



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

B12 Culture Agar (E.coli Maintenance Medium)

Product Code: DM 1185

Application: B12 Culture Agar (*E.coli* Maintenance Medium) is recommended for propagation, cultivation and maintenance of *Escherichia coli* mutant 113. 3 Davis ATCC 11105 used in microbiological assay of Vitamin B12.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.000
Yeast extract	5.000
Liver extract	0.050
Sucrose	12.000
Monopotassium phosphate	0.500
Magnesium sulphate	0.200
Sodium chloride	0.100
Ferrous sulphate	0.001
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

B12 Culture Agar (*E.coli* Mutant Culture Agar) is recommended for cultivation and maintenance of *E.coli* ATCC 11105⁽¹⁾. Casein enzymic hydrolysate provides nitrogen and amino acids for the growth of *E. coli* 113.3. Yeast extract is vitamin source in the medium while sucrose is carbon and energy source. Potassium salt provides buffering capacity to the medium and sodium, magnesium and ferrous salts control permeability of bacterial cells. Liver extract enriches the medium for growth of *E. coli* as well as inhibits gram positive bacteria.

Stock cultures of *E.coli* ATCC 11105 are prepared by stab cultures at least three times in a week. Do not use the culture for preparing assay inoculum if it is more than 4 days old. Before using a fresh culture for assay, make at least 10 successive transfers of the culture in 15 days period. Incubate the cultures for 16-24 hours by keeping the temperature constant at 35°C±0.5°C After incubation store at 2-8°C.

Methodology

Suspend 37.85 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.



Quality Control

Physical Appearance

Cream to yellow coloured homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured slightly opalescent gel forms in tubes as slants.

Reaction

Reaction of 3.79% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH Range

6.80-7.20

Cultural Response/Characteristics

DM 1185: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Escherichia coli</i> ATCC11105	50-100	luxuriant	>=70%

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Kavanagh F., (1972), Analytical Microbiology, Academic Press, New York.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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