



Minimum Salt w/ Casein Acid Hydrolysate

M1254

Minimum Salt w/ Casein Acid Hydrolysate is used for the cultivation of *Escherichia coli* strains used for genetic and molecular studies.

Composition**

Ingredients	Gms / Litre
Casein acid hydrolysate	4.000
Disodium hydrogen phosphate	6.800
Monopotassium hydrogen phosphate	3.000
Sodium chloride	0.500
Ammonium chloride	1.000
Dextrose	4.000
Magnesium sulphate	0.240
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 19.54 grams in 1000 ml distilled water. Heat, if necessary, to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

Principle And Interpretation

Minimum Salt with Casein Acid Hydrolysate is prepared based on the formula originally suggested by Davis et al (1). The medium with the addition of casein acid hydrolysate is used for cultivating *Escherichia coli* strains used for genetic and molecular studies.

Casein acid hydrolysate supplies many amino acids (except tryptophan) to *E. coli*. Ammonium chloride is added as a nitrogen source. Dextrose serves as the carbon and energy source while the two phosphates buffer the medium against pH changes due to the utilization of carbohydrate. Magnesium ions are required in a variety of enzymatic reactions including DNA replication (2).

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent solution

Reaction

Reaction of 1.95% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

M1254: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response <i>Escherichia coli</i> strain B ATCC 23226	50-100	luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expirydate on the label.

Reference

1. Davis L.G., Dibner M. D. and Battey J. F., 1986, Basic Methods in Molecular Biology, Elsevier, New York.

2. Sambrook J., Fritsch E. F. and Maniatis T., 1989, Molecular Cloning: A Laboratory Manual, 2nd Ed., Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

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