



ARISTO ORGANIC

Powering Treatment Solutions with
Nature's Intelligence

GET IN TOUCH

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OURS is the group of Companies under the properties heads, promote and led by master experts in various field such as chemical, Bio Chemicals, Green and renewable energy.

BACK-GRUOND :

Since 4 decades we have been engaged in industrial chemical formulation as well as enzymatic bio chemicals formulation. We study the industry process and deliver them tailor made solution to their industrial system particularly water base industry. We cover products both for cold and hot or boil water by industrial systems.

RANGE OF OUR PRODUCTS LIST :

- (1) Scale inhibitor formulation for hot to boiling water systems and cooling tower also.
- (2) Microbial agent with different base :
 1. QAC Base
 2. DTC Base
 3. SILVER IODIDE Base
 4. ALDEHYTE BASE
 5. IDOPHORM BASE
- (3) Algaecides : for control of algal growth in industrial water.
- (4) PH-BOOSTER-AMINE BASE.
- (5) Slim and organic falling problems treatment formulations.
- (6) oxygen scavenger.
- (7) Enzymatic formulation for ETP of various industry.
- (8) Enzymatic formulation for distillery use both grain and molasses base.
- (9) Enzymatic formulation for sugar process is particularly with burnt case.
- (10) Range of Defoamers & Antifoam Oils.
- (11) Dried yeast for various Industries.



SCALATOR - 333 FOR SCALE INHIBITION

SPECIFICATION FOR SCALATOR - 333

Colour	:	Colorless to pale yellow
Specific Gravity	:	1.20 + 0.05
PH	:	5 to 6.5 + 0.5
Solubility	:	Compatible with water
Dose	:	10+3 ppm

Dosing Points :

- (1) Into clear juice before entering into evaporator proper.
- (2) Into the third & fourth body by dosing pump.

Precaution to be takes for getting better results.

- (1) Evaporator & Pan tube should be perfectly cleaned.
- (2) As soon as the evaporator body is restarted the addition of the SCALATOR - 333 must be started.
- (3) Syrup tanks should be periodically cleaned.

For any more Technical details you may Contact our Official Address

"BACTAQUEET" FOR MILL SANITATION

Biocide for Sugar product :

Introductory :

Bacterial generation in warm sugarcane juice is a natural phenomenon. Enzyme invertase which is mainly responsible for the loss of sucrose in sugarcane juice. Also bacteria like *Leuconostoc*, *Aerobacter* etc. & yeast like *Saccharomyces* are responsible for the loss of sucrose in sugarcane juice which ultimately lead to loss of sugar. Not only that, many micro organism which proliferate in the mill-gutter pipelines, weight tanks, crush, causes sugar loss.

DOSAGE :

PRODUCT

DOSE

BACTAQUEET - B (Chlorine Base)	15 - 20 ppM + 3ppM
BACTAQUEET - sp (DTC Base)	8 - 20 ppM + 2 ppM
BACTAQUEET - 09 (OAC Base)	2 - 5 ppM + 2 ppM

Application Points Mills gutters, Tanks wherever sugarcane juice is traveling & storage. Method of application.

- (1) Either it can be sprayed at interval in its original concentration wherever is required.
- (2) Or it can be sprayed regularly with suitable dilution at the " Application points.

Summary :

Reduction in purity drop from primary juice to mix juice observed by sugar factories is found 0.2 to 1 unit. Economical viability records, obtained from several sugar factories may be furnished on request To overcome this inversion activity (Sugar loss) "Bactaqueet" is found successful chemical compound, in so many sugar industries.

Synergism of this compound with other suitable antimicrobial agent has been immersed of products namely 'Bactaqueet' as the satisfactory & successful group of Biocide.



Benefits of using Bactaqueet :

- Germicidal over a wide range of pH.
- Prevents inversion of sugar arising out of Bacterial and fungal contamination.
- Reduces inert sugar in mixed juice and clarified juice.
- Sucrose in juice is not effected.
- No corrosion of Plant.
- Machinery, tanks, Pipes etc.
- Highly advantageous considering cost benefit ratio.
- Substantially reduce purity drop from primary juice to mixed juice.
- It is nontoxic during the whole process.
- It is innocent in use and handling.
- Biodegradable hence causes no pollution.
- Non volatile hence highly stable and not at all responsible for salt-formation as others.

