

CM 21021 – LYSINE ASSAY MEDIUM

INTENDED USE

For determining lysine concentration by microbiological assay method.

PRODUCT SUMMARY AND EXPLANATION

Lysine Assay medium is formulated as described in Kavanagh. It contains all the essential growth factors for *Pediococcus acidilactici* ATCC 8042 except lysine. Exact concentration of lysine in the test material can be calculated by comparing results with standard curve of lysine.

Assay/Procedure: Stock cultures of the test organism *Pediococcus acidilactici* ATCC 8042, are prepared by stab inoculation into *Lactobacilli* Agar AOAC. Incubate the cultures at 35-37°C for 16-24 hours. After incubation, centrifuge aseptically and decant the supernatant. The pellet is washed 3-4 times with 10 ml of 0.85% NaCl solution. Then resuspend the cells in 10 ml of 0.85% NaCl solution. Inoculate each tube aseptically with 1 drop of the inoculum.

It is essential that a standard curve be set up for each assay since conditions of autoclaving, temperature of incubation, etc. which influence the standard curve readings, cannot be duplicated exactly from time to time. Increasing amounts of the standard or the unknown and make up the volume to 10 ml per tube containing 5 ml of the rehydrated medium. The growth response is measured turbidometrically.

COMPOSITION

Ingredients	Gms / Ltr
Dextrose (Glucose)	50.000
Sodium acetate	40.000
Ammonium chloride	6.000
Potassium dihydrogen phosphate	1.200
Dipotassium hydrogen phosphate	1.200
Magnesium sulphate	0.400
Ferrous sulphate	0.020
Manganese sulphate	0.040
Sodium chloride	0.020
Adenine sulfate	0.020
Guanine hydrochloride	0.020
Uracil	0.020
Xanthine	0.020
Thiamine hydrochloride	0.001
Pyridoxine hydrochloride	0.002
Pyridoxamine hydrochloride	0.600
Pyridoxal hydrochloride	0.600
Calcium pantothenate	0.001
Riboflavin	0.001
Nicotinic acid	0.002
p-Aminobenzoic acid	200.000 mcg



Biotin	2.000mcg
Folic acid	20.000mcg
Glycine	0.200
DL-Alanine	0.400
Asparagine	0.800
L-Aspartic acid	0.200
L-Proline	0.200
DL-Serine	0.100
DL-Tryptophan	0.080
L-Glutamic acid	0.600
L-Histidine hydrochloride	0.124
DL-Phenylalanine	0.200
DL-Threonine	0.400
L-Tyrosine	0.200
DL-Valine	0.500
DL-Isoleucine	0.500
DL-Leucine	0.500
L-Arginine hydrochloride	0.484
L-Cystine	0.100
DL-Methionine	0.200

PRINCIPLE

This medium consists of amino acids which provide necessary nitrogenous nutrients for the organisms. Glucose is the fermentable carbohydrate source in the medium. Phosphate buffers the medium. Sodium chloride helps to maintain the osmotic balance in the medium. Sulphates present in the medium helps to provide ions to the medium.

INSTRUCTION FOR USE

Dissolve 10.5 grams in 100 ml purified/distilled water.

Heat to boiling to dissolve the medium completely.

Mix well to distribute the slight precipitate evenly. Dispense in 5 ml amounts to each assay tube in increasing amounts of the standard or the unknown and total volume 10 ml per tube is adjusted by addition of distilled / purified water.

Sterilize by autoclaving at 15 psi pressure (121°C) for 10 minutes.

□

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Off-white to yellow homogeneous free flowing powder.

Appearance of prepared medium : Light amber coloured clear solution, which may contain a slight precipitate.

pH (at 25°C) : 6.7 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Pediococcus acidilactici	8042	50-100	Good Gradual increase in growth with increasing conc. of standard L-Lysine 0, 30,60, 90, 120,150 mcg per assaytube was recorded as equivalent increase in absorbance at 660 nm	25-30°C	24-48 Hours

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°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. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Kavanagh F., Analytical Microbiology Academic Press 1963, New York and London.

 Good Manufacturing Practices Certified	 For In Vitro Diagnostic Use	 Quantity	 Lot / Batch Number	 Catalogue Number	 Manufacturer
 Temperature Unit	 Authorized Representative MedNet GmbH Birkstrasse 10, 48153 Münster, Germany	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

*For Lab Use Only

