

Cetrimide Agar Plate (Harmonized)

Intended Use

Cetrimide Agar Plate (Harmonized) is used for isolation and cultivation of *Pseudomonas aeruginosa* from pharmaceutical products in accordance with microbial limit testing by harmonized methodology of USP/EP/BP/JP/IP.

Summary

Cetrimide Agar is based on the formulation described by King *et al.*, and is widely recommended for use in the examination of cosmetics, pharmaceuticals and clinical specimens for the presence of *P. aeruginosa*. Cetrimide Agar is used as a selective medium for the isolation of *Pseudomonas aeruginosa*. *Pseudomonas aeruginosa* is an environmental organism and an important nosocomial pathogen. Strains of *P. aeruginosa* are identified from specimens by the production of pyocyanin, a blue, water-soluble, non-fluorescent, phenazine pigment in addition to their colonial morphology and the characteristic grape-like odour of aminoacetophenone. *P. aeruginosa* is the only species of *Pseudomonas* or Gram-negative rod known to excrete pyocyanin. This medium is therefore, a valuable culture medium in the identification of this organism. It is also included in the Bacteriological Analytical Manual for cosmetics testing and recommended by the USP, EP, BP, JP and IP in Microbial Limit Tests.

Principle

Cetrimide (Cetyltrimethylammonium bromide) is a quaternary ammonium compound, cationic detergent, which is inhibitory to a wide variety of bacteria including *Pseudomonas* species other than *P. aeruginosa*. It causes nitrogen and phosphorous to be released from bacterial cells other than *Pseudomonas aeruginosa*. Magnesium chloride and dipotassium sulphate in the medium stimulates the production of pyocyanin. Pancreatic digest of gelatin provides nitrogenous compounds. Sodium chloride maintains osmotic equilibrium.

Formula*

Ingredients	g/L
Pancreatic Digest of Gelatin	20.0
Magnesium Chloride	1.4
Dipotassium Sulphate	10.0
Cetrimide	0.3
Agar	13.6
Glycerol	10 mL

*Adjusted to suit performance parameters.

Additional Material Required

Bacteriological Incubator.

Instructions for use

1. Open the sterile pack and remove the plate aseptically.
2. Inoculate/streak the plate as per standard procedure.
3. Incubate the plates in inverted position.
4. For confirmation, biochemical tests should be performed.

Reading and interpretation

1. After incubation, observe the microbial growth and count the colonies.
2. Interpretation is assured by user.
3. User is responsible to define the action limits as per standard guidelines and alert limits on the basis of trend analysis and other relevant data.

Quality Control

Appearance: Gel with smooth and even surface, without any cracks, bubbles and drying or shrinking of media.

Colour of Medium: Off white to Light yellow coloured medium with slight haze.

Quantity of Medium: 27 ± 2 g in 90 mm petriplate.

pH at 25°C ± 2°C: 7.2 ± 0.2

Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/BP/JP/IP and growth is observed after an incubation at 30°C-35°C for 18-72 hours.

Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time, inoculating ≤ 100 cfu of appropriate microorganism.

Indicative Properties: The test results observed are within the specified temperature and time, inoculating ≤ 100 cfu of appropriate microorganism.

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.

Organism (ATCC)	Growth	Color of Colony
Growth Promoting		
<i>Pseudomonas aeruginosa</i> (9027)	Good	Greenish
Inhibitory		
<i>Escherichia coli</i> (8739)	Inhibited	-

Note: For inhibition no growth of test microorganism should occur.

Storage and Shelf Life

1. Store between 15°C-25°C to avoid water condensation. Condensation can be prevented by avoiding quick temperature shifts and mechanical stress.
2. Under optimal conditions, the medium has a shelf life of 3 months. Use before expiry mentioned on the label.

Reference

1. King, Ward and Raney, 1954, J. Lab. Clin. Med., 44:301.
2. The United States Pharmacopoeia, 2011. United States Pharmacopoeial Convention. Rockville, MD.
3. British Pharmacopoeia, 2011, The Stationery Office British Pharmacopoeia.
4. European Pharmacopoeia, 2011 European Dept. for the quality of Medicines.
5. Indian Pharmacopoeia, 2010, Govt. of India, Ministry of Health and Family Welfare, New Delhi.
6. Kiska, D.L., and P.H. Gilligan. 2003. *Pseudomonas*. In: Murray, P. R., E. J. Baron, J.H. Jorgensen, M. A. Pfaller, and R. H. Tenover (ed.). Manual of clinical microbiology, 8th ed. American Society for Microbiology, Washington, D.C.
7. Data on file: Microexpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product	Pack Size
205030390100	Cetrimide Agar Plates (Harmonized)	100 Plates

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.
