



ENZYLASE

Thermostable α -amylase for improved efficient process in sugar manufacturing

In sugar manufacturing, starch accumulation can increase viscosity, affect clarification, impact pan boiling efficiency, and contribute to operational inefficiencies during processing.

Enzylase is a starch-hydrolysing alpha-amylase produced through controlled fermentation of genetically modified strains of *Bacillus licheniformis*.

Mode of Action

- Hydrolyses internal α -1,4-glucosidic bonds in starch
- Converts starch into dextrin and glucose

Product Key Benefits

- Improves clarification efficiency
- Reduces process viscosity
- Enhances pan boiling performance
- Improves ICUMSA colour
- Supports overall manufacturing process improvement with prolonged use

Product Application

Applicable across sugar manufacturing operations including:

- Milling and juice extraction
- Clarification systems
- Vacuum pan boiling and crystallization
- Refinery operations

Dosage may vary depending on:

- Climatic conditions
- Cane variety
- Starch levels
- Process requirements

Operational Conditions

- Temperature: 35 – 105°C
- pH: 5.0 – 7.5

Dosage

- 3–5 ppm (3–5 g per ton of cane crushed) depending on starch levels
- 25–30 ppm on raw sugar

Product Characteristics

Form: Liquid
Appearance: Brown

Product Packaging

- 30 kg HDPE drums

Product Shelf Life

- Minimum 6 months below 30°C

Product Handling

Enzymes are proteins and require controlled handling:

- Avoid inhalation of dust or aerosols
- Use PPE including gloves, protective clothing, and eye/face protection
- Prevent splashing and aerosol formation
- Flush spills with water to avoid dust formation
- Wash contaminated clothing before reuse
- Follow MSDS guidelines for safe handling



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ENZYDEX

Enzyme blend for reduced viscosity, improved clarification and sugar recovery

In sugar processing, dextran formation caused by microbial activity increases juice viscosity, reduces clarification efficiency, impacts crystallization, and contributes to sugar losses during manufacturing.

Enzydex is a specialized dextranase enzyme developed to hydrolyse dextran into lower molecular weight sugars, used in sugar manufacturing operations.

Mode of Action

Enzydex is a fungal dextranase (1,6- α -D-glucan 6-glucanohydrolase) produced through controlled fermentation of *Penicillium Paecilomyces*:

- Hydrolyses internal α -1,6-glucosidic bonds of dextran
- Converts dextran into lower molecular weight sugars
- Reduces viscosity caused by dextran accumulation, save steam in process.
- Improves clarification, pan boiling, crystallization, and centrifuge efficiency
- Enhances overall process efficiency and reduces sugar losses

Product Key Benefits

- Hydrolyses dextran, Improves clarification efficiency
- Reduces overall process viscosity
- Improves pan boiling performance
- Enhances centrifuge efficiency
- Reduces sugar losses through improved process efficiency
- Supports overall manufacturing system improvement with prolonged use

Product Application

Applicable in sugar manufacturing processes across:

- Milling and juice extraction
- Clarification systems
- Refinery operations
- Vacuum pan boiling and crystallization

Application dosage may vary depending on:

- Climatic conditions
- Cane variety
- Dextran levels
- Process conditions

Operational Conditions

- Temperature: 35 – 70°C
- pH: 5.0 – 7.5

Dosage

- 3–5 ppm (3–5Kg per MT of cane crushed) depending on dextran levels
- 25–30 ppm on raw sugar

Product Characteristics

- Enzyme Type: Fungal dextranase (1,6-alpha-β-glucan 6-glucanohydrolase)
- Production Organism: *Penicillium Paecilomyces*
- Form: Liquid
- Appearance: Brown

Product Packaging

- Minimum 12 months below 30°C

Product Shelf Life

- 25 kg HDPE drums

Product Handling

Enzymes are proteins and require controlled handling:

- Avoid inhalation of dust or aerosols
- Use PPE including gloves, protective clothing, and eye/face protection
- Prevent splashing and aerosol formation
- Flush spills with water to avoid dust formation
- Wash contaminated clothing before reuse
- Follow MSDS guidelines for safe handling



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ENZYSWEET

Enzyme-based microbial inhibitor for improved sugarcane juice processing and purity management

In sugarcane processing, microbial contamination and inversion losses can reduce juice purity, impact recovery, and lower overall process efficiency. Conventional biocides may control bacteria but can introduce toxicity and environmental concerns.

