Chromogenic Agar Burkholderia Cepacia

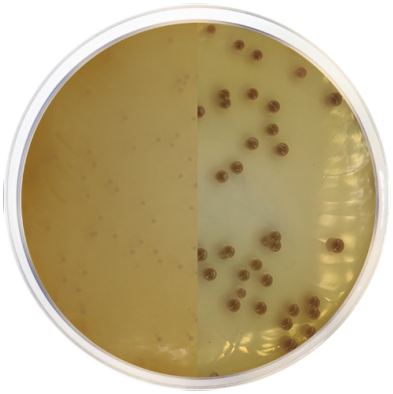
Cat. 2142

For the detection and selective isolation of Burkholderia Cepacia in cosmetic products.

Practical information

Aplications	Categories
Selective isolation	Burkholderia
Detection	Burkholderia

Industry: Cosmetics



Principles and uses

Chromogenic Agar Burkholderia Cepacia is a selective medium specially formulated for the isolation amd detection of Burkholderia cepacia.

Burkholderia cepacia is a bacterial species of rising importance in the pharmaceutical, OTC and cosmetic industries in recent years.

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 CO2 from air.

The medium contains peptone, which provides nitrogen, vitamins, minerals, and amino acids essential for growth. Yeast extract is a source of vitamins, particularly of the B-group. Selective agents are added to improve B. cepacia recovery through the inhibition of common contaminants. Chromogenic substrate is added to detect B. cepacia by means of a color change in its colonies. Bile salts inhibit most Gram-positive cocci except for enterococci. Sodium pyruvate increases the recovery of stressed cells. Tween 80 and soya lecithin neutralize quaternary ammonium compounds and parahydroxy benzoates. Magnesium sulphate, ammonium sulphate, and ferroammonium citrate provide sources of sulfates and metallic ions. Bacteriological agar is the solidifying agent.

Formula in g/L

Ammonium sulfate	1	Bacteriological agar	12
Bile salts	1,5	Ferric ammonium citrate	0,01
Magnesium sulfate	0,2	Peptone	5
Sodium pyruvate	7	Tween 80	5
Yeast extract	4	Chromogenic Substrate and Inhibitors	5,59

Typical formula g/L * Adjusted and/or supplemented as required to meet performance criteria.

Preparation

Suspend 42 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. AVOID OVERHEATING. DO NOT AUTOCLAVE. Cool to 45-50 ºC, mix well and dispense into plates.

Instructions for use

- Prepare the sample.
- Subculture by streaking on a plate of Chromogenic Agar Burkholderia Cepacia, and incubate at 37 ºC for 48-72 h.
- Confirm by identification tests.

Quality control

Solubility	Appareance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Beige	Amber, slightly opalescent	6,3±0,2

Microbiological test

Incubation conditions: (37 ºC / 48-72 h)

Microorganisms	Specification	Characteristic reaction
Candida albicans ATCC 10231	Moderate growth	White colonies
Klebsiella aerogenes ATCC 13048	Total inhibition	
Salmonella typhimurium ATCC 14028	Total inhibition	
Burkholderia Cepacia ATCC 17759	Good growth	Brown-pinkish colonies
Pseudomonas aeruginosa ATCC 27853	Total inhibition	
Enterococcus faecalis ATCC 29212	Total inhibition	
Staphylococcus aureus ATCC 6538	Total inhibition	
Escherichia coli ATCC 8739	Total inhibition	

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

Lynn Torbeck, Diane Raccasi, Dennis E. Guilfoyle, et al. Burkholderia cepacia: This Decision Is Overdue. PDA J Pharm Sci and Tech 2011.

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COENYE, T., P. VANDAMME, J.R.W. Govan and J.J. LiPuma. 2001. Taxonomy and identification of the Burkholderia cepacia Complex. J. Clin. Microbiol. 39:10:3427-3436