



ENZYMOL PLUS

An efficient solution for Molasses Alcohol Fermentation

Molasses-based fermentation often faces challenges such as lower alcohol yield, high spent wash generation, microbial contamination, and nutrient limitations for yeast growth. These issues can negatively impact fermentation efficiency and spirit quality. To overcome these operational limitations and enhance fermentation performance, an effective enzymatic solution is required that can improve sugar availability, support yeast health, and control contamination in the fermentation system.

ENZYMOL PLUS is an advanced enzyme composition formulated with a unique combination of enzymes designed specifically for conventional batch fermentation in molasses-based alcohol production. The product improves alcohol yield by converting complex substrates into fermentable sugars and enhancing yeast nutrition. Its enzymatic activity supports better fermentation performance, reduces contamination risks, and contributes to improved spirit quality during the fermentation process.

Mode of Action

ENZYMOL PLUS works through a combination of enzymatic activities that enhance fermentation efficiency:

- Hydrolyzes polysaccharides such as starch, dextrans, and cellulose present in molasses into fermentable reducing sugars, increasing sugar availability for yeast.
- Protease activity hydrolyzes proteins and releases **FAAN (Free Alpha Amino Nitrogen)**, providing essential nutrients for yeast growth and improving yeast health.
- Helps in reducing **VFA (Volatile Fatty Acid)** levels during fermentation.
- Supports the reduction or elimination of the need for biocides and antibiotics.
- Lysing action on bacterial cell walls helps control contamination, allowing more sugars to be utilized by yeast for alcohol production.

Product Key Benefits

- Increases alcohol yield during fermentation
- Reduces spent wash ratio
- Eliminates di-acetyl odour and improves spirit quality
- Enhances yeast nutrition by releasing FAAN
- Improves fermentation efficiency by increasing available fermentable sugars
- Helps control bacterial contamination
- Supports healthier yeast growth and stable fermentation

Product Application

ENZYMOL PLUS is recommended for **batch fermentation in molasses-based alcohol production plants.**

Operational Conditions

- Temperature: **30–50°C**
- pH: **4.0 – 5.5**

Dosage

- **4–6 ppm**
- **400–600 g per 100,000 litres of wash**

For best results, the product should be applied in **divided dosing at pre-fermenter and fermenter stages.**

Product Characteristics

Composition: Blend of essential enzymes and supportive ingredients

Product form: Powder

Appearance: Off-white to brownish powder

Product Packaging

- Available in **1 kg foil packs**, further packed in **20 kg HDPE drums.**

Product Shelf Life

- Minimum **12 months** when stored in a cool and dry place.
- Product should be re-tested after the shelf-life period.

Product Handling

- Enzymes are proteins; inhalation of dust or aerosols may cause sensitization or allergic reactions in susceptible individuals.
- Prolonged contact may irritate skin, eyes, or mucous membranes.
- Avoid splashing or vigorous stirring that may create aerosols.
- Spilled product may dry and form dust; flush spills with water and avoid dust formation.
- Use suitable protective clothing, gloves, and eye/face protection while handling the product.
- Contaminated clothing should be washed properly before reuse.
- Refer to the **MSDS** provided with the product for detailed safety instructions.



ISO 9001:2015 Certified | FSC 22000 Certified

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