Enzysweet is an enzyme-based microbial inhibitor designed to control microbial contamination and inversion simultaneously, improving process efficiency and reducing sugar losses during sugarcane juice processing.

Mode of Action

Enzysweet is a liquid protease enzyme formulation developed for sugarcane juice processing:

- Controls microbial contamination during juice processing
- Helps control both inversion and bacterial contamination simultaneously
- Reduces purity drops associated with microbial activity
- Supports improved process efficiency and sugar recovery compared to conventional biocides

Product Key Benefits

- Controls microbial contamination effectively
- Helps reduce inversion losses
- Improves juice purity and process efficiency
- Reduces sugar losses during processing
- Environment-friendly alternative compared to conventional biocides
- Supports improved clarification and downstream operations

Product Application

Applicable in sugarcane juice processing systems:

- Used as contamination controller and process yield enhancer
- Applied at specific points in split dosing manner for efficient outcomes
- Recommended from primary to mixed juice stages depending on contamination levels

Operational Conditions

- Temperature: 30 – 70°C
- pH: 5.5 – 7.0

Dosage

- 3–5 ppm (3–5 Kg per MT of cane crushed) depending on bacterial contamination and purity drop

Product Characteristics

Product Type: Liquid protease enzyme

Form: Liquid

Appearance: Off white

Product Packaging

- 25 kg HDPE drums

Product Shelf Life

- Minimum 12 months below 30°C

Product Handling

Enzymes are proteins and require controlled handling:

- Avoid inhalation of dust or aerosols
- Use PPE including gloves, protective clothing, and eye/face protection
- Prevent splashing and aerosol formation
- Flush spills with water to avoid dust formation
- Wash contaminated clothing before reuse
- Follow MSDS guidelines for safe handling



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BACTOSAFE-I

Efficient Decontaminant for Sugar Mill Sanitization

In the sugar industry, undesirable microbial flora often leads to significant contamination and purity drops during processing. These industry challenges result in sugar losses and increased processing expenses, requiring a high-efficiency solution to maintain product quality.

Bactosafe-I is a new generation mill sanitizer designed to effectively control microbial contaminants across various cane varieties and process conditions. By optimizing process performance and reducing microbial growth, it ensures maximal efficiency at low dosages within the manufacturing environment.

Mode of Action

As an efficient decontaminant, Bactosafe-I works by targeting and controlling a wide range of undesirable microbial flora within the sugar manufacturing process. Effectiveness of the product will be achieved along with optimization of process parameters and the maximal efficiency can be possible by fine tuning the dosages and dosing points at plant level during actual practice.

Product Key Benefits

- Effective against all sugar process microbial contaminants.
- Unique formulation that works effectively even at lower dosages.
- Minimize sugar losses and processing expenses by reducing purity drops.
- Effective across different cane varieties and various process conditions.
- Suitable for the specific pH and temperature ranges of the sugar process to improve overall performance.

Product Application

Specifically used for mill sanitization in the sugar industry.

Operational Conditions

- **Temperature:** < 85°C
- **pH:** 5.0 – 9.0

Dosage

- 5-7 ppm/ton of cane

Product Characteristics

- **Form:** Transparent to semi-transparent liquid
- **Appearance:** Watery to slight amber color.
- **Odor:** Characteristic smell.
- **Specific Gravity:** 0.8 - 1.2 g/ml.

Shelf Life

- Minimum shelf life of 12 months when stored below 25°C; best used within 6 months if stored between 25-35°C.

Product Storage

- Available in 25 Kg HDPE drums

Product Handling

- Avoid inhalation of dust or aerosols, as they may induce sensitization and cause allergic reactions.
- Prolonged contact with skin, eyes, and mucous membranes should be avoided to prevent irritation.
- In case of spills, flush the area with water immediately to prevent the material from drying into inhalable dust.
- Always wear suitable protective clothing, gloves, and eye/face protection.
- Refer to the supplied MSDS for comprehensive safety instructions.



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BACTOSAFE II

*Mill sanitizer for controlling microbial contamination,
reducing losses in Milling*

Microbial contamination is a major challenge in sugar manufacturing, causing sucrose losses, purity reduction, process inefficiencies, and operational disruptions. These issues become even more significant under fluctuating cane quality and processing conditions.

Bactosafe II is an advanced mill sanitizer formulated to effectively control unwanted microbial growth within sugar processing systems. Its application helps reduce sugar losses, enhance process stability, maintain product quality, and optimize overall plant performance.

