Tryptone, ES (Casitose, ES)

Principle And Interpretation
Tryptone, ES, (Casitose, ES) is obtained by refined processing of milk protein, manufactured under controlled enzymatic hydrolysis. It is rich in tryptophan content and is extra soluble as compared to other casitose. It can be used as a microbial nutrient in diagnostic and fermentation medias. It is equivalent to Casein Enzyme Hydrolysate, ES.

Quality Control

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

Solubility
10% Freely soluble in distilled/purified water, insoluble in alcohol and ether.

Reaction
Reaction of 2% w/v aqueous solution at 25°C
pH
6.30-7.30

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: Passes

Cultural response
Cultural response observed after an incubation at 35-37°C for 18-48 hours by preparing Soyabean Casein Digest Medium (M011) using Tryptone, ES (Casitose, ES) as an ingredient.

Cultural Response

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coli ATCC 25922</td>
<td>Characteristic, luxuriant growth</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa ATCC 27853</td>
<td>Characteristic, luxuriant growth</td>
</tr>
<tr>
<td>Enterobacter aerogenes ATCC 13048</td>
<td>Characteristic, luxuriant growth</td>
</tr>
<tr>
<td>Salmonella Typhi ATCC 6539</td>
<td>Characteristic, luxuriant growth</td>
</tr>
<tr>
<td>Staphylococcus aureus ATCC 25923</td>
<td>Characteristic, luxuriant growth</td>
</tr>
<tr>
<td>Streptomyces albus ATCC 3004</td>
<td>Characteristic, luxuriant growth</td>
</tr>
<tr>
<td>Streptococcus pyogenes ATCC 19615</td>
<td>Luxuriant w/beta haemolysis (with addition of sterile 5% sheep blood in above medium after 48 hours of incubation at 35-37°C).</td>
</tr>
</tbody>
</table>
Neisseria gonorrhoeae
ATCC 19424

Luxuriant w/beta haemolysis (with addition of sterile 10% sheep blood to above medium heated to 80 to 90°C until blood has turned to chocolate brown and incubated in 10% CO₂ atmosphere after 48 hours of incubation at 35-37°C).

**Chemical Analysis**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nitrogen</td>
<td>&gt;= 13.0%</td>
</tr>
<tr>
<td>Amino Nitrogen</td>
<td>&gt;= 4.0%</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>&lt;= 5.0%</td>
</tr>
<tr>
<td>Loss on drying</td>
<td>&lt;= 5.0%</td>
</tr>
<tr>
<td>Residue on ignition</td>
<td>&lt;= 15.0%</td>
</tr>
</tbody>
</table>

**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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