ALCOTimes™

FEBRUARY 2024

BALAJI ENZYME & CHEMICAL PVT LTD

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E-mail : info@becpl.in | Web. : www.becpl.in

Introducing AlcoTimes :

We Balaji Enzymes & Chemical Pvt Ltd are sharing our monthly newsletter ALCOTIMES for Alcohol Industry. Now we are happy to launch our new monthly news letter "ALCOTIMES" for Alcohol Industry.

About Our Company :

We M/s Balaji Enzyme & Chemical Pvt Ltd are a leading supplier of Enzymes, Filter aid, Yeast, Hops, Processing aids, Clarifiers and food fortification products to breweries, distilleries, malt extract industry, starch industry, juice and beverage industry, and other food industry.

BALAJI ENZYME AND CHEMICAL PVT LTD

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ENZYMES AND ANTIBACTERIAL SOLUTIONS

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Through innovations and advanced technologies, we want to provide excellent services and build long-term relationships with our esteemed customers

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   Thermostable Alpha Amylase
2. **SUPER GLUCOAMYLASE**
   Glucoamylase
3. **VITAHOP C**
   Hop Based Natural Antibacterials
4. **SUPER ALCOBOOST G**
   Antibacterials Solutions

MOLASSES DISTILLERY

1. **SUPER ALCOBOOST M**
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0 22-46031666

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Sir M V Road, Andheri (East),
Mumbai - 400059,
Maharashtra, India

Product Technical Data Sheet

BALAJI ENZYME AND CHEMICAL PVT LTD

SUPERAMYLASE DX

Thermostable Alpha Amylase

Description

SuperAmylase DX is a kind of thermostable α-amylase with high activity. It is derived from Bacillus licheniformis and produced through submerged fermentation and refining process. It can hydrolyse α- 1,4 glycosidic bond of starch randomly and reduces mash viscosity rapidly. SuperAmylase DX Alpha-amylase is designed for starch-based feedstock ethanol production

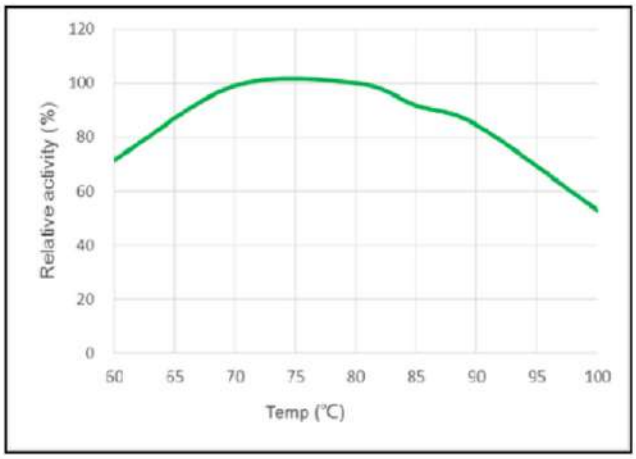

Fig. 1 : The influence of temperature on the activity of Super Amylase DX

Characteristics

Component name : Alpha amylase
Activity :≥150000 U/g
Color :Amber
Physical form : Liquid
Approx. density g/ml : 1.10-1.25

Enzyme	DS	Brix	Reducing sugar	Iodine test	Viscosity/cp
Benchmark	1:2.8	23.0	3.06	Brown to red	283
SuperAmylase DX	**1:2.8**	**23.4**	**3.08**	Brown to Red	**224**

pH:4.85, Dosage: 12u/g, Temp/Time: 90°C/120 min

Advantages

For ethanol producer, smooth running and high starch conversion rate are extremely important to achieve high ethanol yields. Super Amylase DX may become an ideal solution to meet your targets. The advantages are as follows:

- Outstanding viscosity reduction performance
- Easier liquefaction handling with wide pH and temperature range
- Complete starch conversion to enhance ethanol yields

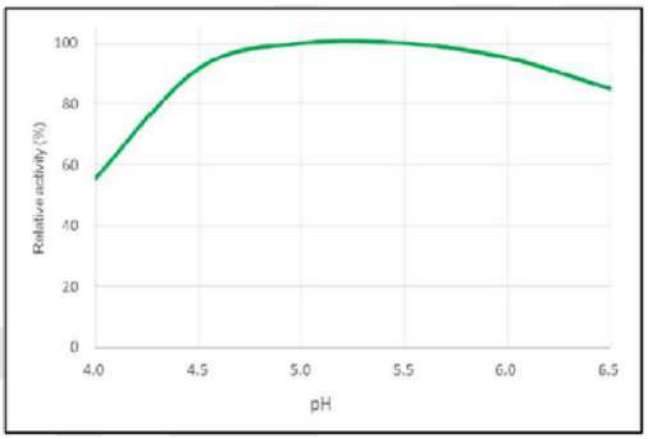

Fig. 2 : The influence of pH on the activity of Super Amylase DX

Recommendation

Material/water ratio : 1:1.8-1:3 (Optimum ratio 1:2-1:2.7)
pH range : 4.8-6.5 (Optimum : 5.0 to 6.0)
Temperature range : 65-100 ℃ (Optimum : 75 to 95 ℃)
Cooking time : 90 to 120 mins
Dosage (kg/t Starch) : 0.10-0.15 kg/T
The actual dose required will depend upon the conditions of your fermentation: time, initial pH and the level of solids.