PH REDUCER

GENERAL DESCRIPTION	:	This is a liquid blend of Aromatic triazole and Alkyl Phosphonoate.
APPEARANCE	:	Radish Brown Liquid.
PH !	:	1.00 - 3.00
SP. GRAVITY	:	1.30
DOSE	:	5 Gms/Ton liquor for reducing each unit of pH i.e to bring down pH from 9 to 7, 10 gms of the chemical will be required.
SELF LIFE	:	18 Months
APPLICATION	:	This chemical can be use for reducing pH of circulating water, Fruit solution, particularly in sugar cane of beet juice of in any other chemical solution. it is compatible with all other chemicals.
PACKING	:	50 / 100 HDPE Carboy
PRECAUTION	:	Avoid contact with eyes, skin and clothing. Wear rubber gloves.

DESCALE - 09



- **For Plant & Equipments Cleaning :**

Descale - 09 is our - Tailor made formulation for cleaning plant's and equipment's metallic surface. Scale formation in water base industry is a common phenomenon. Descale - 09 is most efficient, scale remover, with acid inhibitor.

- **Technical Specification : Descale - 09**

Colour	:	Light to dark brown.
Specific Gravity	:	1.18 to 1.25 + 0.07
Solubility	:	Completely Water Soluble
Using Medium	:	Acidic
PH	:	2-4



IS - 072 : EFFECTIVE DEFOAMING AND ANTIFOAMING AGENT FOR DISTILLERY (MOLASSES FERMENTATION)

INTRODUCTION :

Specificity of foaming ingredients, due to variable nature of input solid and operating conditions, causes severe problems in molasses / grain fermentation, thus resulting in high, consumption of defoaming agent at the stake of poor alcohol recovery and increased BOD & COD level.

Number of conventional proprietary formulation of defoamer available in the market with no basic technical concept, have apparent deroaming characteristic thus resulting in camouflage / deceiving performance giving rise to reduced recovery, increased microbial growth, BOD & COD requirements etc.

Various impurities present in conventional defoamer and being added during dilution molasses / grains do have catalytic detrimental affect on fermentation efficiency, formation of slimes and corrosive products.

It is a ripe time to give a thought over modern concept of Eco-friendly defoaming and antifoaming agents so as to meet the global standards.

TRO (A conventional Product) being used as defoamer in Distillery.

Turkry red oil is made by Sulphating Castor Oil, followed by neatralization with Sodium Hydroxide (Temp <30 - 35 C. Variation in operating temperature etc. results in formation of following undesirable side products.

Fatty acid (Ricinolic), Soap, (Sodium Ricinoleate), Glycerol, Triglycerides (Unreacted Castor Oil), Mono & Di-glycerides, Lactones, Lactides, Sulfated fatty Acid, Monoglyceride Sulphate, Diglyceride Sulfate, Sulfated Triglyceride, Corresponding Sulfonates, Sulphato-Sulphonates, Hydroxy Sulfate and Sulphonates, Hydroxy Fatty and Hydroxy Glycerides.

Above undersirable side products are not Eco-friendly & results in reduced recovery, increased microbial growth, formation of slimes and corrosive products, increased BOD and Cod level.

PRODUCT SPECIFICATIONS :

(1) APPREANCE	:	CREAMISH - WHITE DISPERSION (PASTE)
(2) CHEMICAL NATURE	:	POLYHYDROXYFATTY ESTERS
(3) IONICNATURE	:	NON - IONIC
(4) PHF2%EMULSON	:	6.5+0.5
(5) DENSITY AT 25* C	:	0.97 + 0.010 gm/ml.
(6) MOISTURE (DEA AND STARK METHOD)	:	80+0.5%
(7) TFM	:	20 + 0.05%
(8) SILICON OIL	:	2.5%
(9) SOLUBILITY	:	READILY DISPERSIBLE IN COLD WATER



OUTSTANDING PROPERTIES

IS - 072 being non-ionic nature is stable in all the probable operational parameters in distilleries does not have any side-effect.

It dose not ionize.

Safe and economical in use, than the conventional products.

IS - 072 is based on vegetable oil and polyhydric Alcohol, thus a single complex stale product.

It is non volatile, easy to disperse, strong spreading power and surface attraction and orientation.

USES.

IS-072 is used as defoaming and antuifoaming agent in distilleries.

RECOMMENDED APPLICATION :

IS-072 being NON-IONIC dispersion, to be diluted with water (1:3) and sprayed where foam is generated or where the foaming problem is encountered, to eliminate the foam completely.

DOSE :

The quantity 'IS-072 being dispersion, to be used will depend on the intensity of foam etc.
Estimated Dose level-50-100 ppm.



Fali-M

BIOETHANOL YEAST (MOLASSES)

PRODUCT INFORMATION

DESCRIPTION :

Fali Bioethanol Yeast (Molasses) is an active dried yeast well-suited for use in batch and continuous fermentations of molasses and pure sugars. It has a high tolerance to osmotic pressure at high sugar concentration.

