



PERFORMANCE ENHANCERS FOR SUGAR INDUSTRY

Praj after successfully establishing the Performance Enhancers for the distillery plants globally is now introducing its unique range of Sugar Process Enhancers for the Sugar Industry.

Praj's Bioproducts Division characterizes the vast experience and expertise in the domain of process engineering, installation and operation of Ethanol Plants and Breweries in over 75 countries across 5 continents.

The division combines the knowledge of Biotechnology, Microbiology, Engineering and Operations to deliver the products. These products are manufactured in accordance with GMP Standards.

Praj Bioproducts Division addresses the process needs of bioethanol and sugar industry through production and supply of customized formulations. In addition to products, Praj provides value added services such as :-

- Technical Audits of SUGAR process
- Analytical services of various streams
- Product dosing optimization
- Microbiological services for bacterial contamination profiling

Services are rendered by expert pool of qualified professionals and network of local associates to services the customers. Praj Bioproducts are manufactured in manufacturing facility certified by KOSHER, HALAL, FDA, ISO-9001-2015.



**Bioproducts
Division**

JUICEZYME-D[®]

"A Special Blend of Thermostable Enzyme/S That Rapidly and Effectively Degrades The Dextran In Mix Juice, Syrup Streams"

Key Benefits

- Reduction in Dextran content in Sugar
- Improved Clarification and Evaporation
- Reduction in viscosity in Syrup & Massecurite
- Improved filter performance
- Improvement in crystallization
- Reduced Molasses purity

Specifications	
Parameter	Value
Appearance	Light brown liquid
Dextranase	590-600 K-IU/mg* (Customized to mill requirement)
Sp. Gravity	1.14 – 1.18
pH	5 - 6

JUICEZYME-D[®] for Dextran Degradation

Application conditions

Application points - • Mixed Juice • Syrup • Crystallizers
Dose ppm - 2-3 (may be optimized based on Dextran content)
Temp. Deg C - 55 – 75 • **pH** - 4 - 8

Packing : Available in 20 / 50 Liter HDPE carboys / 1000 Liter Tots.

Storage & Handling : It is recommended to store at cool and dry place (25 Deg. C) away from sun light. No special handling equipment is required. Use of normal PPE is recommended.

Shelf Life : When stored at recommended conditions, the product is stable for 12 months in original container.

JUICEZYME-A[®]

"Thermostable Alpha amylase Rapidly And Effectively Hydrolyses Amylose & Amylopectin Starch and breaks it to oligosaccharides"

Key Benefits

- Reduction in Starch content in Sugar
- Improved flow rate enhances throughput.
- Improved clarification
- Improved productivity
- Improved decolorization
- Enhanced filter life

Specifications	
Parameter	Value
Appearance	Light brown liquid
Amylase	425-475IU/mg
Sp. Gravity	1.14 – 1.18
pH	5 - 6

JUICEZYME-A[®] for Starch Degradation

Application conditions

Application points - • Breaking / Fiberizing • Mixed Juice
Dose ppm - 3 - 5 • **Temp. Deg C** - Ambient to 55 • **pH** - 4 - 8

Packing : Available in 20 / 50 Liter HDPE carboys / 1000 Liter Tots.

Storage & Handling : It is recommended to store at cool and dry place (25 Deg. C) away from sun light. No special handling equipment is required. Use of normal PPE is recommended.

Shelf Life : When stored at recommended conditions, the product is stable for 12 months in original container.

JUICESAFE®

Specifically Developed Biocide For Improved Sanitation / Hygiene Of Sugar Mills & Sugarcane Juice Processing. Superior To Conventional Chemicals Like Compounds Of Bifluoride, Bleaching Powder & Other Halogen Compounds.

Key Benefits

- Effective control of microbial growth in sugarcane juice.
- Prevention of loss of vital sugars by avoiding inversion.
- Improved sanitation of mill surroundings.

Specifications	
Parameter	Value
Appearance	Clear Syrupy liquid
Colour	Colourless to pale yellow
Solubility	Soluble in water
Sp. Gravity At 25 Deg C	1.130 - 1.180
pH (1.0% w/v solution)	5.0 to 6.0

JUICESAFE® for Mill Sanitation

Application conditions

Application points - Breaking / Fiberizing Mixed Juice

Dose ppm - 10 - 15

Temp. Deg C - Ambient to 55

pH - 4.0 to 8.0

Packing : Available in 20 / 50 Liter HDPE carboys.

Storage & Handling : It is recommended to store at cool and dry place (25 Deg. C) away from sun light. No special handling equipment is required. Use of normal PPE s recommended.