Mode of Action

Bactosafe II is an advanced blends of new-generation sanitizing ingredients specially formulated for sugar industry applications. These formulations are free **from DTC and QAC-based chemistries** and are designed to effectively control microbial contamination across sugar processing systems

By controlling microbial growth throughout the sugar manufacturing process, Bactosafe II help maintain juice quality, improve process stability, reduce sugar losses, and support efficient plant operations. Its advanced formulation enables reliable performance while helping mills optimize production outcomes.

Product Key Benefits

- Effective control of microbial contamination at low dosage levels
- Helps reduce sucrose losses caused by undesirable microbial activity
- Minimizes purity drop across process streams
- Supports consistent and stable process performance under varying cane quality and operating conditions
- Improves process smoothness and operational flexibility while reducing contamination-related losses
- Contributes to enhanced process efficiency and overall plant productivity

Product Application

Bactosafe II is recommended for sanitization across sugar manufacturing operations.

The optimal application depends on:

- Crushing rate
- Cut-to-crush delay
- Contaminant load
- Retention time
- Contamination generation points

The best results are achieved through process-specific dosage optimization and fine-tuning during actual plant operation.

Operational Conditions

- Temperature: <80°C
- pH: 5.0 – 9.0

Dosage

- 4–5 ppm on cane alternatively/15 days

Product Characteristics

Parameter	Specification
Product Type	Mill Sanitizer
Form	Liquid
Appearance	Transparent to semi-transparent watery to snuff colour
Odour	No peculiar smell
Specific Gravity	≤ 1.35 g/ml

Product Packaging

- 25 kg HDPE drums

Product Shelf Life

- Below 10°C Minimum 12 months
- 10–25°C Best used within 6 months from date of delivery

Product Handling

- Avoid inhalation of aerosols or vapours
- Some ingredients may irritate skin, eyes, and mucous membranes upon prolonged contact
- Prevent splashing and aerosol formation during handling
- Flush spills with water immediately
- Use suitable PPE including gloves, protective clothing, and eye/face protection
- Wash contaminated clothing before reuse
- Follow MSDS safety instructions for detailed handling guidance



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ECODEX

Dextran Controller for Sugarcane Juice Processing

Sugarcane juice often faces challenges due to dextran formation, leading to high viscosity, poor crystallization, and sucrose losses, the reason behind this **microbial activity, especially by *Leuconostoc* bacteria, which convert sucrose into dextran when cane is damaged, delayed in processing, or stored improperly.** ECODEX addresses these industry issues by effectively controlling dextran and improving process

ECODEX is a fungal Dextranase enzyme (1,6- α -D-glucan-6-glucanohydrolase) obtained through controlled fermentation of *Penicillium paecilomyces*. Hydrolyses dextran into glucose, isomaltose, and iso-maltotriose. Reduces viscosity, enabling smooth juice flow. Improves crystallization and evaporation efficiency. Enhances ICUMSA values with prolonged use.

Mode of Action

Ecodex hydrolysed the interior α -1,6-glucosidic bonds of dextran, ensuring smoother processing and higher sugar recovery.

Product Key Benefits

- Improved crystallization and evaporation.
- Reduced viscosity for smoother operations.
- Enhanced sugar quality and ICUMSA improvement.
- Lower sucrose losses, maximizing yield.
- Consistent process smoothness and efficiency.

Product Application

Application in milling, clarification systems, and refineries.

Operational Conditions

- Temperature: **35-70°C**
- pH: **5.0-7.5**

Dosage

4 - 6 ppm/ton of cane crushed (depending on dextran levels)

Product Characteristics

Declared Enzyme: Dextranase (1,6- α -D-glucan-6-glucanohydrolase)

- Form: Liquid
- Appearance: Amber to Brown

Product Packaging

- Available in **25 kg and 50 kg HDPE containers.**

Product Shelf Life

- Minimum **12 months** when stored below **25°C.**

Product Handling

- The product is a **non-hazardous chemical** under normal handling conditions.
- Avoid direct contact with eyes and skin; use appropriate protective equipment if necessary.
- Store in a cool and dry place below **25°C.**
- Refer to the **MSDS** provided with the product for detailed safety and handling instructions.



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ENZYCOLOR GO (J/R)

Aqueous amine-based polymer solution- a colour precipitating agent in juice / Melt clarification.

