



ENZYMOL PROTECT ADVANCE

Enzymol Protect Advance is a solution (involving product and process) designed and implemented by the Catalysts team to preserve reducing sugars in B-Heavy Molasses during storage. Its implementation guarantees zero loss of sugars in Molasses while storage up to 6 months. It saves huge losses (up to 15%) to Sugar Factory or allied Distilleries being suffered due to deterioration of sugars in Molasses while in storage.

Features and Services:

- A proprietary blended product Enzymol Protect Advance is dosed at regular intervals in supervision of Catalysts team to control microbial action in molasses and prevent deterioration of existing as well as newly exposed reducing sugars.
- Continuous circulation and temperature maintenance system at storage tanks as advised by Catalysts team, to avoid Maillard reaction and proper mixing of EMP advance.
- Close monitoring of various molasses parameters

through joint analysis at site.

- HPLC and microbial analysis at Catalysts lab of Molasses samples at regular intervals.
- Dosage optimization and product customisation whenever required based on microbial and HPLC analysis.

Application and Dosages:

Regular Dosage of EMP advance @ 10 ppm of Molasses at the final Molasses tank (before transferring to storage tank) is recommended to arrest microbial growth at initial levels itself. Once Molasses is transferred to storage tanks, additional dosage of 10 - 15 ppm of EMP Advance of Molasses quantity stored needs to be dosed every 15 days till the same is processed for Ethanol production. Product needs to be mixed homogeneously in storage tanks by circulation using installed circulation pumps.

Advantages:

- **Prevent sugar loss during the storage of molasses -** save valuable sugar and prevent undesired loss

in ethanol yield.

- **Prevent caramelisation and furfurals formation** - a toxic component creates toxicity for yeast during fermentation resulting in lower fermentation efficiency.
- **Prevent foaming** - Major cause of huge molasses loss due to tank burst or overflow.
- **Prevent VA formation** - a by-product formed due to Millard reaction & bacterial contamination cause severe difficulties during fermentation.
- **Prevent Lactic Acid formation** - a type of acid produced by lactobacillus species which cause a severe alcohol yield loss in fermentation sometimes leads to stuck fermentation.

Benefits:

- **Systematic Scientific Approach** - a proper approach to prevent valuable sugar by combining a process optimisation with suitable product incorporation to obtain a systematic dosage cum circulation pattern for optimum product performance.
- **Technical Support Team** - Dedicated technically strong team works onsite to establish of systematic scientific approach and proper data mining cum observations.
- **Customisation Support** - an approach by which we can quickly customise the best suitable product based on the running trend to prevent any loss due to change in microbial flora via any engineering aspects or any unfavourable conditions.
- **On-site Joint analysis** - Timely joint analysis to ensure product & optimised process performance.
- **On-site Lactic Acid Estimation** - A special portable analyser kit provided to our technical team for onsite analysis of Lactic Acid in samples.

- **State-of-the-art Laboratory Support** - Time-course 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.
- **No sugar loss Guarantee during preservation** - Our systematic approach fearlessly allows us to take the wholesale guarantee of any sugar loss during preservation.

Inclusions:

1. Product (Enzymol Protect Advance) in required quantities based on Molasses quantity and storage period.
2. Training on product dosage, advice on setting up of systems required for continuous circulation and temperature maintenance.
3. Deputation of technical person for dosage supervision whenever required.
4. Joint Analysis of Molasses at site covering all necessary parameters such as TRS%, FS%, VA% at the start of treatment and every 15 days thereafter. Preparation and submission of joint analysis report to the management.
5. HPLC and Microbial Analysis report from Catalysts Lab at the start and every month thereafter.
6. Customisation or additional quantities of product if required over and above recommended dosages.

Guarantees:

There will be no loss of TRS% or FS% in Molasses during the storage period.

Note: 0.3-0.5 unit deterioration in TRS value from 1st dosing will be taken as standard deterioration / analytical error.



ISO 9001:2015 Certified | FSSC 22000 Certified

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Certifications:

