Minimum Salt w/ Acicase™

M1254

Intended Use:

Recommended for the cultivation of *Escherichia coli* strains used for genetic and molecular studies.

Composition**

Ingredients	g / L
Acicase™	4.000
Disodium hydrogen phosphate	6.800
Potassium dihydrogen phosphate	3.000
Sodium chloride	0.500
Ammonium chloride	1.000
Dextrose (Glucose)	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 purified / 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 w/ Acicase is prepared based on the formula originally suggested by Davis et al (1). The medium with the addition of Acicase™ is used for cultivating *Escherichia coli* strains used for genetic and molecular studies.

Acicase™ 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).

Type of specimen

Isolated Microorganism from recombinant strains samples.

Specimen Collection and Handling:

For isolated Microorganism samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. This medium is general purpose medium and may not support the growth of fastidious organisms.
2. Further biochemical and serological tests must be carried out for further identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

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

Organism	Inoculum (CFU)	Growth
Escherichia coli strain B ATCC 23226	50-100	luxuriant

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

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.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
4. 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.

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Disclaimer :

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