Shelf Life : When stored at recommended conditions, the product is stable for 12 months in original container.

VISCOSAFE

Specially Designed to Improve Fluidity of Masseccuite Allowing Uniform Heating, Reduce Surface Tension and Improve Boiling Efficiency, Crystallization, Centrifugation and Exhaustion of Molasses

Key Benefits

- Reduction in Starch content in Sugar
- Improved flow rate enhances throughput.
- Improved clarification
- Improved productivity
- Improved decolorization
- Enhanced filter life

Specifications	
Parameter	Value
Appearance	Clear Syrupy liquid
Solubility	Soluble in water
Density	1.05 ± 0.05
pH (1.0% w/v solution)	4.5 - 7.0

VISCOSAFE for Viscosity Reduction

Application conditions

Application points - May be added to all Pans, Crystallizer & Molasses tanks

Dose A & B m/c - 2-3 kg / 100 MT

Dose C m/c - 3-5 kg / 100 MT

Dose Graining - 5-7 kg for 3 Pans grain

Crystallizer & Molasses - Dilute 1 part Viscosafe with 25 parts water

Packing : Available in 50 Kg HDPE carboys.

Storage & Handling : It is recommended to store at cool and dry place away from sun light. No special handling equipment is required. Use of normal PPE s recommended.

Shelf Life : When stored at recommended conditions, the product is stable for 12 months in original container.

SCALTREAT

Specially Developed Chemical Composition For Softening The Scales In The Evaporator Bodies Of Sugar Mills During The Cleaning Process. Scaltreat Can Be Added To Caustic Soda In Specific Proportions During The Soda Boiling Of Evaporator Bodies

SCALTREAT for Softening Toughest Scales

Key Benefits

- Increases the penetration power of caustic soda soln. at boiling temp.
- Lattice structure gets broken easily and the scale becomes soft.
- Softens toughest scale like silicates, sulphates and carbonates.
- Mixes easily and thoroughly, ensuring better action.
- Less time required for operation.
- Life of equipment increased.

Specifications	
Parameter	Value
Appearance	- Clear yellow liquid
Solubility	- Soluble in water
Density	- 1.05 ± 0.05

Application conditions

Application points - Evaporator tanks

Dose : Based on the hardness of scales, may vary from 15to25 % of the chemicals used for boil-outs
Add along with other cleaning chemicals into evaporators. Ensure proper mixing for effective results.

Packing : Available in 50 Kg HDPE carboys.

Storage & Handling :Store in cool, dry condition. Avoid contact with eyes and skin. Do not allow to enter human internal system. In case of skin contact, wash with plenty of water. Gloves and goggles should be used preferably while handling.

Shelf Life : When stored at recommended conditions, the product is stable for 12 months in original container.

COLTREAT

A Cationic Polymeric Additive Used For Improving The Color Of Sugar Re-melt / Syrup In Sugar Mills And Sugar Refineries

COLTREAT for Minimizing colour

Key Benefits

- Free flowing, Syrupy liquid, non-foaming
- Stable up to 80 Deg C
- De-stabilizes the negatively charged colloidal particles and promote rapid floc formation.
- Compatible with mineral coagulants, inorganic builders and nonionic surfactants.
- Results in good decolourisation & filterability of clarified liquor. Thus improves quality of the final sugar.
- Minimizes most of the color of syrup, reduces ash and helps in removal of non-sugar solids.
- Decolorizing agent for syrup clarification in the phosflotation process.
- The un-sulphured syrup is treated with the color precipitant while being pumped to a buffer tank.

Specifications	
Parameter	Value
Appearance	- Clear viscous liquid
Colour	- Colourless/Pale yellow
pH	- 4.0 - 6.0
Solubility	- Soluble in water
Sp. Gravity At 25 Deg C	- 1.130 -1.180

Application conditions

Recommended dosage is up to 150 ppm of polymer by weight based on sugar solids and turbidity. Do not mix any other products or additives and do not use in conjunction with oxidizing agents that will inhibit the efficiency of the polymer.

Packing : Available in 50 Kg HDPE carboys.

Storage & Handling : Store in cool & dry conditions, away from strong nucleophiles & Alkalis. Handle in well-ventilated area. Use of Full protective suites, rubber gloves, safety shoes, full head and face protection, glasses are recommended

Shelf Life : When stored at recommended conditions, the product is stable for 12 months in original container.

Praj Worldwide : India | Thailand | USA



Innovate • Integrate • Deliver

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