- Has a high cell count (>20 x 10 cells/g)
- Rehydrates well in direct pitch applications
- Has high ethanol and temperature tolerance
- Has organic acid tolerance
- Can be used in conjunction with nutritional and vitamin supplementation.

APPLICATION USE :

This yeast product has optimal performance within a pH range 4.0 to 5.0 but can ferment well in the range of 3.5 to 6.0. Optimal fermentation temperature is dependent on other stresses present (i.e. organic acid, ethanol and pH) but generally ferments well in the range of 32 C to 37 C (90 F to 98 F). Under various process conditions, this yeast can produce high ethanol titres under a broad range of applications and substrate type.

DIRECTIONS FOR USE :

Yeast can be added directly to a ferment or at a dose rate between 0.2 and 0.5 kilograms per 1000 liters (1.6 and 4.2 pounds per 1000 gallons).

STORAGE :

Boxes should be stored in a cool, dry place. Product should be used within two years of its production date for best performance. Packages which have lost their vacuum-seal should not be used. Opened packages can be stored cool and used within 3 to 4 days.

REGULATORY :

All yeast conforms to current local regulations.

FERMENT AID - 09

Description :

It is a mixture of various enzymes like α -amylase, Gluco amylase protease along spores vegetative cells, B-glucanase, produced from selected strain of *Bacillus* species. it is a high performance starch Liquefication enzyme. Also it contains nutrient salts.

Product colour variation has no influence over product strength or enzymatic activity.

Parameters	It works best under the following conditions : Temperature 20C-6C pH 4 to 2.5
Application	It is a mixture of enzymes, spore & nutrients. It rapidly start break down of starch & Carbohydrates. It is completely capable to achieve the complete degradation of starch in to fermentable sugar (Glucose). It is free from transflucosi base activity & there for produces quantitative better yields of glucose from liquefied starch.
Use Guideline	There are many factors that influence saccharification. (1) Type of Raw Materials. (2) Dry Substance (DS) (3) Type of process equipments. (4) pH & Temperature of the process. (5) Process time.
Dose	For Powder 3-5 ppm basis on Fermentable wash, input.
Storage	It is advisable to store in cold & dry place, below 360C it retains it's activity for at least 8 months.
Package	10 kg. & 20 kg.
Technical Services	We are please to catter Tailor made product as per your specific demand.



ENZALIQUI - 09

Is a heat-stable, liquid Alpha-Amylase Enzyme of bacterial origin. is an endo-amylase that randomly hydrolyzes alpha 1, 4 - glycosidic binds in gelatinized starch.

PRODUCT SPECIFICATIONS :

From	:	Brown colored liquid
Miscibility	:	Miscible in water
Working temperature range	:	80 - 110 C

APPLICATIONS AND BENEFITS :

Is used in excellent thermal stability for liquefaction of steam jetcooked starch. It increases worth yield and grain adjunct cooking capacity. The prolonged action of rapidly reduces the viscosity of gelatinized starch and produces large amounts of lower molecular weight dextrins.

DOSAGE :

Recommended Dosage : 0.2 - 0.3 kg / Ton of Starch, to be optimized based on requirements.

TECHNICAL ASSISTANCE :

Please contact us for more information concerning technical advice and assistance with this product.

QUALITY CERTIFICATIONS :

ISO 9001 : 2015	HALAL INDIA
ISO 22000 : 2018	DAR KOSHER

SAFETY AND ENZYME HANDLING :

Store in a cool, dry and shaded place, away from direct sunlight. Enzyme vapours may cause irritation when inhaled. Unnecessary contact with the product should be avoided. The shelf life of under recommended storage conditions is for 1 year.

PACKAGING :

The product is available in 25 kg and 50 kg HDPE drums. The packing can also be customized as per the requirements.



ENZASACHHARIDE - 09

Is a preparation of and Amyloglucosidase derived from Fungus origin. Amyloglucosidase is an exo-amylase that catalyses of successive glucose units from the non-reducing and of liquefied starch by hydrolyzing both the linear (1,4-alpha-D) and branched (1,6-alpha-D) glycosidic linkages. has side activity of Pullulanase.

PRODUCT SPECIFICATIONS :

From	:	Brown colored liquid
Miscibility	:	Miscible in water
Working pH Rang	:	4.5 - 6.5
Working temperature range	:	40 - 60 C

APPLICATIONS AND BENEFITS :

Is used in the saccharification of liquid starch for preparing amylaceous hydrolysates and crystal glucose, in the brewing of beer with low dextrans content, and in the production of bread and juices.

