TM 1974 – ANTIBIOTIC ASSAY MEDIUM NO. 36

INTENDED USE

A general purpose medium for cultivation of a wide variety of fastidious microorganisms.

PRODUCT SUMMARY AND EXPLANATION

The composition of this medium is in accordance to CFR. This medium is recommended for sterility testing. Antibiotic Assay Medium No. 36 is widely employed as seed agar for agar diffusion assay for antibiotic bleomycin. The test organism *Mycobacterium smegmatis* is also maintained in this medium. This medium is employed for cultivation and isolation of fastidious or non-fastidious microorganisms. This medium is also used as maintenance medium of *Psuedomonas aeruginosa* for plate assay of ticarcillin. The medium like the conventional medium is used for a multitude of purposes including maintenance of stock cultures, plate counting, isolation of microorganisms from a variety of specimen types and a base for media containing blood.

Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterile seed agar pre-cooled to 40-45°C and spread evenly over the surface of solidified base agar. All conditions in the microbiological assay must be controlled carefully. The use of standard culture media in the test is one of the important step for the good results.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	15.000
Papaic digest of soyabean meal	5.000
Sodium chloride	5.000
Agar	15.000

PRINCIPLE

Casein enzymic hydrolysate and papiac digest of soyabean gives the essential nutrients for maintenance and growth of the test organisms used. Osmotic balance is maintained by sodium chloride. Agar provides excellent medium for antibiotic diffusion and gives well defined zones of inhibition.

INSTRUCTION FOR USE

- Dissolve 40.0 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- If desired aseptically add 5% v/v defibrinated blood in previously cooled medium at 45 - 50°C. Mix well before pouring.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium : Basal Medium: Light yellow coloured clear to slightly opalescent gel. After addition of 5-7%w/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates.

pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after incubation with added 5-7%w/v sterile defibrinated blood.

Microorganism	ATCC	Inoculum (CFU)	Growth	Growth with blood	Recovery	Recovery w/ blood	Incubation Temperature	Incubation Period
Bacillus subtilis	6633	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Staphylococcus aureus	25923	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Staphylococcus aureus	6538	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Escherichia coli	25922	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Escherichia coli	8739	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Pseudomonas aeruginosa	27853	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Pseudomonas aeruginosa	9027	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Micrococcus luteus	9341	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Salmonella Typhimurium	14028	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Streptococcus pneumoniae	6305	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	30-35°C	<=3 Days
Candida albicans	10231	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	20-25°C	<=5days

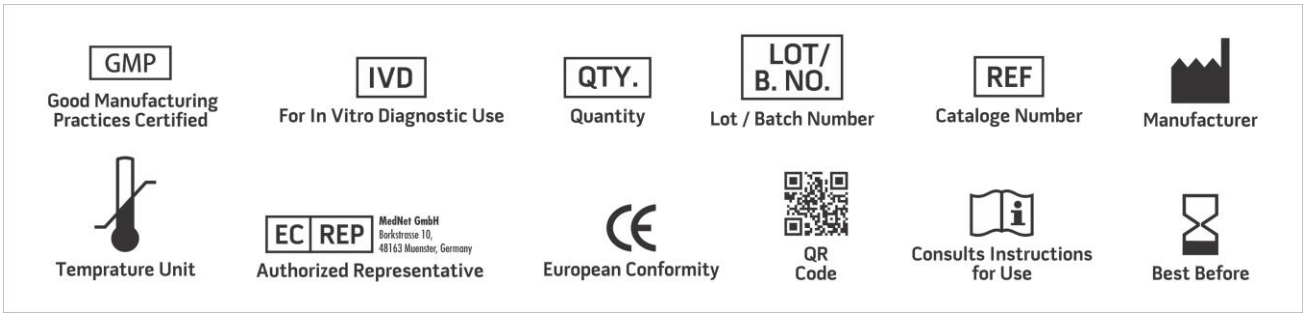
Candida albicans	2091	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	20-25°C	<=5days
Aspergillus brasiliensis	16404	50 -100	Luxuriant	Luxuriant	>=70 %	>=70 %	20-25°C	<=5days

PACKAGING:
In pack size of 100 gm and 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. Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs, FDA, CFR, 1983 Title 21, Part 436, Subpart D, Washington, D.C.: U.S. Government Printing Office, paragraphs 436, 100-436, 106, p. 242-259, (April1).
2. Wright and Welch, 1959-60, Antibiotic Ann., 61.
3. MacFaddin 1985, Media for isolation-cultivation-identification-maintenance medical bacteria Vol, I, Williams, & Wilkins, Baltimore, MD
4. Forbes BA, Sahm DF, Weissfeld AS, 2002, Bailey and Scott's Diagnostic Microbiology, 11th ed.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
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