



Catalysts
Biotechnologies Pvt. Ltd.

NATUNUTR-DSPN

Nutritive formulation for Ethanol Fermenting Yeast

PRODUCT LITERATURE

One of the most overlooked aspects of creating a sound, rapid and complete fermentation is the nutritional package needed to maintain healthy and viable yeast. Typically distilleries use Urea, DAP or Liquor ammonia as cheap source of nitrogen for Yeast growth in Pre-fermenter and Fermenters.

On a dry weight basis, about 10% of yeast weight consists of nitrogen. All the nitrogen used in building cellular material during fermentation is taken up from the mash. **The growing yeasts produce ethanol 33 times faster than stationary phase yeasts.** Nutrition is important during growth for maintaining a good start

during the log phase and later, in the final stages. Yeast also needs micronutrients, vitamins, co-enzymes and minerals.

Nitrogenous compounds are the most important nutrient substances required by Yeast. Ammonia, which exists as ammonium (NH₄⁺) ions in various salts, Urea, and amino acids are the predominant nitrogen containing compounds that are utilized by yeast. Yeast must multiply many times over to reach critical mass.

Additional nutrients like phosphorous, potassium, zinc. Manganese, sulphur, are also an important for optimal yeast growth.

NATUNUTR-DSPN

A **nutritional strategy for healthy yeast** which will lead to increased fermentation rate, higher yield and profitability. It is a unique formulation using inimitable combination of enzymes and nutrients required by Yeast for faster growth and higher yield. **It has been designed to replace all nutrients and Nitrogen sources like Urea, Liquor ammonia etc.**

BENEFITS OF NATUNUTR-DSPN

- ✓ Provides all vital nutrients – no need to add any nitrogen source.
- ✓ Hydrolyses protein and peptides into precious assailable nitrogen.
- ✓ Faster yeast growth, higher productivity and low by-product formation.
- ✓ Works at process conditions; pH and temperature.

PRODUCT APPLICATION

NATUNUTR-DSPN is an advance enzyme nutrient composition for Yeast. Product is to be added during Yeast propagation, Pre-fermentation and Fermentation. Product is applied in 40 – 60 ppm in mash.



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PRODUCT LITERATURE

PRODUCT CHARACTERISTICS

Product Composition	Blend of essential enzymes & other ingredients
Occurrence	Powder
Appearance	Off white to light brown.

PRODUCT DOSING

Dosage	40 – 60 ppm.
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PRODUCT OPERATING PARAMETERS

Temperature	30 – 50°C
pH	4.0 – 5.5

PACKAGING

HDPE drums	25 Kg Pack Size
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PRODUCT STORAGE

Shaded area; avoid direct sunlight and moisture
Best used within 3 months from the date of delivery

PRODUCT HANDLING

- Enzymes are proteins. Inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals.
- Some enzymes may irritate the skin, eyes and mucous membranes upon prolonged contact.
- The product may create easily inhaled aerosols if splashed or vigorously stirred.
- Spilled product may dry out and create dust. Spilled material should be flushed away with water.
- Avoid splashing.
- Left over material may dry out and create dust.
- Wear suitable protective clothing, gloves and eye/face protection.
- Contaminated cloths should be properly washed.
- MSDS is supplied with the product. Follow MSDS safety instructions for more details.