DOSAGE :

Recommended Dosage : 0.4 - 0.6 kg / Ton Starch, to be optimized based on requirements.

TECHNICAL CERTIFICATIONS :

Please contact us for more information concerning technical advice and assistance with this product.

QUALITY CERTIFICATIONS :

ISO 9001 : 2015	HALAL INDIA
ISO 22000 : 2018	DAR KOSHER

SAFETY AND ENZYME HANDLING :

Store in a cool, dry and shaded place, away from direct sunlight. Enzyme vapors may cause irritation when inhaled. Unnecessary contact with the product should be avoided. The shelf life of under recommended storage condition is for 1 year.

PACKAGING : The product is available in 25 kg and 50 kg HDPE drums. The packing can also be customized as per the requirements.



ENZABOOSTER - 09

The Enzymes based Formulation for Starch / Grain Based Distilleries :

Enzymes are vital biochemical materials that have been proven critical for the use in distilleries for various benefits like increasing the yield and efficiency by utilizing dextrin's and polymers which Yeast cannot metabolize directly, streamlinants, thus lesser by-products along with improved spirit quality.

Helps in exponential increase of the Ethanol Yield of the Distillery thereby Streamlining overall processes and increasing the Fermentation efficiency.

Primary Functions of :

Converting Non - Fermentable Carbohydrates, Fibers and NSP to Fermentable Sugars. Strengthening of the Yeast Cell Wall. Controlling Bacterial Contamination and Proliferation.

Method of Applications :

In Powder form containing Enzyme. It should be Weighed as per dosage required and added in the Pre - Fermenters and Fermenters directly.

The application in Pre - Fermenters has to be done along with Yeast addition while the application in Fermenters has to be done along with transfer of Pre-Fermenter. Powder form containing Enzyme. It should be Weighed as per dosage required and added in the Pre - Fermenters and Fermenters directly.

- In Continuous Fermentation, the application of should be done regularly as per shift basis. The dosage points of the Fermenters shall be optimized based on the plant operational details.

Dosage : 5 ppM on Mash Volume basis.

Process Parameters :

Is designed in such a way that it is suitable for all the process parameters such as Temperature and pH of the Pre-Fermenters and Fermenters.

Storage and shelf life :

Store it in cool, dry and shaded place and avoid contact with direct sunlight. Enzyme dust may cause irritation when inhaled. Unnecessary contact with product should be avoided. The shelf life of under recommended conditions is for the period of 1 year from the date of manufacture.

Packaging :

Is packed in 1 kg Aluminium Poly Pouches which are further packed in HDPE Drums. The packing can also be customized as per the requirements.



BIOETHANOL YEAST (GRAIN)

PRODUCT INFORMATION

DESCRIPTION :

Fali Bioethanol Yeast (Grain) is an active dried yeast well-suited for use in simultaneous saccharification fermentations of starch substrates. It has a high tolerance to liberated glucose.

- Has a high cell count ($>20 \times 10^9$ Cells / g)
- Rehydrates well in direct pitch applications
- Has high ethanol and temperature tolerance
- Has organic acid tolerance
- Can be used in conjunction with glucoamylase and alpha amylase enzyme systems

APPLICATION USE :

This yeast product has optimal performance within a pH range 4.0 to 5.0 but can ferment well in the range of 3.5 to 6.0. Optimal fermentation temperature is dependent on other stresses present (organic acid, ethanol and pH) but generally ferments well in the range of 32° C to 37° C (90° F to 98° F). Under proper conditions, Fali can produce ethanol up to and beyond 16% w/v.

DIRECTIONS FOR USE :

Yesat can be added directly to a fermentor at a dose rate of between 0.1 and 0.5 kilograms per 1000 liters (1 and 4 pounds per 1000 gallons.)

Yeast conditioning can also be performed to acclimate the yeast for fermentation, increase the pitching cell mass and shorten the lag phase in the fermentor.

PACKAGING :

Fali Bioethanol Yeast (Grain) is packaged in vacuum-sealed foil bags and shipped in cardboard boxes. Each package contains 10kg (22lb) with 60 boxes per pallet.

STORAGE :

Boxes should be stored in a cool dry space. Product should be used within two years of its production date for best performance. Packages which have lost their vacuum seal should not be used. Opened packages can be stored cool and used within 3 to 4 days.

REGULATORY : All yeast conforms to current local regulations.



