ALLIANCE BIO EXPERTISE

Reference: BPWR3027 **A.B.E. - Technical Data Sheet**

Product: **Cetrimide Agar**

Specification

Solid culture medium for selective isolation of *Pseudomonas aeruginosa* according to the Pharmacopeial Harmonised Method and the ISO standard.

Presentation

	Packaging Details	Shelf Life	Storage
20 Prepared Plates 90 mm with: 21 ± 2 ml	1 box with 2 packs of 10 plates/pack. Single cellophane.	3 months	2-14 ºC

Composition

Composition (g/l):

Gelatin Peptone	20.00
Magnesium chloride	1.40
Potassium sulfate	10.00
Cetrimide	0.30
Agar	13.60
Glycerol	10.00 ml

Description /Technique

Description

The Cetrimide Agar is based on the resistance of *P. aeruginosa* strains to Quaternary Ammonium Compounds (QAC's). With Cetyltrimethyl-Ammonium Bromide a growth at concentrations of 1g/L has been archieved, but has been very poor and slow.
An inhibitor concentration of 0,3-0,5 g/L does not seem to affect the viability of pyogenic species. But it does inhibit the accompanying bacteria, both Gram positive and Gram negative organisms. Other species of Pseudomonas which may develop at lower inhibitory concentrations are also inhibited.
Although P. aeruginosa prevails over any other fastidious bacteria after a 48 hour incubation at 30-35°C, an initial incubation at 42°C for 48 hours followed by an incubation at 35°C for 48 hours is recommended. Using this method almost complete inhibition of other microorganisms is obtained.

Technique

Collect, dilute and prepare samples and volumes as required according to specifications, directives, official standard regulations and/or expected results.
Once solidified on a flat surface, spread the plate streaking methodology or by spiral method.

Incubate the plates right side up aerobically at 30-35 ºC for 18-72 h.
(Incubation times longer than those mentioned above or different incubation temperatures mey be required depending on the sample, on the specifications,...)
After incubation, enumerate all the colonies that have appeared onto the surface of the agar with a blue-greenih colour (due to pigment production by Pseudomonas sp)
Each laboratory must evaluate the results according to their specifications.
Presumptive isolation of Pseudomonas sp must be confirmed by further microbiological or biochemical tests.

Precautions

For in vitro diagnostic use. Do not reuse. For professional use only.
Do not use the product if it shows evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

Quality control

Physical/Chemical control

Color : Off-white / opalescent pH: 7.2 ± 0.2 at 25ºC

Microbiological control

Inoculate with 10-100 CFU according to harmonized Pharmacopoeia or with 100-1000 CFU for selectivity.

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 30-35ºC. Reading at 18h (Productivity) and 72h (Selectivity)

Microorganism	Growth
Escherichia coli ATCC® 8739, WDCM 00012	Inhibited
Ps. aeruginosa ATCC® 9027, WDCM 00026	Good (≥ 50%) Green-yellowish to dark green colonies
Ps. aeruginosa ATCC® 27853, WDCM 00025	Good (≥ 50%) Green-yellowish to dark green colonies
Ps. aeruginosa ATCC® 10145, WDCM 00024	Good (≥ 50%) Green-yellowish to dark green colonies

Sterility control

Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

Bibliography

· ATLAS, R.M. and L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press Inc. Boca Raton,Fla.
· BROWN, V.I. & J.L. LOWBURY (1965) Use of an improved Cetrimide Agar Medium and of culture methods for *Pseudomonas aeruginosa*. J. Clin. Path. 18.752.
· COLIPA (1997) Guidelines on Microbial Quality Management (MQM). Brussels.
· EUROPEAN PHARMACOPOEIA 8.0 (2014) 8th ed. § 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. EDQM. Council of Europe. Strasbourg.
· FDA (Food and Drug Adminstrations) (1998) Bacteriological Analytical Manual. 8th ed. Rev. A. AOAC International. Gaitherburg. VA.
. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
. ISO 4973:2023. Quality control of culture media and diluents used in cosmetics standards
· ISO 22717 Standard (2015) Cosmetics - Microbiology - Detection of *Pseudomonas aeuruginosa.*
· LOWBURY,E.J.L. & A.G. COLLINS (1955) The use of a new cetrimide product in a selective medium for *Pseudomonas aeruginosa* J. Clin. Path. 8.47.
· USP 33 - NF 28 (2011) <62> Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. USP Corp. Inc. Rockville. MD. USA.