

ANTIBIOTIC MEDIUM E

Medium for determining antibiotic potency using the Agar Diffusion method.

TYPICAL FORMULA	(g/l)
Peptone	5.0
Meat Extract	3.0
Disodium Hydrogen Phosphate	10.8*
Agar	10.0
Final pH 7.9 ± 0.2 at 25°C	

*Equivalent to 26.9 g Disodium Phosphate Dodecahydrate

DESCRIPTION

ANTIBIOTIC MEDIUM E is a medium used in the microbiological assay of aminoglycoside antibiotics by the agar diffusion method. The medium meets European Pharmacopoeia (EP) performance specifications.

PRINCIPLE

The activity (potency) of an antibiotic can be demonstrated under suitable conditions by its inhibitory effect on microorganisms. Antibiotic assay are performed by the diffusion method on agar medium or by the turbidimetric method in a fluid medium.

The Diffusion method is based on the diffusion of an antibiotic solution from a cylinder or a cavity on the surface of an inoculated agar medium. Alternatively, an impregnated paper disc can be used. The diameter of a zone of inhibition after incubation depends, in part, on the concentration or activity of the antibiotic.

PREPARATION

Suspend 28.8 g of powder in 1 litre of distilled or deionized water. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder. Autoclave at 121°C for 15 minutes. Distribute into final containers.

TECHNIQUE

Inoculate the medium by the pour plate method. Apply the solutions of both the antibiotic to be examined and the reference substance with penicylinders, cut wells or impregnated paper discs. Incubate under appropriate conditions for the growth of the inoculated organism.

INTERPRETATION OF RESULTS

Measure the zones of inhibition. Refer to appropriate procedures for interpreting results.

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 away from light.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous, it is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used only by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

1. Grove and Randall (1955) Assay methods of antibiotics. Medical Encyclopedia, Inc. New York, N.Y.
2. European Pharmacopoeia 7.0 (2011) 7th ed. 2.7.2 Microbiological Assay of Antibiotics. EDQM. Council of Europe. Strasbourg.



LIOFILCHEM® S.r.l.

Via Scozia, Zona Ind.le - 64026, Roseto degli Abruzzi (TE) - ITALY
Tel +39 0858930745 Fax +39 0858930330 Website: www.liofilchem.net E-mail: liofilchem@liofilchem.net

PRODUCT SPECIFICATIONS

NAME

ANTIBIOTIC MEDIUM E

PRESENTATION

Dehydrated medium

STORAGE

10-30°C

PACKAGE

Ref.	Content	Packaging
610229	500 g	500 g of powder in plastic bottle
620229	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM

7.9 ± 0.2

USE

ANTIBIOTIC MEDIUM E is a medium used in the microbiological assay of aminoglycoside antibiotics by the agar diffusion method. The medium meets European Pharmacopeia (EP) performance specifications

TECHNIQUE

Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Dehydrated medium

Appearance: free-flowing, homogeneous

Colour: beige

Prepared medium

Appearance: slightly opalescent

Colour: light to medium amber

SHELF LIFE

4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: 10-100 CFU/ml
Incubation conditions: 18-24 h at 35 ± 2°C

Microorganism










Bacillus subtilis

Growth

Good

ATCC® 6633

TABLE OF SYMBOLS

 Batch code	 Keep away from heat sources	 Manufacturer	 Use by	 Fragile, handle with care
 Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Consult instruction for use	



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