UNIZYME DESCRIPTION

Available Form	Organic Semi-Liquid Form
Number of Bacterial Strains	60 Different Bacterial Strains
Stage of Bacteria	Living Bacteria
Number of Bacterial Colonies	63×10^{-9} CFU/MI

ROLE OF MICROBIAL UNIZYME IN WASTEWATER TREATMENT PLANTS

Parameters	Percentage of Reduction
Sludge Degradation	Zero Sludge
Chemical Oxygen Demand (COD)	75 % to 80 %
Biological Oxygen Demand (BOD)	75 % to 80 %
Colour	80 %
Odour	90 %
Removal of Suspended & Floatable Organic Debris	90 %
Reduces Total Suspended Solids (TSS)	80 %
Depends on Characteristics	Reduces Total Dissolved Solids (TDS)
Increases Dissolved Oxygen (DO)	Min. 3 - Max - 6



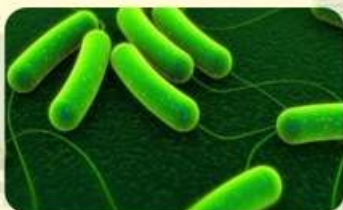
UNIZYME USAGE IN INDUSTRY

• Dye & Textile processing Industries	:	Effluent Treatment Plants (ETP)
• Paper And Pulp Industries	:	Sewage Treatment Plants (STP)
• Tanneries & Leather	:	Common Effluent Treatment Plants (CETP)
• Pharmaceutical Industries	:	Common Sewage Treatment Plants (CSTP)
• Sugar & Distilleries Industries	:	Food Processing Industries
• Milk & Dairy Industries	:	Municipal Sewage Water
• Breweries, Wine & Alcohol Plants	:	Chemical Industries



WHERE THE UNIZYME TO BE USED?

• Activated Sludge Process	:	Collection & Equalization Tank
• Aerobic Treatment Plants	:	Common Effluent Treatment Plants
• Anaerobic Digester	:	(CETP) & Effluent Treatment Plants (ETP_
• MBR (Membrane Bio Reactor)	:	Up - Flow Anaerobic Sludge Bankets Reactor (UASBR)
• Compositing Inoculam	:	Biogas Production Bio Digester
• Septic Tanks & Sludge Pits	:	Agricultural Bio Fertilizers



MERITS OF USING UNIZYME

Avoid Chemical Uses	Reduction of sludge generation
Low Cost Treatment	Degradation of Organic Pollutants & Heavy Metals
Reduction of Aeration Time & Blowers	Avoid sludge handling.
Low Energy Consumption	Increase The Biogas Production
Reduction of > 50 % of electricity usage	Treats Suspended And Floatable Organic Debris
Improved Anaerobic Digester Efficiency	Degradation of organic & Inorganic Chemicals



HOW DO BACTERIA BREAKDOWN ANY MOLECULE



Unizyme contains 60 different bacterial strains, each selected continually adapt and grow at degrading certain waste materials. Biological treatment is the only method that can degrade the waste.



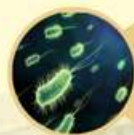
Bacteria have the capability of producing many different types of enzymes that degrade a wide variety of organic materials such as fats, oils, cellulose, xylan, proteins starches and all chemicals.



Bacteria can produce the complete "team" of enzymes that are necessary to degrade and consume the organic materials present in their environment at any given time.



They can protect themselves from changes in environmental conditions by forming colonies, biofilms, or spores.

