Cetrimide Agar (Harmonized)

Intended Use
Cetrimide Agar 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*, as well as for evaluating the efficacy of disinfectants against this organism. 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. Cetrimide Agar Base 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*. The magnesium chloride and dipotassium sulphate in the medium stimulates the production of pyocyanin. Presence of magnesium ions can also neutralize EDTA, if present in the sample. Pancreatic digest of gelatin provides nitrogenous compounds. *Pseudomonas aeruginosa* colonies may appear pigmented greenish (under UV light also). Addition of antibiotic Nalidixic acid can aid in inhibiting the growth of accompanying flora.

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	10.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.

Directions
1. Loosen the cap.
2. Melt the medium completely in a water bath at 100°C. Do not remove the cap of the bottle while melting.
3. Cool to 45°C-50°C, mix well and pour into pre-sterile petriplates.

Quality Control
Appearance: Light amber coloured gel without any bubbles.
Appearance of Poured Plate: Light amber coloured, slightly opalescent gel with slight precipitate forms in petridishes.
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 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°C-35°C for 18 hours.
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 at 30°C-35°C for 72 hours.

Growth Promoting + Indicative Organism (ATCC)	Growth	Colour of Colony
Pseudomonas aeruginosa (9027)	Good	Greenish
Pseudomonas aeruginosa Strain Boston 41501 (27853)	Good	Greenish
Inhibitory		
Escherichia coli (8739)	Inhibited	-

Note: For good growth - Growth observed on test media should not differ by a factor greater than 2 from calculated value for standardized inoculum.
No growth of the organisms should occur for the inhibitory test.
Inoculum for good growth is 10-100 cfu and that for inhibition is greater than 100 cfu.

Remarks

1. Do not use media bottles that exhibit any damage, cracks, microbial contamination, discoloration, drying or other sign of deterioration.
2. Ensure that the temperature of water bath is at 100°C so that the medium melts completely. Cooler water baths give rise to lumpy, uneven medium.
3. Before pouring into sterile petriplates, gently swirl the bottle to check whether the entire contents are properly mixed and melted.
4. Good laboratory practices and hazard precautions must be observed at all times.
5. After use media containers, prepared plates, sample, sample containers and other contaminated materials must be sterilized or incinerated before discarding.

Storage and Stability

1. Store the ready to use Cetrimide Agar (Harmonized) at 15°C-25°C in a cool, dry place away from light.
2. Stability of the kit is as per expiry date mentioned on the label.

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. 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. Japanese Pharmacopoeia, 2008.
6. Indian Pharmacopoeia, 2010, Govt. of India, Ministry of Health and Family Welfare, New Delhi.
7. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat. No.	Product Description	Pack Size
203030280100	Bottle Media	100 mL
203030280250	Bottle Media	6 x 250 mL

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.