Composition

Preservatives : Potassium sorbate
Stabilizers : Sorbitol
Sodium chloride

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BALAJI ENZYME AND CHEMICAL PVT LTD

SUPERAMYLASE DX

Thermostable Alpha Amylase

Packaging

Available in various package sizes. Please consult Our representative for detailed information.

Safty and Handling precaution

Enzymes are proteins. Inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Some enzymes may irritate the skin, eyes, and mucous membranes upon prolonged contact. See the MSDS or Safety Manual for further information regarding safe handling of the product and spills.

Storage and Shelf life

Recommended storage: 0-25 °C Packaging must be kept intact, dry, and away from sunlight. Please follow the recommendations and use the product before the best before date to avoid the need for a higher dosage. To ensure maximum retention of activity, please keep the enzyme under refrigerated conditions below 5 °C with the container closed.

Best before: You will find the best before date in the certificate of analysis or on the product label. The product can be transported at ambient temperature. Following delivery, the product should be stored as recommended

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Product Technical Data Sheet

BALAJI ENZYME AND CHEMICAL PVT LTD

SUPER GLUCOAMYLASE

Glucoamylase

Description

Super Glucoamylase is the exo-glucoamylase derived from a Aspergillus niger with extremely high enzyme activity and sugar conversion rate, which can efficiently hydrolyze α-1,4-glucosidic bonds from the nonreducing end of liquefied starch to produce glucose quickly. Super Glucoamylase Alpha-amylase is designed for starch-based feedstock ethanol production

Characteristics

Component name : Glucoamylase
Activity : 400,000 U/g
Color : Amber
Physical form : Liquid
Approximate density g/ml : ≤1.20

Advantages

For ethanol producer, smooth running and high starch conversion rate are extremely important to achieve high ethanol yields.The advantages are as follows:

- Release glucose quickly and smoothly, the successive glucose providing favorable conditions for alcohol production.
- Optimize fermentation time and improve the utilization rate of equipment.
- Stable production performance with wide pH and Temperature range.
- Utilized in saccharification and can achieve high DX value.
- Wide pH stability, flexibility in process control.
- Saccharification can be processed in higher temperature and drier substance concentrations.

Composition

Enzyme : Glucoamylase
Stabilizers : Glucose

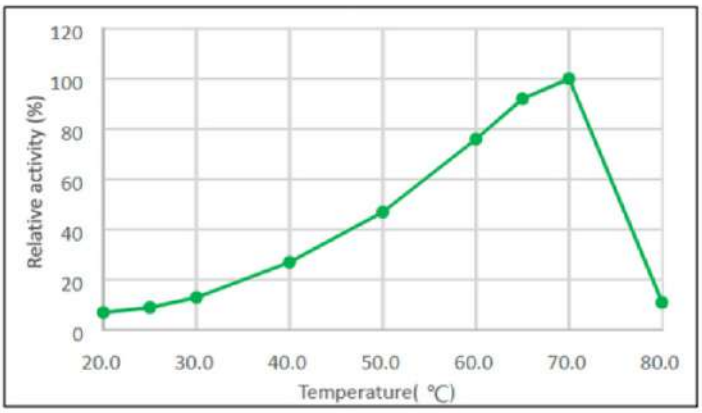

Fig. 1 The influence of temperature on the relative activity of Super Glucoamylase

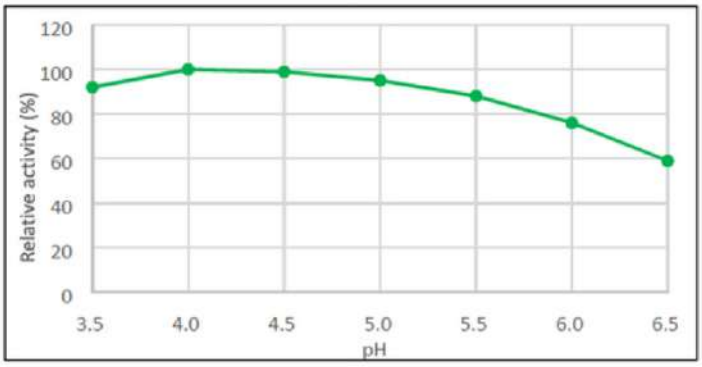

Fig. 2 The influence of pH on the relative activity of Super Glucoamylase

Recommendation

Material/water ratio: 1:1.4-1:3.0
(Optimum ratio 1:1.6 to 1:2.4)
pH range : 4.0-5.0 (Optimum : 4.1 to 4.5)
Temperature range : 30-70 ℃ (Optimum : 55 to 65 ℃)
Dosage (kg/t Starch): 0.4-0.6 kg/T

The actual dose required will depend upon the conditions of your fermentation: time, initial pH and the level of solids.

