

## CM 24043 - YEAST EXTRACT (STD) TBL POWDER (Culture Media Ingredient)

### INTENDED USE

Yeast Extract (STD) TBL Powder is used in the preparation of culture media for the cultivation of a wide variety of microorganisms.

### PRODUCT SUMMARY AND EXPLANATION

Yeast Extract (STD) TBL Powder are concentrates of the water-soluble portion of *Saccharomyces cerevisiae* cells that have been autolyzed. These products provide essential water-soluble vitamins, amino acids, peptides and carbohydrates in microbiological culture media. Yeast Extract (STD) TBL Powder is considered a non-animal product and is used extensively for many non-animal formulations of bacterial, fungal, mammalian and insect cell culture. It has been considered one of the most complete and versatile of the fermentation bionutrients available. It has been a valuable ingredient for the microbiological assay of vitamins.

### PRINCIPLE

Yeast Extract Powder is prepared by drying yeast cells (*Saccharomyces*) extract specially grown for this purpose. It is a rich source of amino nitrogen. It provides vitamins, nitrogen, amino acids and carbon required for bacterial growth. It is used extensively for many non-animal formulations of bacterial, fungal, mammalian and insect cell culture.

### INSTRUCTION FOR USE

It is used as an additive for culture media and the microbiological assay of vitamins.

### QUALITY CONTROL SPECIFICATIONS

|                               |   |                                                                                             |
|-------------------------------|---|---------------------------------------------------------------------------------------------|
| Appearance                    | : | Light yellowish free flowing powder having characteristic yeast odor but not pungent smell. |
| Solubility (2% soln. at 25°C) | : | Completely soluble in distilled water, clear. Insoluble in alcohol                          |
| Clarity (2% Soln. at 121°C)   | : | Absolute clear solution. No ppt.                                                            |
| pH (2% Soln. at 25°C)         | : | 6.5 – 7.5                                                                                   |
| Loss on drying (at 105°C)     | : | NMT – 6.0%                                                                                  |
| Total Nitrogen (DWB)          | : | NLT – 10.5%                                                                                 |
| α-Amino Nitrogen              | : | NLT – 4.5%                                                                                  |
| Total Ash                     | : | NMT – 15.0%                                                                                 |
| Chloride (as NaCl)            | : | NMT – 1.0%                                                                                  |
| Microbial Test                | : | Passes test                                                                                 |
| Growth Promotion Test         | : | Passes test                                                                                 |
| Indole Test                   | : | Positive                                                                                    |

| TEST                        | SOLUTION | ORGANISM               | ATCC  | RESULT   |
|-----------------------------|----------|------------------------|-------|----------|
| Hydrogen Sulfide Production | 1%       | Salmonella Typhimurium | 14028 | Positive |
| Indole Production           | 1%       | Escherichia coli       | 29552 | Positive |

### INTERPRETATION

Cultural Characteristic observed in 2% Yeast Extract (STD) TBL and 1.5% agar after incubation at 35-37°C for 18-24 hours.



| Microorganism          | ATCC  | Inoculum (CFU/ml) | Growth         |
|------------------------|-------|-------------------|----------------|
| Staphylococcus aureus  | 25923 | 50-100            | Good-Luxuriant |
| Escherichia coli       | 25922 | 50-100            | Good-Luxuriant |
| Pseudomonas aeruginosa | 27853 | 50-100            | Good-Luxuriant |
| Bacillus subtilis      | 6633  | 50-100            | Good-Luxuriant |
| Enterococcus faecalis  | 29212 | 50-100            | Good-Luxuriant |
| Streptococcus pyogenes | 19615 | 50-100            | Good-Luxuriant |
| Lactobacillus casei    | 9595  | 50-100            | Good-Luxuriant |

#### PACKAGING:

Standard packing is 500gm, in plastic bottle. After packing tightly closed in a dry and well-ventilated place.

#### STORAGE

Store at room temperature in cool place, Keep plastic bottle tightly closed in a dry and well-ventilated place. 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.

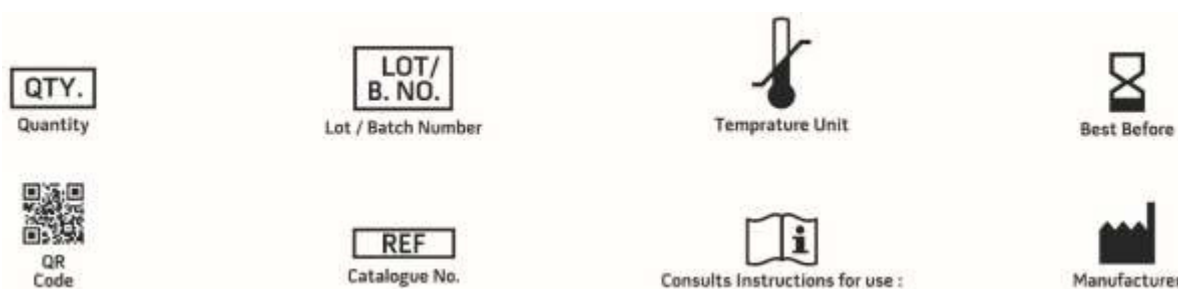
Product Deterioration: Do not use product if any contamination, discoloration or other sign of deterioration is found.

#### DISPOSAL

After use, contact a licensed professional waste disposal service to dispose of this material. Dispose of as unused product.

#### REFERENCES

1. U.S. Food and Drug Administration. 2001. Bacteriological analytical manual, online. AOAC International, Gaithersburg, Md.
2. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
3. Wehr and Frank (ed.). 2004. Standard methods for the examination of dairy products, 17th ed. American Public Health Association, Washington, D.C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

\*ForLab Use Only

