

TMV 018 – ANTIBIOTIC ASSAY MEDIUM NO. 6 (VEG.)

INTENDED USE

For induction of spore production in *Bacillus subtilis* strains used in antibiotic assay.

PRODUCT SUMMARY AND EXPLANATION

Antibiotic Veg Assay Medium No. 6 is prepared by incorporating vegetable peptones in place of animal peptones, making the medium BSE-TSE risks free. This can be used for the same purpose of Antibiotic Assay Medium No. 6, a common medium for the assay of various antibiotics. Antibiotic Assay media are used in the performance of antibiotic assays. Grove and Randall have elaborately elucidated the methods to perform these assays and various media used for that. Schmidt and Moyer have reported the use of antibiotic assay medium for the liquid formulation used in the performance of antibiotic assay.

These media are recommended by USP and FDA. This broth is a modification of animal based Antibiotic Assay Medium No. 6 and is also used for sterility checking procedures of several preparations. It can be used for inoculum development and spore induction of *Bacillus subtilis* for antibiotic assay. Manganese is known to influence and enhance sporulation in the *Bacillus species*. Thermophilic bacteria such as *Bacillus stearothermophilus* are capable of growth at 55 - 65°C while an incubation period of 30 to 35°C is favourable for culture and sporulation of mesophilic spore formers. It has been reported that organisms recovered from spoilage of foods such as fruit drinks, tomatoes, acidified onions and other canned foods sporulate well aerobically on nutrient agar with added manganese.

COMPOSITION

Ingredients	Gms / Ltr
Veg hydrolysate	17.000
Soya peptone	3.000
Sodium chloride	5.000
Dextrose (Glucose)	2.500
Dipotassium hydrogen phosphate	2.500
Manganese sulphate	0.030

PRINCIPLE

Veg hydrolysate and papaic digest of soyabean meal provides the nutrients and growth factors. Dextrose provides as energy source. Dipotassium phosphate provides the buffering system. Manganese sulphate helps in the early initiation of *Bacillus species*.

INSTRUCTION FOR USE

- Dissolve 30.03 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense into tubes or flasks as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured clear solution may contain slight precipitate.
pH (at 25°C)	: 7.0±0.2

INTERPRETATION



Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Spores	Incubation Temperature	Incubation Period
<i>Bacillus cereus</i>	10876	50-100	Luxuriant	Positive	30°C	6 Days
<i>Bacillus stearothermophilus</i>	7953	50-100	Luxuriant	Positive	55°C	6 Days
<i>Bacillus subtilis subsp. spizizenii</i>	6633	50-100	Luxuriant	Positive	35°C	6 Days
<i>Bacillus pumilus</i>	14884	50-100	Luxuriant	Positive	35°C	6 Days

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.










DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Grove and Randall, Assay Methods of Antibiotics Medical Encyclopedia, Inc. New York.
2. Schmidt and Moyer JB, 47:199.
3. United States Pharmacopoeia 2011 , USP 34/NF 29 , US Pharmacopoeial Convention, Inc., Rockville, MD.
4. Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs F, CFR, 1983. Title 21, part 436, Subpart D, Washington, D.C. U.S Government printing office, paragraphs 436, 100-436, 106 pg 242-259 (April 1).
5. Vasantha and Freese, J.Gen.Microbiol. 112:329-336.
6. Charney J, Fisher, W.P. and Hegarty, C.P. 1951. J. Bacteriol. 62:1.
7. Downes FP& Itok (EDs) 2001.Compendium of methods for the microbiological examination of foods. 4th ed.APHA,Washington, DC.
8. Maunder DTEocffmsM, Metal Div. R. and D, Continental Can Co., Inc., Oak Brook, Ill.



 GMP Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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