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BALAJI ENZYME AND CHEMICAL PVT LTD

SUPER GLUCOAMYLASE

Glucoamylase

Packaging

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Safty and Handling precaution

Enzymes are proteins. Inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Some enzymes may irritate the skin, eyes, and mucous membranes upon prolonged contact. See the MSDS or Safety Manual for further information regarding safe handling of the product and spills.

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Vitahop®

Increase profits in BIOETHANOL...naturally

Vitahop® is a range of natural hop extracts, ideal for production of bioethanol from a range of raw material feedstocks, as they protect yeast from bacterial growth, and their acid by-products, during fermentation processes. When used as part of a planned process regime with regular additions, bacterial infections do not develop and spoil yeast fermentations.

When infections do develop, they can quickly get out of control and disrupt production, potentially causing substantial losses and lost revenue. By controlling bacteria and preventing bacterial growth, catastrophic infections can be a thing of the past.

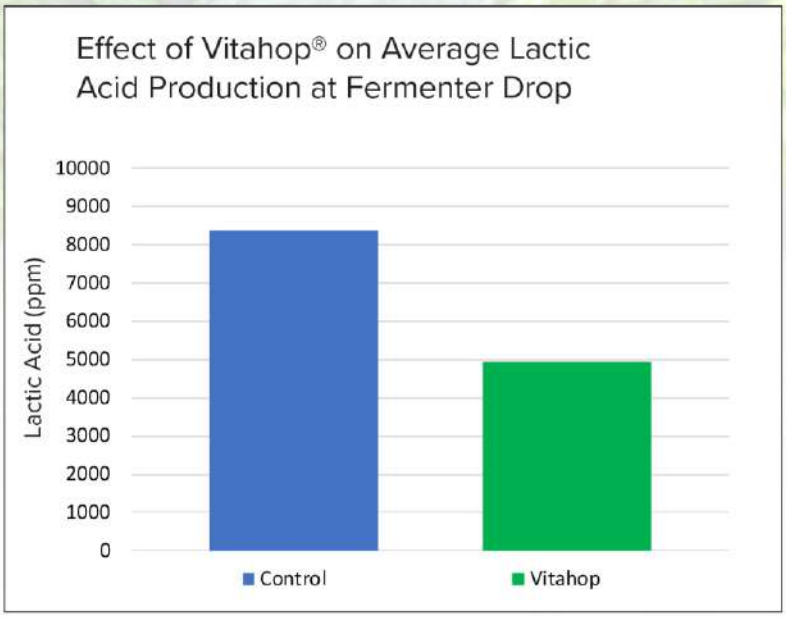
Vitahop® is used in both continuous and batch fermentations. It helps ensure healthy, vitalised yeast growth and during fermentation suppress gram positive bacteria. If bacteria are allowed to prosper, they will compete with and eventually inhibit the yeast, slowing fermentation sometimes to a complete stop, resulting in a "stuck" fermentation. Bacteria will also use up valuable feedstock producing organic acids such as lactic acid, further reducing ethanol yields. Prevent this happening with **Vitahop**®**.**

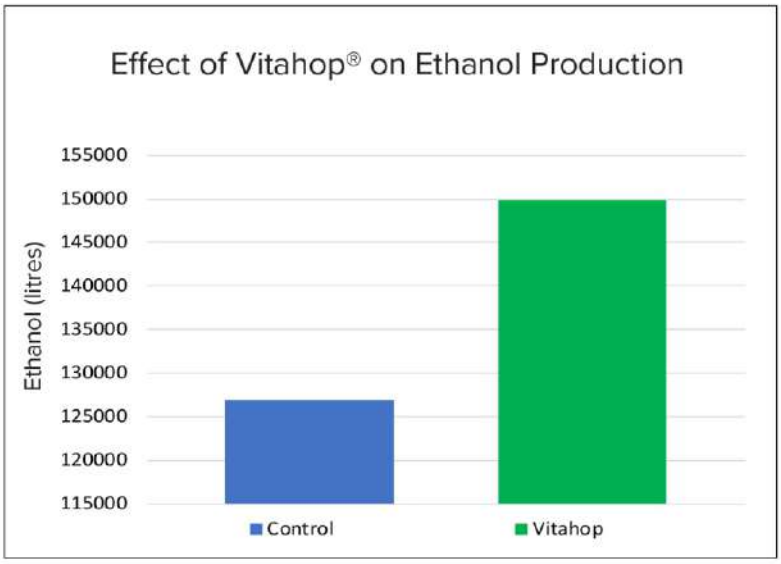
info@betatec.com | **betatec.com** | *efficient by nature*®

BetaTec® hop products

Key Benefits of Vitahop®

- Maintains optimum ethanol yields
- Ensures reliable fermentations
- Keeps yeast healthy
- Controls bacteria
- Demonstrated benefits in ethanol production plants worldwide
- Safe and natural, easy to use
- Safe DDGS for animal feed
- A natural alternative to antibiotics





Unpublished data BetaTec 2015

Vitahop®

BetaTec is the first company worldwide specialising in the application of hops and hop-derived compounds for use in "beyond brewing" industries. Our product portfolio includes natural fermentation aids, antibacterials, flavours and functional ingredients. Our key business areas are alcohol, yeast and sugar production.
All BetaTec products are accompanied by on-site support, process optimisation and consulting.

