



ENZYTTREAT ADVANCE

An effective additive for optimum fermentation under stressed conditions

The recycle streams often contain high level of volatile acids and other organic pollutants which cause significant stress on the yeast during fermentation. Further, many recycled streams also consist of bacterial contamination, which consume fermentable sugars, produce inhibitory metabolites like volatile fatty acids (VFAs), and reduce overall fermentation efficiency and alcohol yield.

Enzyttreat Advance is a specialized blend of high-efficacy, broad-spectrum antimicrobial agents and biochemicals, designed to control a wide variety of bacterial contaminants and enable the yeast to function normally under high stress conditions, and maintain a stable fermentation environment without negatively affecting alcohol yield.

Mode of Action

Enzyttreat Advance prevents the growth and proliferation of undesirable bacteria through disruption of cellular structures and intermolecular interactions within bacterial cells. The product also optimizes the yeast metabolism in the presence of stress causing substances like volatile fatty acids, higher alcohols and phenolic compounds. The product remains effective across a broad pH, temperature range and shows improved activity with increased exposure time.

Product Key Benefits

- Prevents sugar loss caused by bacterial contamination in the fermentation process
- Minimizes microbial load during recycling of treated water from ETP operations
- Helps control the production and accumulation of **volatile fatty acids (VFAs)**
- Maintains healthier fermentation conditions for yeast growth
- Improves overall fermentation efficiency, productivity, and alcohol yield

Product Application

Enzytreat Advance is recommended for ethanol production processes utilizing cane-based feedstocks such as juice, syrup, and molasses. It can be applied in raw water streams, treated wastewater streams (such as spent wash, raw MEE condensate, and BMSW MEE condensate) as well as directly in fermenters or reactors to help manage microbial contamination. The required dosage may vary depending on the level of bacterial contamination and stress.

Operational Conditions

- Working pH range: **4 – 10**
- Working temperature range: **20 – 80°C**

Dosage

- Recommended dosage: **5 – 10 ppm**
- It is recommended to start with **10 ppm**, followed by dosage optimization based on conditions.

Product Characteristics

- Composition: Ammonium ion-based antimicrobial salts
- Product form: Liquid
- Appearance: Clear, watery liquid
- Specific Gravity: 1.05 – 1.25
- pH: 4.0 – 6.5

Product Shelf Life

- Minimum **12 months** when stored under recommended conditions.

Product Storage

- Store **below 20°C** in a cool and dry place.

Product Packaging

- Available in **25 kg HDPE drums**.

Product Handling

- Inhalation of aerosols or mist may induce sensitization and allergic reactions in susceptible individuals.
- May cause irritation to skin, eyes, and mucous membranes upon contact.
- Aerosols may form if the product is splashed or vigorously stirred.
- Spilled product may dry and create dust; flush spills with water and avoid dust formation.
- Avoid splashing during handling.
- Wear suitable protective clothing, gloves, and eye/face protection.
- Contaminated clothing should be washed properly before reuse.
- Refer to the **MSDS** supplied with the product for detailed safety instructions.



ISO 9001:2015 Certified | FSSC 22000 Certified

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