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39573 Burkholderia cepacia Selective Agar according USP-NF 60(BCSA)
39643 Burkholderia cepacia Selective Supplement

NutriSelect® prime

Solid medium for the selective detection and isolation of *Burkholderia cepacia* from industrial samples. The medium complies with the USP-NF chapter 60 for the Microbial Examination of Non-sterile Products–Tests for *Burkholderia cepacia* complex.

Composition:

Ingredients Media Base	Grams/Litre	Ingredients USP-NF chapter 60	Grams/Liter
Tryptone	10.0	Casein Peptone	10.0
Yeast extract	1.5	Yeast extract	1.5
Lactose	10.0	Lactose	10.0
Sucrose	10.0	Sucrose	10.0
Sodium chloride	5.0	Sodium chloride	5.0
Phenol red	0.080	Phenol red	0.080
Crystal violet	0.002	Crystal violet	0.002
Agar	15.0	Agar	14.0
Supplement			
Polymixin B Sulphate	600,000 IU	Polymixin B	600,000 IU
Gentamicin	0.01	Gentamicin	0.01
Vancomycin	0.0025	Vancomycin	0.0025

Final pH 6.8 +/- 0.3 at 25°C

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 4-30°C.

Appearance: Light beige colored, homogeneous, free flowing powder.
Color and Clarity: Light amber colored, opalescent gel forms in petri plate.

Directions:
Dissolve 51,6 g of the powder in 1 litre of distilled water, heating if necessary. Distribute 500 mL volumes into suitable containers and sterilize by autoclaving at 121° C for 15 minutes. Cool to about 50° C and aseptically add the contents of a vial of Burkholderia cepacia Selective Supplement (Cat. No. 39643) to each 500mL of medium. Mix and pour into Petri dishes.

Principle and Interpretation:
Members of the "*Burkholderia cepacia* complex" (Bcc) are observed to be responsible for chronic bacterial colonization of the upper respiratory tract causing exacerbations of lung infections. Members of the Bcc demonstrate slow and poor growth in conventional media and are often not remarked or overgrown by other fast-growing mucoid bacteria, such as *Pseudomonas*, *Staphylococcus* or *Klebsiella*, ubiquitous in the respiratory tract secretions of patients with cystic fibrosis.
B. cepacia is a member of a group of at least 18 closely related species in the *B. cepacia* complex group. Bcc species are known to be highly opportunistic and can rapidly establish themselves in water systems, equipment, surfaces, and within non-sterile water-based products. Bcc species can be resistant to antibiotics/antiseptics and have been found in oral liquids, nasal sprays as well as other non-sterile medicine. Members of the Bcc also form biofilms, making it more difficult to eliminate them from pharmaceutical water systems.

Tryptone and yeast extract provide essential growth nutrients like vitamin, amino acids and other nitrogenous compounds. Lactose and sucrose are the fermentable carbohydrates. Sodium chloride maintains correct osmotic pressure. Agar is the solidifying agent.
On BCSA medium *Burkholderia cepacia* colonies typically appear translucent and rough as greenish-brown with a yellowish halo or white with a yellowish-pink halo (phenol red color indicator). Polymyxin, gentamicin, ticarcillin and crystal violet, gives the medium selectivity. Bcc is recovered earlier and better with these inhibitors. Additionally, non-fermenters that don't belong to the Bcc are inhibited. Normally members of the Bcc produce punctiform colonies at 24 hours and after 72 hours incubation 95% of the colonies which have developed belong to the *B. cepacia* complex.
Limitation: Occasionally a few colonies of *Flavobacterium* spp., *Ralstonia* spp., or *Burkholderia gladioli*, may grow. Therefore, it is recommended that further biochemical, genetic or molecular confirmative identification test are performed.

Cultural characteristics after 48-72 hours at 30-35°C. Inoculum: <100 CFU (Productivity) according USP, practical 50-100 CFU according to ISO 11133:2014/Amd1:2018/Amd2:2020. Spiral Plate Method.

Organisms (ATCC®, **WDCM**)	Recovery	Remarks
Burkholderia cepacia (25608)	≥50%	Greenish–brown colonies with yellow halo
Burkholderia cepacia (25416*)	≥50%	Greenish–brown colonies with yellow halo
Burkholderia cenocepacia (BAA-245*)	≥50%	White colonies
Burkholderia multivorans (BAA-247*)	≥50%	White colonies
Staphylococcus aureus (6538*/**00032**)	inhibited	w. selective supplement
Pseudomonas aeruginosa (9027*/**00026**)	Inhibited (partial to complete)	w. selective supplement

*all test strains recommended by USP-NF chapter 60

References:

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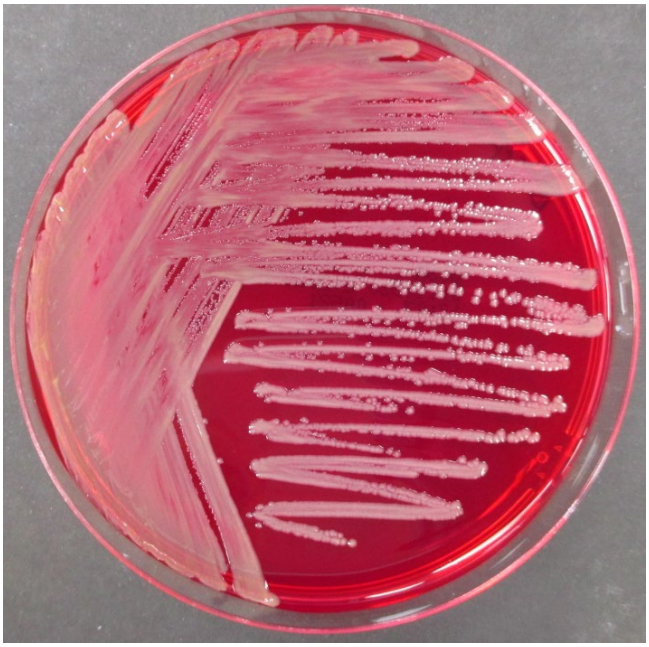

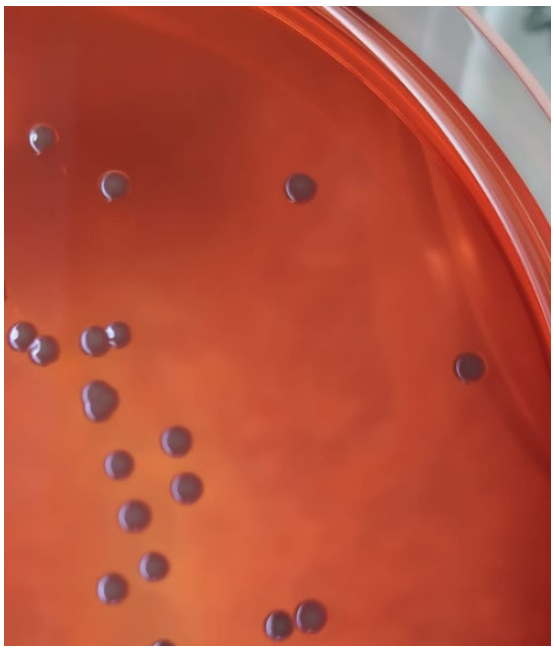

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.