ENZYCOLOR GO addresses the challenge of high colour and turbidity in juice during sugar processing, which impacts sugar quality and yield. Efficient removal of colour bodies and suspended impurities is essential for improved processing and quality. It enhances coagulation of colour and colloidal matter, leading to improved clarity and better process efficiency.

Mode of Action

The product works as a cationic polymer that neutralizes negatively charged colour bodies and colloidal particles present in juice / Melt. This results in coagulation and precipitation of impurities, enabling efficient solid-liquid separation over a wide pH and temperature range.

Product Key Benefits

- Higher sugar yield with reduced colour and turbidity
- Final sugar colour reduction by 15–25% in juice, 35–45% in melt.
- Turbidity reduction by 45–50% in juice, 65–90% in melt.
- Improved solid-liquid separation across a wide pH range
- Consistent performance in juice clarification process

Product Application

- Enzycolor J-Juice clarification in sugar processing
- Enzycolor R-Raw sugar Melt clarification in sugar processing

Usage

Acts as a colour precipitant by coagulating colour and colloidal matter

Operational Conditions

- Effective pH Range: **4 – 9**
- Effective Temperature Range: **40 – 105°C**

Dosage

- Enzycolor Go J - 6–8 ppm on cane
- Enzycolor Go R - 90-110 ppm based on sugar solid (45-50%)

Product Characteristics

- Composition: Polymer solution
- Appearance: Clear, viscous, colourless to yellow liquid
- Molecular Weight: Low to medium
- Specific Gravity: ~1.25
- pH: 6–7
- Solid Content: 45–50%

Shelf Life

24 months (when stored below 25°C)

Product Packaging

- HDPE drums: 50 kg / 25 kg

Product Handling

- May exhibit toxicity towards fish; avoid contamination of water bodies
- Low corrosion to most materials; recommended materials include stainless steel, fiberglass, polyethylene, polypropylene, and epoxy-coated surfaces
- Aluminum may be adversely affected in some cases
- Spilled product is slippery, especially when wet
- Protect from frost
- Follow MSDS guidelines for safe handling and detailed precautions.



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CATFLOC-J

Sugar-cane Juice Clarification product

In clear Juice formation, suspended solids and colloidal particles create challenges in clarification, settling, and filtration. Inefficient solid-liquid separation can reduce process efficiency, increase chemical consumption, and affect product quality. To address these issues, an effective flocculant is required to enhance particle aggregation, improve settling characteristics, and support efficient clarification and dewatering operations.

Catfloc-J is a high-performance, high molecular weight anionic flocculant. The product is designed for industrial applications in sugar manufacturing and water treatment processes. It readily dissolves in water to produce a high-viscosity solution that facilitates efficient flocculation, solid-liquid separation, and sludge thickening across a wide range of operating conditions.

Mode of Action

Catfloc-J works through polymer bridging and charge neutralization mechanisms: The polymer chains adsorb onto suspended particles and bridge them together, forming larger aggregates (floc), promoting flocculation, improving settling and separation. The product enhances clarification, filtration, flotation, and mechanical dewatering processes in both neutral and acidic conditions.

Product Key Benefits

- High-performance, high molecular weight flocculant
- Effective across a wide pH range
- Efficient removal of suspended solids and phosphates
- Improves clarification and settling efficiency
- Reduces requirement of inorganic coagulant salts
- Also suitable for wastewater and effluent treatment applications

Product Application

Catfloc-J is used for **flocculation and clarification of suspended solids in liquid systems**, particularly in the **sugar industry**. It can also be applied in various other industrial processes, including, mechanical dewatering, gravity settling, filtration and flotation systems, dissolved air flotation (DAF) systems and wastewater treatment applications.

Operational Conditions

- Temperature: **30 – 100°C**
- pH: **4 – 9**

Dosage

- 8-15 ppm on juice volume, can be optimized based on plant conditions

Product Characteristics

- **Form:** Granulated free-flowing powder
- **Color:** White
- **Odour:** Characteristic
- **pH** (0.2% solution): 6.5 – 8.5
- **Solubility in water:** Completely miscible
- **Ionic nature:** Anionic

Product Shelf Life & Storage

- Recommended storage temperature: **Below 35°C (95°F)**
- Store in a cool, dry, and well-ventilated area.

