



Catalysts created its footprint as a pioneer in establishing the new technology of syrup ethanol fermentation using our technical expertise and suitable fermentation booster "Enzysyrup Max", a specially designed product for Cane Juice Syrup to ethanol fermentation. It is an effective fermentation

booster to address the challenges that arise during syrup fermentation. Cane Juice syrup has different properties than molasses, which makes it more difficult to ferment resulting in inefficient fermentation resulting in ethanol yield loss & lower productivity.

Challenges in Syrup ethanol fermentation

- High osmotic stress on yeast during propagation and fermentation due to higher sucrose concentration & lower free sugar.
- Drastic pH drops of wash due to very limited buffer capacity
- **Highly susceptible to deterioration** due to lower brix and higher water activity allows rapid growth of bacterial contamination
- **Higher fermentation time** due to increase lag phase & lesser nutrient availability
- Challenge in spent wash recycling due to higher level of existing by-products stress
- Challenge in MEE operation due to lesser solid content in spent wash which makes spent wash recycling in fermentation to increase the solid content for efficient MEE operation

Feature:

- Highly suitable product to boost syrup fermentation process
- **Effective on low dosage** of 5 ppm on wash volume
- Efficiently control bacterial contamination to prevent stress on yeast performance
- **Effectively boost yeast** efficiency & productivity
- Provide vital support to maintain viability & budding rate of yeast

Application & Dosage

Enzysyrup Max is recommended to dose in prefermenter & fermenter at 5 ppm dosage rate on wash volume. Dosage should be done in a split manner based on the feeding pattern. Suitable feeding pattern and proper dosage splitting is necessary for maximum yield & profitability.

Advantage:

- Prevent sugar loss occurs through undesired bacterial contamination
- **Reduce by-products** stress from yeast
- Maintain maximum ethanol yield
- Reduce loss of fermentation efficiency
- Help to **reduce struck fermentation** frequency
- **Reduce VA** level in process

Benefits:

- Systematic Scientific Approach a proper approach to convert valuable sugar by combining a process optimisation with suitable product incorporation to obtain a systematic dosage cum filling pattern for optimum product performance.
- Technical Support Team Dedicated technically strong team works onsite to establish a systematic scientific approach and proper data mining cum observations
- On-site in-depth analysis Timely gap analysis to ensure product & optimised process performance
- State-of-the-art Laboratory Support Timecourse analysis of samples via advanced scientific instruments and in-depth parameters analysis like HPLC (High Performance Liquid Chromatography) for accurate analysis and complete profiling of different sugars and volatile acid



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