



Acicase, Technical

RM013

Principle And Interpretation

Acicase, Technical is the result of acidic digestion of milk protein by hydrochloric acid. Absence of sulphonamide inhibitors makes Acicase, Technical ideal for preparation of Antibiotic Test Media, like Mueller Hinton Agar and Vaccine Preparation Media as a source of high concentration of free amino acids. It contains all amino acids (except Tryptophan and Cystine which are destroyed during acid hydrolysis) present in milk protein and high sodium chloride content. It is equivalent to Casein Acid Hydrolysate Technical.

Quality Control

Appearance

Off white to light yellow homogenous free flowing powder, having characteristic odour but not putrescent.

Solubility

Freely soluble in distilled water, insoluble in alcohol and ether.

Clarity

1% w/v aqueous solution is clear without any haziness after autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Reaction

Reaction of 2% w/v aqueous solution at 25°C.

pH

5.00- 7.00

Microbial Load:

Total aerobic microbial count (cfu/gm)

By plate method when incubated at 30-35°C for not less than 3 days.

Bacterial Count : <= 2000 CFU/gram

Total Yeast and mould count (cfu/gm)

By plate method when incubated at 20-25°C for not less than 5 days.

Yeast & mould Count : <= 100 CFU/gram

Test for Pathogens

1. *Escherichia coli*-Negative in 10 gms of sample 2. *Salmonella* species-Negative in 10 gms of sample 3. *Pseudomonas aeruginosa*- Negative in 10 gms of sample 4. *Staphylococcus aureus*- Negative in 10 gms of sample 5. *Candida albicans*- Negative in 10 gms of sample 6. *Clostridia*- Negative in 10 gms of sample

Indole test

Tryptophan content: Absent

Thymine / Thymidine content

Following discs were tested for standard ATCC strains and zone of inhibition were measured after an incubation 35-37°C for 18 hours. (As per CLSI Protocol M6-A2 & Standards as per CLSI M100-S19)

Escherichia coli ATCC 25922

Co-Trimoxazole COT 25mcg (SD010) 23mm- 29mm

Staphylococcus aureus ATCC 25923

Co-Trimoxazole COT 25mcg (SD010) 24mm- 32mm

Enterococcus faecalis ATCC 29212

Co-Trimoxazole COT 25mcg (SD010) >= 20mm

Trimethoprim TR 5mcg (SD039) >= 20mm

Staphylococcus aureus ATCC 43300

Oxacillin OX 1mcg (SD088) No zone or very hazy zone.

Divalent cation content

Following discs were tested for standard ATCC strains and zone of inhibition were measured after an incubation 35-37°C for 18 hours. (As per CLSI Protocol M6-A2 & Standards as per CLSI M100-S19)

Staphylococcus aureus ATCC 25923

Tetracycline TE 30mcg (SD037) 24mm- 30mm

Escherichia coli ATCC 25922

Tetracycline TE 30mcg (SD037) 18mm- 25mm

Pseudomonas aeruginosa ATCC 27853

Amikacin AK 30mcg (SD035) 18mm- 26mm

Gentamicin GEN 10mcg (SD016) 16mm-21mm

Tobramycin TOB 10mcg (SD044) 19mm-25mm

Cultural response

Cultural response observed after an incubation at 35-37°C for 18-48 hours by preparing Mueller Hinton Agar (M173) using Acicase, Technical as an ingredient.

Cultural Response

Organism	Growth
Cultural response	
<i>Escherichia coli</i> ATCC 25922	Luxuriant
<i>Haemophilus influenzae</i> ATCC 49247	Good-luxuriant(on Mueller Hinton Chocolate Agar)
<i>Neisseria gonorrhoeae</i> ATCC 49226	Luxuriant
<i>Pseudomonas aeruginosa</i> ATCC 27853	Luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	Luxuriant
<i>Enterococcus faecalis</i> ATCC 29212	Luxuriant
<i>Streptococcus pneumoniae</i> ATCC 6305	Luxuriant (on Mueller Hinton Blood Agar)

Chemical Analysis

Total Nitrogen	>= 7.0%
Amino Nitrogen	>= 5.0%
Sodium chloride	<= 35.0%
Loss on drying	<= 5.0%
Residue on ignition	<= 38%
Iron	0 -100ppm

Storage and Shelf Life

Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources. Seal the container tightly after use.

**Disclaimer :**

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