Product Packaging

- Available in **25 kg HDPE bags/drums**

Product Handling

- Catfloc-J is not expected to be toxic, but it should be handled using protective clothing, facemask, safety goggles, shoes and gloves.
- Observe all normal procedures for handling industrial chemicals.
- Handle in a well-ventilated area.
- Avoid dust formation.
- Do not breathe dust.
- Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.
- Refer to the MSDS for detailed safety and handling guidelines.



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Catfloc-R

Catfloc-R is a high performance, high molecular weight, granulated free flowing, anionic Flocculant in dry solid form. Catfloc-R is of a medium anionic charge density which is completely miscible with water producing relatively high viscosity solution for various applications. The product is formulated for use in industrial process of sugar refineries.

Catfloc-R is ideal for use in mechanical dewatering, gravity settling, as a coagulant aid, water clarification, floatation, filtration, phosphate removal and as an aid in Dissolved Air Flotation (DAF).

Catfloc-R has an ability to bridge together particles suspended in solution by an adsorption process. Polymers of Catfloc-R often have electrostatic charges that allow for surface particle neutralization resulting in flocculation.

Catfloc-R creates reversible covalent bonds between particle surfaces allowing the particle to gain size and mass. Addition of Catfloc-R can effectively reduce fluid friction in a pipe. The product is also used to thicken a variety of sludge's in both neutral and acidic conditions.

PRIMARY BENEFICIARY FUNCTION

- Ø High performance
- Ø High molecular weight
- Ø Effective over wide pH range
- Ø Efficient phosphate removal
- Ø Reduces need for inorganic salts
- Ø Achieves high solids removal
- Ø Improves clarification settling
- Ø Excellent for use in wastewater and effluent treatment applications
- Ø Improves solid liquid separation in dewatering, floatation, filtration and thickening applications
- Ø Economical to use

PRODUCT APPLICATION

Catfloc-R is used to flocculate solids in liquids. It is used for raw sugar syrup/melt treatment. The product is widely used in sugar refineries.

PRODUCT CHARACTERISTICS

Appearance	Granulated free flowing white powder
Color	White
Odour	Characteristic
pH (0.2 % Sol)	6.5 - 8.5
Solubility in water	Completely miscible
Ionic nature	Anionic

PRODUCT DOSING

Actual dosages depend upon Total suspended solid content present in the system. Usually, it is recommended to perform plant trials and lab trials.

PRODUCT OPERATING PARAMETERS

Temperature	30-100 °C
pH	4-9

PACKAGING

HDPE	25.0 Kg
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PRODUCT STORAGE

Recommended storage temperature is below 35° C (95° F).

PRODUCT HANDLING

Catfloc-R is not expected to be toxic, but it should be handled using protective clothing, facemask, safety goggles, shoes and gloves.

Observe all normal procedures for handling industrial chemicals.

Handle in a well-ventilated area.

Avoid dust formation.

Do not breathe dust.

Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.

Catfloc-R

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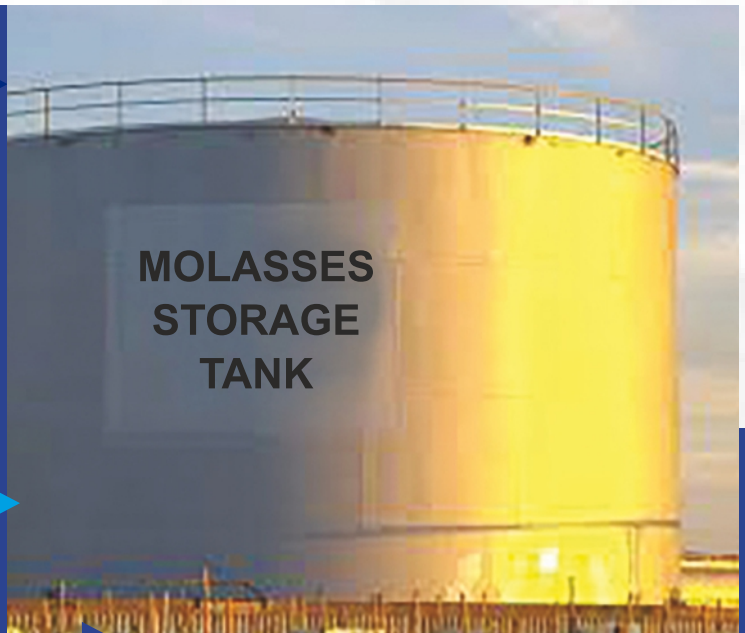
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ENZYMOL PROTECT ADVANCE

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.



PAN SHINER

Specialty additive for improving sugar crystal hardness, colour, and lustre during pan processing.