Please contact our technical experts to learn how Vitahop® can help you sustain improved ethanol yields.

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Malvern Hills Science Park
Geraldine Road
Great Malvern, Worcestershire WR14 3SZ
+44(0) 1684 217340

BetaTec® hop products

"Transforming your world with our natural hop solutions"

Product Technical Data Sheet

BALAJI ENZYME AND CHEMICAL PVT LTD

SUPER ALCOBOOST G

Grain ethanol biocide

Description

Super Alcoboost G is a powerful solid biocide in powder form that protects yeast, sugar, and alcohol by removing bacteria from wort/wash. It improves alcohol quality by reducing acid formation caused by harmful lactic acid bacteria during grain ethanol production. It also benefits microorganisms during the biomethanation process.

Advantages

Super Alcoboost G provides the following benefits:

- Reduction of yeast stress & Increased alcohol yields
- Reduces sucrose losses due to contamination
- Reduces bacterial contamination very rapidly
- Prevention of bacterial competition for glucose

Dosages

5-10 PPM in the wort prior to pitching the yeast culture, and the same dose after filling the fermenter.
We recommend 6 PPM or 600 gram per 1.00 lac litre of wort / wash for grain.
Before mixing to bulk volume in the pre fermenter and fermenter, Super Alcoboost G should be dissolved in wort / wash in a bucket. (It is readily dissolved in water, wort & wash)

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BALAJI ENZYME AND CHEMICAL PVT LTD

SUPER ALCOBOOST G

Grain ethanol biocide

Product application

PRE FERMENTER

Dosing/application begins in the pre fermenter. Super Alcoboost G should be added as soon as 10% of the wort is transferred to the pre fermenter.

Example-
IIf the pre fermenter capacity is 2 lacs litres, then Super Alcoboost G should be added for full capacity as soon as 20,000 litres of wort are transferred to PF @ 600 gm per 01 lac litre, i.e. 1.2 kg Super Alcoboost G should be dissolved by hand in the same wort in a bucket & put it to PF now PF should be filled normally. (The operator must wear gloves and goggles).

FERMENTER

Super Alcoboost G should be added to the fermeter as soon as 10% of the wort is transferred/reaches the fermenter.

Example-
We presume only one ferementer of 12 lac litre in capacity.

In this case, the total amount of Super Alcoboost G should be added as soon as 10% (1,20,000 ltr) of wort/wash is transferred to the fermentation tank, i.e. @ 600 gm/one lac litre x 12 = 7.2 kg, and then the fermenter should be filled normally.

Packaging

12 Kg carton (12 sealed plastic jars - 1 Kg each)

Safty ,Handling and storage precaution

Store in a cool, dry place. Nobody should try to smell or taste anything. Hand gloves are advised to be worn when handling.

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Product Technical Data Sheet

BALAJI ENZYME AND CHEMICAL PVT LTD

SUPER ALCOBOOST M

Molasses ethanol biocide

Description

Super Alcoboost M is a powerful solid biocide in powder form that protects yeast, sugar, and alcohol by removing bacteria from wort/wash. It improves alcohol quality by reducing acid formation caused by harmful lactic acid bacteria during grain ethanol production. It also benefits microorganisms during the biomethanation process.

Advantages

Super Alcoboost M provides the following benefits:

- Reduction of yeast stress & Increased alcohol yields
- Reduces sucrose losses due to contamination
- Reduces bacterial contamination very rapidly
- Prevention of bacterial competition for glucose

Dosages

5-10 PPM in the wort prior to pitching the yeast culture, and the same dose after filling the fermenter.
We recommend 6 PPM or 600 gram per 1.00 lac litre of wort / wash for grain.
Before mixing to bulk volume in the pre fermenter and fermenter, Super Alcoboost M should be dissolved in wort / wash in a bucket. (It is readily dissolved in water, wort & wash)

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BALAJI ENZYME AND CHEMICAL PVT LTD

SUPER ALCOBOOST M

Molasses ethanol biocide

Product application

PRE FERMENTER

Dosing/application begins in the pre fermenter. Super Alcoboost M should be added as soon as 10% of the wort is transferred to the pre fermenter.

Example-
IIf the pre fermenter capacity is 2 lacs litres, then Super Alcoboost M should be added for full capacity as soon as 20,000 litres of wort are transferred to PF @ 600 gm per 01 lac litre, i.e. 1.2 kg Super Alcoboost M should be dissolved by hand in the same wort in a bucket & put it to PF now PF should be filled normally. (The operator must wear gloves and goggles).

FERMENTER

Super Alcoboost M should be added to the fermenter as soon as 10% of the wort is transferred/reaches the fermenter.

Example-
We presume only one fermenter of 12 lac liter in capacity.

In this case, the total amount of Super Alcoboost M should be added as soon as 10% (1,20,000 ltr) of wort/wash is transferred to the fermentation tank, i.e. @ 600 gm/one lac liter x 12 = 7.2 kg, and then the fermenter should be filled normally.

Packaging

12 Kg carton (12 sealed plastic jars - 1 Kg each)

Safty ,Handling and storage precaution

Store in a cool, dry place. Nobody should try to smell or taste anything. Hand gloves are advised to be worn when handling.

