



Antibiotic Assay Medium No- 11

RDM-AAM-11

Principle

The media is composed according to the USP, recommended as antibiotic assay medium. It is composed of peptone, pancreatic digest of casein, yeast extract, meat extract, dextrose and agar. Peptone, pancreatic digest of casein, yeast extract and meat extract provide nitrogen, carbon, vitamins essential nutrients. Glucose serves as energy source. This medium is formulated in such a way to facilitate diffusion of the antibiotics for antibiotic assay studies. Media is generally used of testing Neomycin, Erythromycin, Kanamycin like antibiotics.

Use: Recommended for testing antibiotic potency by Kirby-Bauer (Disk diffusion method) or well diffusion method. (For Erythromycin, Gentamicin, Neomycin B, Paromomycin, Sisomicin and Netilmicin antibiotics)

Contents*

Ingredients	Gram/Litre
Peptone	6.000
Pancreatic Digest of Casein	4.000
Yeast Extract	3.000
Meat Extract#	1.500
Dextrose	1.000
Agar	15.000
pH at 25°C	8.3 ±0.1

* Formula adjusted for optimum performance and parameters

Equivalent of Beef Extract

Directions: Dissolve 30.50 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Precautions to be taken

These microbial media are intended for the in-vitro use only. 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 3.05% solution	8.3 ±0.1 at 25 °C
pH	8.20- 8.40
Gelling	Firm comparable with 1.5% 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

Prepared media as per label directions sterilize by autoclaving and allow to solidify. Spread test bacterial suspension by using spreader. Place antibiotic disk contains desired amount of antibiotic, incubate at 4-6 °C for 15 minutes for proper diffusion. The zone of inhibition is observed after incubation at 33-37 °C for 18-48 hrs. Tested antibiotics are Kanamycin against *Bacillus spizizenii*.

Organism	Antibiotic concentration (µg)	Inoculum	Zone of inhibition (mm)
<i>Bacillus spizizenii</i> (ATCC 6633)	5	50-100	8
	10	50-100	15
	20	50-100	20

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

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. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. *The United States Pharmacopoeia*, (2014), The United States Pharmacopoeial Convention. 12601 Twinbrook Parkway, Rockvukke, MD 20852.

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