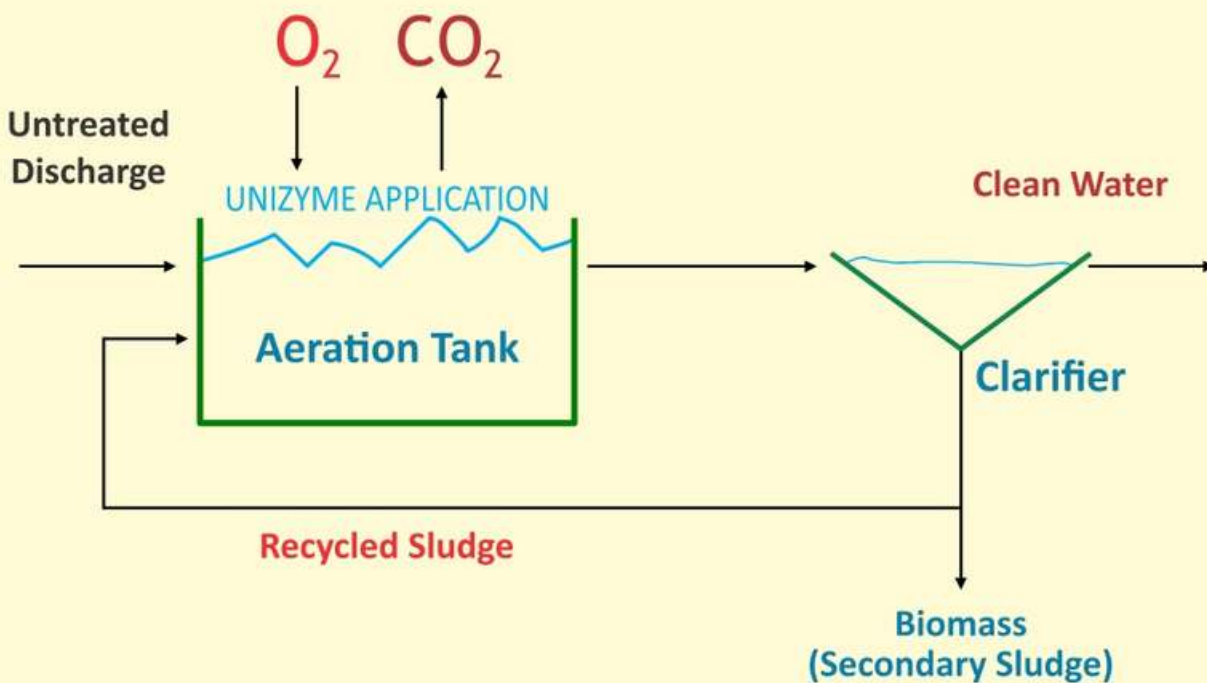


Bacteria can adapt to a range of conditions and food supplies. They can change the type of enzymes that they produce if the food source changes.

HOW QUICKLY DO HIGH ENZYME PRODUCING BACTERIA AND IN WHAT QUANTITIES?

- ❖ Production of enzymes begins as soon as the bacteria begin to grow. The cells must obtain nutrients from their surroundings, so they secrete enzymes to degrade the available food.
- ❖ The quantities of enzymes produced vary depending on the bacterial species and the culture conditions (e.g., nutrients, temperature, and pH) and growth rate.
- ❖ Hydrolytic enzymes such as proteases, amylases, and cellulases, etc. are produced in the range of milligrams per liter to grams per liter.

UNIZYME USAGE IN INDUSTRY



IMPORTANT ABOUT UNIZYME



UNIZYME, When added helps to



Fast Start-ups & Bacterial Oxidation of the phase will be faster and more complete



Population > 60 x 10⁻⁹ per milli gram"



Effluent water standards will be met more consistently, helping to maintain a clean environment



Sludge volume will be reduced more > 90%, as more solids are degraded



Do Not Freeze & Store in a cool dry location



Improve Effluent treatment & Reduce Odours



Do not inhale dusts, avoid excessive eye contact

UNIZYME FOR COMPOSTING SOLID WASTE

- ❖ Range of products available for all type of solid waste
- ❖ Municipal solid waste
- ❖ Industrial sludge composting
- ❖ Agricultural waste composting

DOSAGE DETAILS OF UNIZYME CULTURE FOR 100 KLD PLANT

Dosage	Day of Dosage	Unizyme Application to Aeration tank each Dosage
1st Dosage	1st Day	20 Liters
2nd Dosage	2nd Day	20 Liters
3rd Dosage	3rd Day	20 Liters
4th Dosage	4th Day	15 Liters
5th Dosage	5th Day	15 Liters
6th Dosage	6th Day	10 Liters
Continues Dosage	Every Day	10 Liters



BECTAQEET - 09 CWT

For Microbial inhibition in cooling water systems.

Biocide for cooling water systems.

Synergism of quats compound with suitable other antimicrobial agents have emerged, Our range of products namely BECTAQEET-09 CWT, as a successful & satisfactory group of Biocide.

- (1) Biodegradable hence causes no pollution.
- (2) Non volatile & hence highly stable, & not at all responsible for salt formation as other.
- (3) Germicidal over a wide range of pH.
- (4) Non corrosive to plant & machinery.

Dose : Either it can be sprayed at interval in its original form or can be sprayed regularly with suitable dilution in water.

SCALATOR - 333 CWT

For scale Inhibition in cooling water systems.

Scale formation in circulating cooling water systems is a common problem. To avoid this problem we are offering our tailor made caption products to individuals units, as per their water analysis, equipment design, condition & system adopted.

Special Features :

- (1) pH & temperature variation does not interfere the products activity. As it is workable under wide range of pH & temperature.
- (2) Threshold effect - Ability to form complex with metal ions at substoichiometric levels.
- (3) Defloculation = Ability to disperse solids in liquid.