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CONSULTANTS FOR DISTILLERY & BOTTLING FACILITY

B K GOEL

Email: goelbk20@gmail.com
Ph.: 8962405107, 8889939879

CONSULTANTS FOR DISTILLERY & BOTTLING FACILITY

We are a team headed by Mr. B K Goel (Consultant) for below Projects/Jobs.

1. Setting up a distillery unit For Ethanol & ENA.
2. Setting up a bottling unit for manufacturing of Alcoholic Liquors such as Rum, Whisky, Gin, Brandy, Vodka & RTD.
3. Setting up the Malt Spirit Plants producing the quality as Vatted Malt Spirit.
4. Blending / Development of various liquor brands up to highest Level.
5. We also take annual contract to blend all the Alcoholic products of all range.

May Please Contact
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goelbk20@gmail.com
Ph. 8962405107, 8889939879

How to improve shelf life of molasses

B K GOEL
Consultant for distillery and bottling facility

Till some time ago it was difficult to prevent the deterioration of molasses after storage in steel tanks in sugar mills or in distilleries.

In fact reduction / deterioration starts in TRS of molasses after 3 - 4 months of storage.

Deterioration of sugar in higher brix (say 90 or more)molasses starts after 5 - 6 months as propagation of bacteria is difficult in thick molasses due to osmosis.

Khandsari molasses should be consumed as soon as it is produced due to low brix say around 55 deg.only.

In case the khandsari molasses is stored for a longer period ie around 6 months or more then it is almost impossible to protect it from contamination .

But now it has become possible with a guarantee to save the sugar in molasses for a year or more.

For this one should use the anti bacterial compound .

EXPLORING THE SPIRITED RISE: THE SURGING DEMAND FOR GINGER-INFUSED ALCOHOLIC BEVERAGES IN TODAY'S MARKET

PRADEEP DWIVEDI

CEO of Nutrelis Agro Foods, Noida
Email – info@chicoree.in
Mobile - 9599438851

Introduction

In recent years, the beverage industry has witnessed a fascinating trend with the growing demand for ginger-infused alcoholic drinks. The marriage of ginger's distinctive flavor profile with various alcoholic bases has captured the palates of consumers globally, leading to a surge in popularity. This article delves into the reasons behind the increasing demand for ginger-infused alcoholic beverages, the key players in the market, emerging trends, and the potential future developments.

I. The Ginger Renaissance:

A. Historical Significance:

1. Tracing the roots of ginger in alcoholic concoctions.
2. Cultural significance and traditional uses of ginger-infused drinks.

B. Flavor Dynamics:

1. Analyzing the unique flavor profile of ginger.
2. Synergy between ginger and different types of alcoholic bases.

II. Market Dynamics:

A. Consumer Preferences:

1. The evolving taste preferences of modern consumers.
2. Consumer perception of ginger-infused alcoholic beverages.

B. Health and Wellness Trend:

1. The perceived health benefits of ginger.
2. Ginger as a functional ingredient in alcoholic drinks.

C. Craft and Artisanal Movement:

1. Rise of craft breweries and distilleries incorporating ginger.
2. Artisanal ginger-infused spirits and their appeal.

III. Key Players and Products:

A. Global Brands:

1. Analysis of major international alcoholic beverage brands adopting ginger.
2. Success stories and market strategies.

B. Craft Producers:

1. Spotlight on small-scale producers crafting unique ginger-infused offerings.
2. Niche markets and the impact of local sourcing.

IV. Emerging Trends:

A. Ginger Cocktails:

1. Popular ginger-based cocktail recipes.
2. Mixology trends and the use of ginger in creating signature drinks.

B. Ginger-Infused Beer and Cider:

1. The rise of ginger-flavored beer and cider.
2. Market dynamics and consumer response.

C. Innovation in Spirits:

1. Exploration of innovative ginger-infused spirits.
2. Distillation processes and flavor experimentation.

V. Challenges and Opportunities:

A. Sourcing and Sustainability:

1. Challenges in procuring quality ginger.
2. Sustainable practices in the ginger-alcohol industry.

B. Regulatory Landscape:

1. Compliance challenges and regulations surrounding ginger-infused alcoholic beverages.
2. Lobbying efforts and industry responses.

