



Cetrimide Agar (Harmonized)

RDM-H-CTRA-01

Principle

Cetrimide agar is described by King et.al (1954) and is prepared in accordance with the harmonized principles of USP/EP/IP. Recommended as selective medium for the isolation of *Pseudomonas aeruginosa* in pharmaceutical testing and microbial limit testing of pharmaceutical products and raw material used in pharmaceutical industries. Media consists of pancreatic digest of gelatin, magnesium chloride, dipotassium sulfate, cetrimide and agar. The pancreatic digest of gelatin provides essential nutrients, vitamins and nitrogenous factors and growth factors required for growth of microorganisms. The magnesium chloride and potassium sulphate stimulate pyocyanin and fluorescein production. Cetrimide is the selective agent and inhibits most bacteria by acting as a detergent. The surfactant cetrimide causes the release of nitrogen and phosphorous from the bacterial cell, the *Pseudomonas aeruginosa* have resistance for such activity of cetrimide resulting in selective promotion. Glycerol (not provided) is supplemented as a source of carbon. Agar is the solidifying agent.

Use: Recommended for the enumeration and estimation of *Pseudomonas aeruginosa* from pharmaceutical products in accordance with the microbial limit testing by harmonized principles of USP/EP/IP.

Contents*

Ingredients

	Gram/Litre
Pancreatic Digest of Gelatin	20.000
Magnesium Chloride	1.400
Dipotassium Sulfate	10.000
Cetrimide	0.300
Agar	13.600
pH at 25°C	7.2 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 45.50 grams in 1000 ml distilled water containing 1% glycerol. If necessary, boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45°C and distribute aseptically in sterile petri plates and allow to solidify. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Reaction of 4.55% solution with 1% glycerol solution	7.2 ±0.2 at 25°C
pH	7.00- 7.40
Gelling	Firm comparable with 1.36% agar gel
Color and clarity of ready medium	Light amber colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at 35±2°C for 18-72 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery
<i>Pseudomonas aeruginosa</i>	9027	50-100	Luxuriant	≥ 50%
<i>Pseudomonas aeruginosa</i>	27853	50-100	Luxuriant	≥ 50%
<i>Escherichia coli</i>	8739	50-100	Inhibited	---
<i>Staphylococcus aureus</i>	6538	50-100	Inhibited	---
<i>Salmonella typhimurium</i>	14028	50-100	Inhibited	---
<i>Proteus mirabilis</i>	29906	50-100	Inhibited	---

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *British Pharmacopoeia*, (2011), The Stationery office British Pharmacopoeia
3. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
4. *European Pharmacopoeia*, (2011), European Dept. for the quality of Medicines.
5. *Indian Pharmacopoeia*, (2018), Govt. of India, the Controller of Publication, New Delhi.
6. King, E. O., M. K. Ward, and E. E. Raney. (1954). *Two simple media for the demonstration of pyocyanin and fluorescein*. J. Lab.Clin. Med. 44:301.
7. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.
8. *The Japanese Pharmacopoeia*, 17th Ed. (2016), The Ministry of Health, Labour And Welfare
9. *The United States Pharmacopoeia*, (2014), The United States Pharmacopeial Convention. 12601 Twinbrook Parkway, Rockville, MD 20852.

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