Dose : 5 ppm+3

In holding water 3ppm, circulation 5ppm



ALGAETRET - 09 CWT

ALGAETRET - 09 broad spectrum microbiocide is a chlorophenol based liquid biocidal formulation it is designed to control Algae and microbial attack in cooling water system and the paper

SPECIFICATIONS :

Property	:	Specification
Physical state	:	Liquid
Odour	:	Peculiar light pungent odour
Colour	:	Colourless to pale Yellow
pH at 20 c	:	2 to 6 (With Acid Inhibitor)

SPECIFIC GRAVITY :

(At 20 C)	:	1.05 + 0.01
Solubility	:	Soluble in water

APPLICATIONS :

In Industrial cooling water system to control Algae, Fungi, Slime formation and microbial attack, As wood preservatives in the paper industries.

Packing : 50 kgs Drums.

Comparability :

ALGAETRET - 09 is compatible with corrosion and scale inhibitors conventionally used in alkaline cooling water treatment programme.

Dosing : 50 to 80 ppm every fortnight, the dosage vary depending upon the nature of the severity of the problem but the range of 100 to 150 ppm will effectively control the problem.

AO CWR

- **Aristo introduces proven technology for Reduce, Recycle and Reuse (3 R's) in different streams which is most critical in distillery industry**
- **Reduces fresh water consumption**
- **Save the Global warming and used as a source of renewable energy**
- **Zero liquid discharge**

Introduction

AO CWR is a specially formulated cocktail of enzyme & enzymatic salts used for recycling of condensate water in molasses and grain based distillery.

Condensate water is mineral free and has a Total Dissolved Solids (TDS) level of near zero. The water should NEVER be used for human consumption as it may contain heavy metals from contact with the cooling coils and other HVAC equipment. The lack of minerals in the water also makes it corrosive to most metals, especially steel and iron. The water's low-mineral quality and lack of sanitizers (chlorine, chloramines, etc.) makes it excellent for the purposes of irrigation. In the residential sector, this water should be used similar to harvested rainwater; irrigation for plants not intended for human consumption.

Present Challenges

- Water scarcity and stringent pollution norms are driving the distillery industry to implement ZLD by the way of 3 R's technique ..
- Ground water levels are reducing at an alarming rate and consumption of water in industries is increasing on a daily basis.
- AO-CWR aims to recycle the condensate water in distilleries there by reducing fresh water consumption.
- High level of volatile acids and dissolved gases.
- Presence of organic matter and nutrients for faster contaminants bacterial growth.

Product Technology

- AO CWR has some proteases enzymes which helps to break down the cell wall of gram(+ve) and gram(-ve) bacteria and increase the pH along with FAAN contents in Fermentation System which is essential for Yeast growth.
- In condensate water, some organic acid is always present. AO- CWR will ultimately break down this organic acids into organic Carbon resulting in a reduction of Volatile Acids in condensate water.

Benefits

- Helps to remove the bad odour and colour in condensate water.
- Cost effective reduction in consumption of fresh water
- Controls the bacterial contamination.
- Reduces the TVA in Fermented wash.
- Increases the pH and quality of Alcohol.
- Provides the necessary nutrients for yeast growth.
- Avoids the undesirable by-products in Fermentation & Distillation process.
- Wealth from waste
- Ease to follow the norms given by the PCB authorities
- Ease to solve the day to day public issues
- Can easily approach the CDM and ISO certifications
- Improve the value of product in competitive market

Physical Properties

Physical State	White powder in crystal form
pH	8.5to 8.8
Odour	Odourless
Solubility	100% Water Soluble

Application and Dosage

	Dosage	Retention Time	OptimalEffect	StabilityRange
Fermented wash	8-10 ppm/m3 of wash	10-20 MIN	27-65° C pH-6to8	30°c pH-7.2
Raw condensate	20-25 ppm/m3 of direct condensate	30-45 MIN		

Handling and Storage

- Store in cool Dry and well ventilated Place.
- Keep away from direct sunlight.
- Maintain it at room temperature.
- In case of contact with eyes, wash thoroughly with water

Packing

- Available in 01 kgs packing with standard 30 kg HOPE drums
- As per customer requirement customized packs will be provide for bulk order only

Shelf life

AO-CWR is stable under recommended storage conditions for a period of 12 months.



10

AO DC PLUS

An Enzyme Blended Microbial
Culture For Super Compost
Preparation

- The composting cycle is complete within 30-35 days.
- Helps in the reduction of BOD and COD.

