

Burkholderia Cepacia Selective Agar, Complete (NCM0209)

Intended Use

Burkholderia Cepacia Selective Agar, Complete is used for the selective isolation of the *Burkholderia (Pseudomonas) cepacia* Complex (Bcc). Burkholderia Cepacia Selective Agar is not intended for use in the diagnosis of disease or other conditions in humans

Description

The United States Pharmacopeia has updated the USP/NF Microbiological Test <60> Microbiological Examination of Nonsterile Products- Tests for *Burkholderia cepacia* Complex (Bcc) to include the use of this medium. This test is designed to determine whether a substance or preparation complies with an established specification for microbiological quality and/or to evaluate whether product contains members of the Bcc.

Burkholderia Cepacia Selective Agar, Complete is the complete medium formulation specified by the USP/NF. BCSA, Complete contains peptones and sugars that supply nutrients for the growth of the Bcc. Phenol Red is the sugar utilization indicator. Crystal Violet is added to inhibit the growth of Gram-positive bacteria. Antimicrobics are added to suppress or inhibit the recovery bacteria other than the Bcc. Agar is the solidifying agent.

Formula / Liter

Enzymatic Digest of Casein	10.0 g/L
Lactose	10.0 g/L
Sucrose	10.0 g/L
Sodium Chloride	5.0 g/L
Yeast Extract	1.5 g/L
Phenol Red	0.08 g/L
Crystal Violet	0.002 g/L
Vancomycin	0.0025 g/L
Gentamicin	0.01 g/L
Polymyxin B	600,000 IU/L
Agar	14.0 g/L

Final pH 6.8 ± 0.3 at 25°C

Formula may be adjusted or supplemented as required to meet performance specifications

Precaution

Refer to SDS

Preparation

1. Suspend 50.69 grams of the medium in one liter of purified water.
2. Heat with frequent agitation and bring to a boil. Avoid overheating.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C.
5. Avoid holding for longer than the time required to equilibrate.

Test Procedure

Follow the USP Method <60> Microbiological Examination of Nonsterile Products- Test for *Burkholderia cepacia* Complex².

Quality Control Specifications

Dehydrated appearance: Powder is homogenous, free-flowing and light beige and may have a slight pink or gray tint.

Prepared appearance: The prepared medium is clear to slightly hazy and red-violet without a precipitate.

Expected Cultural Response

Cultural response on Burkholderia Cepacia Selective Agar, Complete when tested following the USP/NF <60> Surface Spread Method (Microbial Enumeration Tests <61>) Growth Promotion Test; Suitability of the Counting Method and Controls, Suitability of the Counting Method in the Presence of Product, Recovery of Microorganisms in the Presence of Product.

MICROORGANISM	APPROX. INOCULUM (CFU)	EXPECTED RESULTS	
		Growth	Reaction
<i>Burkholderia cepacia</i> ATCC® 25416	10-100	Growth	By 48 hours: yellow colonies with gray-purple center; yellow halo; by 72 hours, reversion to pink colonies with large gray-purple center and pink halo
<i>Burkholderia cepacia</i> ATCC® 25608	10-100	Growth	By 48 hours: yellow colonies with gray-purple center; yellow halo; by 72 hours, reversion to pink colonies with large gray-purple center and pink halo
<i>Burkholderia cenocepacia</i> ATCC® BAA-245	10-100	Growth	48-72 hours; small pink colonies with gray-purple centers; slight yellow halo reverts to pink halo
<i>Burkholderia multivorans</i> ATCC® BAA-247	10-100	Growth	48-72 hours; small pink colonies with gray-purple centers; slight yellow halo reverts to pink halo
<i>Pseudomonas aeruginosa</i> ATCC® 9027	10 ³	Suppressed to Inhibited	---
<i>Staphylococcus aureus</i> ATCC® 6538	10 ³	Suppressed to Inhibited	---
<i>Escherichia coli</i> ATCC® 25922	10 ³	Suppressed to Inhibited	---
<i>Enterococcus faecalis</i> ATCC® 29212	10 ³	Suppressed to Inhibited	---

The organisms listed are the minimum that should be used for quality control testing

Results

Refer to appropriate references for test results.

Expiration

Refer to the expiration date stamped on the container label. The dehydrated medium should be discarded if it is not free-flowing, or if the medium has changed from the original color. Expiry applies to the medium in its intact container when stored as directed.

Limitations of the Procedure

Due to nutritional variations, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage

Store the dehydrated culture media at 2-8°C away from direct light. Once opened and recapped, place the container back in the same storage conditions. Protect from moisture and light by keeping container tightly closed.

References

1. Henry, D. et al. 1997, Identification of *Burkholderia cepacia* Isolates from Patients with Cystic Fibrosis and Use of a Simple New Selective Medium. *J. Clin. Micro.*:35:614-619.
2. USP/NF <60> Microbiological Examination of Nonsterile Products- Test for *Burkholderia cepacia* Complex.