Sugar crystallization processes often face challenges in achieving desired crystal hardness, brightness, and low ICUMSA colour, impacting final sugar quality and market value.

Pan Shiner is a multi-functional additive designed to enhance sugar crystal properties during pan processing.

Mode of Action

Cationic Nature Carry positive charges that neutralize negatively charged colloids and suspended particles. Micro floc Formation Small destabilization Role Neutralization breaks particle stability, enabling coagulation to aggregate into larger structures.

Product Key Benefits

- Improves sugar crystal hardness and structure
- Enhances lustre and brilliance visual appearance
- Helps achieve lower ICUMSA colour values
- Improves overall sugar quality and market acceptability

Product Application

Applicable in sugar manufacturing during pan boiling stage.

Used during A-PAN drop and optionally in B-PAN for improved circulation results.

Operational Conditions

- Temperature 40–105°C
- pH compatible with massecuite

Dosage

- 7.5 kg in 20 L water as feed for 100-ton A-PAN initially, followed up by 5 kg afterwards
- Additional 2 kg/100 ton can be added in B-PAN (if required)

Product Characteristics

Composition: Organic-inorganic based

Form: Liquid

Appearance: Clear colorless

Specific Gravity: 1.20

Product Packaging

- 25/50 kg HDPE

Product Shelf Life

- Minimum 24 months (below 25°C)

Product Handling

- Low corrosion to standard materials.
- Avoid prolonged exposure to aluminium.
- Spilled products may be slippery.
- Avoid environmental discharge into water bodies.
- Store below 25°C and protect from frost. Follow MSDS guidelines.



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VISCOPAN 100

Viscosity reducer in sugar refineries

In sugar manufacturing, high viscosity of massecuite during pan crystallization often creates operational challenges such as poor circulation, longer boiling time, foaming issues, and inefficient separation in centrifugal machines. These factors can negatively affect sugar quality, process efficiency, and recovery. To overcome these viscosity-related challenges, an effective solution is required to improve massecuite fluidity and enhance crystallization efficiency in the boiling house.

ViscoPan 100 is an advanced polymer-based formulation specifically developed for the sugar manufacturing process to manage viscosity-related issues during pan crystallization. The product improves the flow behavior of massecuite and supports better processing efficiency. By enhancing fluidity and process control, ViscoPan 100 helps improve sugar quality, operational efficiency, and recovery during crystallization and centrifugation.

Mode of Action

ViscoPan 100 works by modifying the rheological properties of massecuite during crystallization: Reduces viscosity of massecuite, improving fluidity and circulation in vacuum pans. Enhances heat and mass transfer, leading to reduced boiling time. Improves the separation efficiency of sugar crystals during centrifugation. Helps control foaming and stabilizes boiling conditions. Facilitates improved purity drop from massecuite to molasses, enhancing sugar recovery.

Product Key Benefits

- Improves fluidity and reduces viscosity of massecuite
- Reduces boiling time in vacuum pans
- Enhances brilliance and quality of sugar crystals
- Improves pan circulation and reduces foaming
- Increases purity drop from massecuite to molasses
- Facilitates efficient purging in centrifugal machines
- Improves overall crystallization and process efficiency

Product Application

ViscoPan 100 is used during the **pan crystallization stage** in sugar manufacturing plants.

Operational Conditions

- Temperature: **40–105°C**
- pH: **Alkaline conditions**

Dosage

- **A Massecuite:** 1.5 – 2.0 kg per 100 tons
- **B Massecuite:** 2.0 – 2.5 kg per 100 ton
- **C Massecuite:** 4.0 – 5.0 kg per 100 tons

The product should be added during the crystallization stage for optimal viscosity control and improved process performance.

Product Characteristics

- Composition: Polymer-based formulation
- Product form: Viscous liquid
- Appearance: Yellow colored liquid
- pH (1% solution): 5.0 – 7.0

Product Packaging

- Available in **25 kg and 50 kg HDPE containers**.

Product Shelf Life

- Minimum **24 months** when stored below **25°C**.

Product Handling

- The product is a **non-hazardous chemical** under normal handling conditions.
- Avoid direct contact with eyes and skin; use appropriate protective equipment if necessary.
- Store in a cool and dry place below **25°C**.
- Refer to the **MSDS** provided with the product for detailed safety and handling instructions.



ISO 9001:2015 Certified | FSSC 22000 Certified

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