

43265 Antibiotic agar No. 5 NutriSelect® Plus

Antibiotic Agar No.5 is used for microbiological assay of Dihydrostreptomycin, Framycetin and Kanamycin B using *Bacillus subtilis*. Recommended for the Microbiological assay of Dihydrostreptomycin, Framycetin, Kanamycin.

Composition:

Ingredients	Grams/Litre
Peptone	6.0
Beef extract	1.5
Yeast extract	3.0
Agar	15.0

**Formula adjusted, standardized to suit performance parameter

Final pH 7.9 +/- 0.2 at 25°C

Store granulated media below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.

Appearance(color): Cream to yellow coloured, free flowing powder
Gelling: Firm, comparable with 1.5% Agar gel
Color and Clarity: Medium amber coloured slightly opalescent gel forms in Petri plates

Directions:

Suspend 25.50 grams in 1000 ml purified /distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle and Interpretation:

This medium is used in the assay of commercial preparations of antibiotics, as well as for antibiotics in body fluids, feeds etc. Medium composition is in accordance with the specifications detailed in the USP, FDA (1,2) and numerically identical to the name assigned by Grove and Randall (3). The use of standardized culture media and strict control of all test conditions are essential requirements in the microbiological assay of antibiotics to obtain satisfactory test results.

Peptone, yeast and meat extract B provides necessary growth nutrients for the test organisms like *Bacillus subtilis*. Yeast extract is source of vitamins, particularly the B-group. Agar is the solidifying agent. The pH 7.9 maintained in this medium provides optimum growth conditions for *Bacillus subtilis* (4). This medium is used to prepare the base as well as seed layer in the microbiological assay of Dihydrostreptomycin.

To perform the antibiotic assay, the Base Agar should be prepared on the same, inoculated with the standardized test culture can be overlaid. Even distribution of the layer is important.

Cultural characteristics observed after an incubation at 32-35°C for 5 days.

Organisms (ATCC/WDCM)	Inoculum (CFU)	Growth	Antibiotics assayed
<i>Bacillus subtilis</i> (6633/00003)	50-100	+++	Dihydrostreptomycin



References:

1. United States Pharmacopoeia 2011, US Pharmacopoeial Convention, Inc., Rockville, MD.
2. 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.
3. Grove and Randall, 1955, Assay Methods of Antibiotics Medical Encyclopaedia, Inc. New York.
4. Stearn and Stearn, 1933, J Bacteriol. 26(1): 37-55.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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