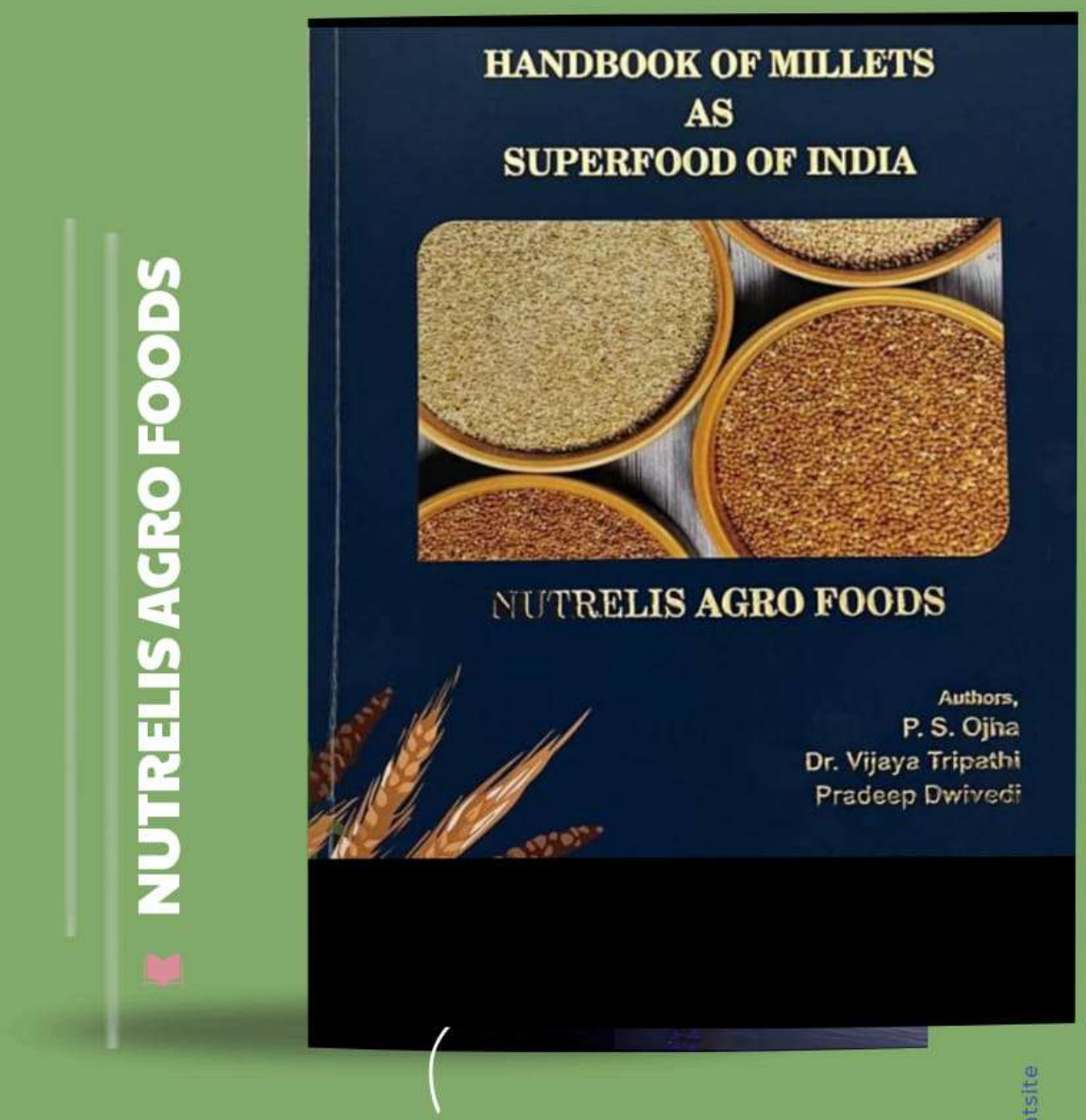
C. Future Outlook:

1. Projections for the future demand of ginger-infused alcoholic drinks.
2. Potential technological advancements and market shifts.

Conclusion:

As the demand for ginger-infused alcoholic beverages continues to rise, the industry finds itself at the crossroads of tradition and innovation. The unique marriage of ginger's distinct flavor with various alcoholic bases, coupled with consumer preferences for unique and health-conscious choices, paints a promising picture for the market's future. From global brands to local artisans, the ginger-alcohol industry is poised for continued growth, offering consumers a diverse and exciting array of options in the spirited world of beverages.

HANDBOOK OF MILLETS AS SUPERFOOD OF INDIA



Authors,
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Dr Vijaya Tripathi
Pradeep Dwivedi

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- Green India Awards 2024
- India Biofuel Meet 2024

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DOES WHISKEY AGE IN THE BOTTLE

MAMTA BHARDWAJA

Business Development Manager
(Wine Industry)

One of the first things we look at when buying a whisky is the age statement on the bottle.

You may be wondering if you buy a ten-year-old bottle now would it become a 20-year-old whisky if you left it sitting in your alcohol cabinet for ten years?

The answer to that is no.

The ageing process in whisky occurs while the spirit is maturing in the oak casks. Scotch whisky must mature for a minimum of three years in oak to be legally classified as Scotch. American bourbon must be aged for a minimum for two years in fresh charred oak barrels.

Whether a three-year-old expression spends a year or 30 years on a shelf without being opened, it is still a three-year-old whisky. This is because the taste profile of a whisky shouldn't change if it remains unopened. A whisky draws its flavour from the wood that it matures in. The longer the whisky spends in the cask, the more flavour it will impart from the wood.

The temperature that a cask is kept in will also have an impact on how quickly the flavour will be imparted from the wood. If the cask is kept in a warmer climate, it will mature much quicker than a cask kept in a colder climate. This is because heat causes wood to expand and therefore allows the spirit to penetrate the wood much quicker and easier. When a cask drops in temperature, it pushes the whisky back out from the wood, alongside the flavour that comes from the oak.

