Yeast Extract Powder

It is rich in vitamins especially those belonging to B complex and is often used to supply these factors in culture media at a concentration of 0.3% to 0.5%. It is particularly used in media for cultivation of microorganisms encountered in milk or other dairy products. Also used with Meat extract B Powder or in place of Meat extract B Powder.

**Principle And Interpretation**

Yeast Extract Powder is manufactured from selected strain of *Saccharomyces* under controlled condition by retaining all the nutritive values, amino acids, vitamins, especially B group and growth factors. It contains low salt and is recommended for microbiological media and for mass cultivation of various microorganisms.

**Quality Control**

**Appearance**
Light yellow to brownish yellow homogenous free flowing powder having characteristic odour but not putrescent.

**Solubility**
Freely soluble in distilled/purified water, insoluble in alcohol.

**Clarity**
2% w/v aqueous solution remains clear and neutral 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**
6.50 - 7.50

**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**


**Indole test**
Tryptophan content: Passes

**Test for coagulable protein**
As per method specified in USP 37, NF32. No formation of precipitate

**Cultural response**
Cultural response observed after incubation at 35-37°C for 18-24 hours by preparing Plate Count Agar (M091) and Plate Count Hiveg Agar (MV091) using Yeast extract powder as an ingredient.

**Cultural Response**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bacillus subtilis</em> ATCC 6633</td>
<td>Luxuriant</td>
</tr>
<tr>
<td><em>Enterococcus faecalis</em> ATCC 29212</td>
<td>Luxuriant</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 25922</td>
<td>Luxuriant</td>
</tr>
</tbody>
</table>
**Lactobacillus casei** ATCC 9595  
**Staphylococcus aureus** ATCC 25923  
**Streptococcus pyogenes** ATCC 19615

**Chemical Analysis**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nitrogen</td>
<td>&gt;= 10.50%</td>
</tr>
<tr>
<td>Amino Nitrogen</td>
<td>&gt;= 4.50%</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>&lt;= 5.0%</td>
</tr>
<tr>
<td>Loss on drying</td>
<td>&lt;= 6.0%</td>
</tr>
<tr>
<td>Residue on ignition</td>
<td>&lt;= 15%</td>
</tr>
</tbody>
</table>

**Storage and Shelf Life**

Store below 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 of ignition. Seal the container tightly after use.

Disclaimer:

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