Introduction

AO -DC Plus is an innovative product developed by Industrial Bioscience for Compost booster preparation by using spent wash & pressmud. Industrial Bioscience an ISO 9001:2015 certified company offers AO-DC Plus enzyme with microbial culture for compost preparation. It contains cocktail of enzymes like cellulose, hemicelluloses and ligninase with high temperature & low pH tolerant bacteria & Actinomycetes. AO -DC Plus is enzyme blended with group of aerobic & Facultative anaerobic micro organisms which can grow on biological wastes. It contains consortium of microbes (fungal & bacterial) which degrades fiber content and wax in press mud to organic acids and humus (Rich nutrient content). The processed compost contains high organic carbon which supplements carbon requirements in sugarcane fields.

Dosing

2kg.of AO DC Plus is diluted to 10 liters of solution and sprayed on 20 tons of compost material

Storage

- Store in cool Dry and well ventilated Place.
- Keep a way from direct sunlight.

Benefits

- The Composting Cycle Is Complete Within 30-35 Days.
- Helps in reduction of BOD and COD.

Packing

- Available in standard 25 kg HDPE drums or 1 kg aluminium foil packet.
- Can be custom packed on request.

Shelf life

AO-DC Plus is stable under recommended storage conditions for a period of 12 months.



Technical Support

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AO NUTRAZYME

100% Replacement of
Inorganic Fertilizers like
Urea, DAP & MgSO_4

- 100 % Replacement of inorganic fertilizers like Urea, DAP and Magnesium Sulphate
- Easily degrades complex materials by enzyme
- Increase the cell vitality and cell count by using this product.
- It is user friendly.

Introduction

Aristo Organic introduces novel products in biological process for replacing of inorganic fertilizers usage. Our energetic scientists have developed new products in bioprocess industries for replacement of inorganic fertilizer utilization.

This novel product contains cocktail of enzyme and gives very excellent source of micro and macro nutrients to the microbes by autolysis and degradation of old biomass and existing complex phosphate source in the raw material. For example the phosphate is very essential for synthesis of anabolism process. The existing raw material contains phosphates in complex forms and it is unable to utilize by yeast cell due to complex form. So we need to add DAP for the yeast propagation in all fermentation and culture vessels. We have the special enzyme to degrade the complex phosphate into simple molecule form for the yeast propagation.

In molasses around 500-750 ppm of Free Ammonical Nitrogen (FAN) is available. But it cannot contribute to the yeast growth directly. Generally 100-150 ppm of FAN content in wash is sufficient for the yeast growth.

Benefits

- 100 % Replacement of inorganic fertilizers like Urea,DAP and Magnesium Sulphate.
- Easily degrade of complex materials by enzyme.
- Increase cell multiplication by phosphate degradation.
- Low treatment cost and dosages.
- Reduces contamination level.
- Reduces overall process cost.

Dosage

FERMENTED WASH – 5 TO 7 PPM

Optimal Effect

TEMPERATURE- 30 TO 37 °C

Safety

A0 - Nutrazyme is available in liquid and powder form. Therefore it is required to store it in cool place for best activity.
Storage in normal room temperature in clean and dry area is sufficient.

Storage

A0 - Nutrazyme should be stored in cool and dry places.
Avoid direct exposure to heat and sunlight.
Always use protective apparels such as gloves, mask, goggles etc., while handling.

Packing

Available as an amber colour liquid in standard 30 kg HDPE drums.
Can be custom packed on request.

Handling Caution

Do not inhale.
In the event of direct contact with skin or eyes, immediately wash or rinse with plenty of water.
Please refer to the MSDS for details.

Shelf Life

Nutrazyme is stable under recommended storage conditions for a period of 12 months with less than 5% drop in activity (The life can be prolonged if storage is at 4-10 °C temperature).



OUR SERVICE CELL

- ◆ Our technical will study your plant & process and clearly define your requirement.
- ◆ Formulation best suited for your need will be determined & suggested.
- ◆ Our technicians will visit your factory time to time to ensure good after sales services.

We undertake job work for cleaning your plants and equipments with expertises service

WHILE THE INFORMATION IS BELIEVED TO BE RELIABLE WE DO NOT GUARANTEE ITS ACCURACY. PURCHASERS ARE URGED TO MAKE THEIR OWN TESTS WITH MATERIALS DESCRIBED HEREIN. NOTHING CONTAINED HEREIN IS INTENDED AS A RECOMMENDATION TO USE OUR PRODUCTS DO AS TO INFRINGE ANY PATENT. WE ASSUME NO LIABILITY FOR CUSTOMERS VIOLATION OF PATENT OR OTHER RIGHTS.



Powering Treatment Solutions with Nature's Intelligence



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