Interaction between a whisky and wood makes up the entire ageing process. As soon as a whisky is filled into a bottle, the ageing process immediately ends there.

If a whiskey is a blend, the age mention on the bottle is of the youngest spirit in the blend. This means if a blend contains 12-year-old and 20-year-old expressions, the whisky will be labelled as a twelve-year-old despite it containing older spirit. Whether an expression is a blend, single malt, or any other kind of whisky, the ageing process ends as soon as the whisky leaves the cask.

As other drinks, such as wine, continue to age in the bottle. However, whisky does not fall into this category. It's as mature as can be once the dram leaves the barrel!

Cheers!!!

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The Fascinating Fermentation Process in Distilleries: Unraveling the Alchemy of Spirits

Sales Executive
Rahul kumar jha
Balaji Enzyme and Chemical Pvt Ltd

Introduction

The art and science of distillation have been integral to human culture for centuries, transforming humble ingredients into spirited elixirs. At the heart of this alchemical process lies fermentation, a crucial step that converts sugars into alcohol, laying the foundation for the diverse array of spirits that grace our glasses. In this article, we delve into the intricacies of the fermentation process in distilleries, exploring the key steps, ingredients, and the magic that unfolds within the fermentation vessels.

The Basics of Fermentation:

Fermentation is a natural metabolic process where microorganisms, typically yeast, break down sugars into alcohol and carbon dioxide. In the context of distilleries, fermentation is the initial stage in the production of spirits like whiskey, vodka, rum, and gin. The primary objective is to create a liquid with a sufficiently high alcohol content that can later be concentrated through distillation.

Ingredients:

The fermentation process begins with a careful selection of ingredients. The choice of raw materials imparts unique flavors and characteristics to the final spirit. Common ingredients include grains such as barley, corn, rye, or wheat for whiskey production, while sugarcane is a staple for rum. Yeast, the microorganism responsible for the conversion of sugars into alcohol, is a critical distinct flavors, and some distilleries cultivate their proprietary strains to achieve a signature taste.

Fermentation Vessels:

Fermentation vessels come in various shapes and sizes, ranging from traditional wooden fermenters to modern stainless steel tanks. Wooden vessels are often favored for their ability to subtly influence the flavor profile of the final product. The size of the vessel is a crucial consideration, as it affects the fermentation time and the overall yield of alcohol.

The Fermentation Process:

Milling and Mashing: Grains are milled to expose their starches, which are then converted into sugars during mashing. Mashing involves soaking the milled grains in hot water to facilitate enzymatic breakdown of starches into fermentable sugars.

component. Different yeast strains contribute

Fermentation: The sugary liquid, known as the "mash," is cooled and transferred to fermentation vessels. Yeast is introduced to the mash, and fermentation begins. As yeast consumes sugars, it produces alcohol and carbon dioxide. This process typically lasts several days, allowing the yeast to work its transformative magic.

Monitoring and Control: Distillers closely monitor the fermentation process, measuring factors such as temperature, pH, and sugar content. Maintaining optimal conditions ensures the yeast performs efficiently and produces the desired alcohol concentration.

Distiller's Beer: The fermented liquid, now known as "distiller's beer," contains alcohol but also various impurities and undesirable flavors. This beer serves as the starting point for the subsequent distillation process.

Conclusion:

The fermentation process in distilleries is a captivating dance of chemistry and microbiology, where yeast transforms simple ingredients into the complex and diverse world of spirits we enjoy. The careful selection of raw materials, the choice of fermentation vessels, and meticulous monitoring during the process contribute to the unique character of each distilled beverage. As we raise our glasses to savor the result of this alchemy, let's appreciate the craftsmanship and science that make spirits an enduring and cherished part of human culture.

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UNVEILING THE ESSENCE: JOURNEY THROUGH A RUM DISTILLERY

KANAK LATA

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In the heart of the Caribbean, where the sun kisses the sugar cane fields and the salty breeze dances through the air, lies a place of magic and tradition—the rum distillery. Embarking on a journey through a rum distillery is not merely about the process of transforming sugarcane into the beloved spirit; it's a voyage through history, culture, and craftsmanship.

The Heritage

Rum distilleries are more than just factories; they are custodians of centuries-old traditions. Many of these distilleries have roots that stretch back to the colonial era when sugarcane plantations flourished across the Caribbean islands. It was in these lush landscapes that the alchemy of rum production was first mastered.

From Cane to Spirit

The journey begins in the fields, where rows upon rows of sugarcane sway in the tropical breeze. Harvested by skilled hands, the cane is then transported to the distillery, where its essence will be extracted. Crushing machines roar to life, pressing the cane to release its sweet juices. These juices, rich with sucrose, are the lifeblood of rum.

Fermentation and Distillation

The extracted cane juice or molasses is then fermented, often in large vats, where yeast transforms sugars into alcohol. This process, while scientific in nature, is also deeply traditional, with many distilleries using age-old techniques passed down through generations.

Once fermented, the liquid is ready for distillation. This is where the artistry of the master distiller truly shines. Copper stills gleam in the dim light of the distillery, carefully crafted to coax out the finest flavors from the fermented wash. Through a process of heating and cooling, the liquid is distilled multiple times, resulting in a spirit of exceptional purity and character.

