pharmacopoeia, 2019. (60) Microbiological examination of non-sterile products-tests for Burkholderia Cepacia Complex.
7. Data on file: Microxpress®, A division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201020760100	Dehydrated Culture Media	100 g
201020760500	Dehydrated Culture Media	500 g



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Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.