PSEUDOMONAS (CETRIMIDE) AGAR

Selective medium for *Pseudomonas aeruginosa* isolation, according to European Pharmacopoeia.

TYPICAL FORMULA	(g/l)
Pancreatic digest of gelatin	20.0
Magnesium Chloride	1.4
Dipotassium Sulphate	10.0
Cetrimide	0.3
Agar	15.0

Final pH = 7.2 ± 0.2 at 25 °C.

DIRECTIONS

Suspend 46.7 g of powder in 990 ml of distilled or deionized water.
Add 10 ml of Glycerol supplement (code 80021).
Heat until completely dissolved.
Sterilize in autoclave at 121 °C for 15 minutes.
Dispense in petri dishes.

DESCRIPTION

PSEUDOMONAS (CETRIMIDE) AGAR is recommended by the European Pharmacopoeia for the isolation and identification of *Pseudomonas* strains.
The medium promotes the production of fluorescein (pyoverdin), a green-yellow fluorescent pigment that oxidizes to yellow. It is water-soluble and, unlike pyocyanin (blue-green pigment), is not soluble in chloroform. The pigment diffuses throughout the medium and the fluorescent yellow-green color is observed.
Gelatin pancreatic digest provide the nutrient growth factors: nitrogen, vitamins, minerals and amino acids. Glycerol is the carbon source. Magnesium chloride and dipotassium sulfate enhance the production of pyocyanin, pyoverdin and fluorescein.
Cetrimide is the selective agent as it inhibits the growth of the accompanying microbial flora.

TECHNIQUE

Inoculate the medium using the streak plate method to obtain isolated colonies.
Incubate for 18-48 hours at 36 ± 1 °C.
Examine for the presence of a good growth and pigment production.
Pseudomonas aeruginosa colonies will be green to blue-green with pigment that diffuses into the medium.
The identification of *Pseudomonas aeruginosa* is completed by performing oxidase test and the differential tests for the production of fluorescein and pyocyanin on, respectively, Pseudomonas Agar F (code 610309) and Pseudomonas Agar P (code 610310).

QUALITY CONTROL

Dehydrated medium
Appearance: free-flowing, homogeneous.
Color: very light beige.
Prepared medium
Appearance: slightly opalescent, firm.
Color: light amber.
Incubation conditions: 36 ± 1 °C for 18-48 hours.

Microorganism	ATCC	Growth	Appearance
Pseudomonas aeruginosa	9027	good	green to blue-green
Pseudomonas aeruginosa	27853	good	green to blue-green
Escherichia coli	25922	poor	

LIOFILCHEM s.r.l.
Via Scozia, Zona Ind.le - 64026, Roseto D.A. (TE) - ITALY
Phone +390858930745 Fax +390858930330
Website: www.liofilchem.net E-mail: liofilchem@liofilchem.net

CE IVD

PERFORMANCE AND LIMITATIONS

The quaternary ammonium compound “Cetrimide” inhibits the growth of Gram positive and Gram negative bacteria, except *Psudomonas spp.*
The particular formulation stimulates production of fluorescein and pyocyanin, though some strains of *Pseudomonas aeruginosa* may fail to produce pyocyanin.
Non-*Pseudomonas aeruginosa* strains that are not completely inhibited on this medium may be encountered and must be differentiated from *Pseudomonas aeruginosa*.
Consult appropriate references.

STORAGE

The powder is very hygroscopic: store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident.
Store prepared plates at 2-8 °C.

REFERENCES

1. King, E.O., and D.E. Raney (1954). Two simple media for the demonstration of pyocyanin and fluorescin. J. Lab. Clin. **44**, 301.
2. Gilligan, P.H. (1995). Pseudomonas and Burkholderia, p.509-519. In Manual of Clinical Microbiology, 6th ed. American Society for microbiology, Washington, D.C.
3. European Pharmacopoeia, 3rd ed.2001. Supplement.

PRESENTATION

Product	REF	Σ
PSEUDOMONAS (CETRIMIDE) AGAR (10.7 l)	610041	500 g
PSEUDOMONAS (CETRIMIDE) AGAR (2.1 l)	620041	100 g
PSEUDOMONAS (CETRIMIDE) AGAR (107.0 l)	6100415	5 Kg

TABLE OF SYMBOLS

IVD	*In Vitro* Diagnostic Medical Device	LOT	Batch code		Manufacturer	Σ	Contains sufficient for <n> tests		Temperature limitation
REF	Catalogue number		Keep away from heat source		Use by		Caution, consult accompanying documents		

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