Aging and Maturation

But the journey doesn't end there. Many rums undergo a period of aging and maturation, where they rest in oak barrels, absorbing the rich flavors of the wood. Here, in the dim silence of the aging warehouse, time works its magic. Each passing year imbues the rum with new complexities, as it takes

on the subtle nuances of the barrel.

The Final Touch

Finally, after years of patience and care, the rum is ready to meet the world. Bottled and labeled with pride, it carries with it the legacy of generations—a testament to the craftsmanship and dedication that went into its creation.

Conclusion

A journey through a rum distillery is more than just a tour of production facilities; it's an exploration of history, culture, and tradition. From the sun-drenched fields of sugarcane to the dimly lit aging warehouses, every step of the process is infused with meaning and significance. So, the next time you raise a glass of rum, take a moment to savor not just the spirit within but the story behind it—a story centuries in the making.

Press Release

A UP based startup says Cheers to a new invention - an Anti-hangover functional water.

Drinking water comes in many forms. But, water that has the function of Anti-hangover certainly deserves attention.

Danta Venturres, a women-owmed and managed enterprise is able to do just that.

According yo the company, this is made possible with two key plants: Milk Thistle and Tamarind.

In Ayurveda, Milk Thistle is known as "Varaka" and is used to improve liver function, balance hormones, and promote overall health. It is believed that Milk Thistle powder helps to cool the body, reduce inflammation, and detoxify the liver, making it an essential herb in Ayurvedic medicine.

In Ayurveda Taramind extract is known as "Tatri". It relieves nausea, dizziness, headaches, tension, bloating and speeds up detoxification of the liver.

Despite the known properties of these two highly effective powerful ingredients, it was a challenge to harness the key ingredients in their purest form to enable them to be inflused into water without changing its colour or taste or potability. Direct mixing of these ingredients with alcohol was another hurdle.

According to the team at Danta Venturres Pvt Ltd, research has been going on for years in Nanotechnology to bring out the best of Ayurvedic and Natural herbs by leveraging its deep expertise in the science to overcome these road blocks and launched its flagship product, 'ShawRab' - a functional water that not only prevents hangovers buy also aids in protecting the liver.

The patent-applied manufacturing process entails molecular-level engineering to optimize oxygen and hydrogen with the key nano extracts to create a powerful Anti-hangover water that can be mixed directly with alcohol.

Shuchi Tandon, the CMD of the company said, "There are many Anti-hangover products in the market. But they are either vitamins or electrolytes or curcumin extracts. These products are taken as a medication rather than a preventive, and pleasant water. That's why ShawRab functional water stands out as it can be directly mixed with alcohol or enjoyed separately"

The product will be available on One litre bottles, and will be in liquor stores and bars soon.

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Enzymes in Grain Based Distillery

AKSHAT JAIN

Business Development Manager-Craft Brewing

In grain distilleries, enzymes play a fundamental role in converting the starches present in grains into fermentable sugars, which are essential for the subsequent fermentation process. Here's a detailed look at the role of enzymes in various stages of grain distillation:

Raw Material Preparation:

Starch Conversion: Grains such as barley, corn, rye, and wheat contain starch as their primary carbohydrate source. Before fermentation, these starches must be converted into fermentable sugars like glucose and maltose. Enzymes facilitate this process through mashing, where the grains are mixed with water and heated. Alpha-amylase and beta-amylase enzymes break down the starch molecules into shorter chains and eventually into fermentable sugars.

Fermentation:

Fermentable Sugar Production: The enzymatically converted sugars from the mashing process are essential for fermentation. Yeast consumes these sugars and produces alcohol and carbon dioxide as byproducts. Glucoamylase, another enzyme, further breaks down any remaining complex sugars into simple fermentable sugars during fermentation, ensuring maximum alcohol yield.

Flavor Development:

Pre-Fermentation Flavor Formation: Enzymes can also contribute to flavor development by releasing aroma and flavor compounds from grains during mashing. This stage is crucial for the creation of flavorful wort, which serves as the basis for the final spirit.

Quality Control:

Consistency: Enzymes are used in grain distilleries to maintain consistency in the conversion of starches to sugars. By carefully controlling enzymatic activity during mashing, distillers can ensure that each batch of wort contains the desired amount of fermentable sugars, leading to consistent alcohol production.

Efficiency: Enzymes improve the efficiency of the mashing process by accelerating starch conversion, reducing processing times, and energy consumption. This not only saves costs but also enhances

overall production efficiency.

Conclusion:

Enzymes are indispensable in grain distilleries, where they facilitate the conversion of starches into fermentable sugars, which are essential for fermentation and alcohol production. By optimizing the mashing process, enzymes contribute to flavor development, consistency, and efficiency, ultimately shaping the quality of the final distilled spirit. Their careful application ensures that grain distilleries can produce high-quality spirits consistently, meeting the demands of consumers worldwide.

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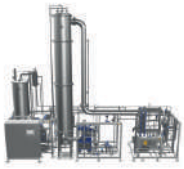

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