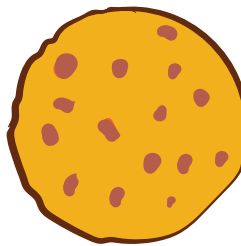
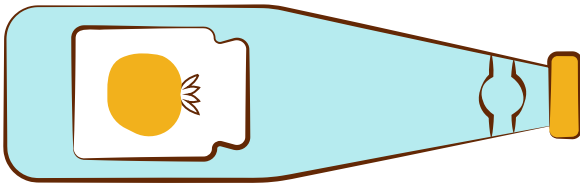
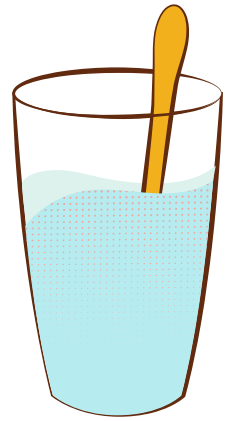
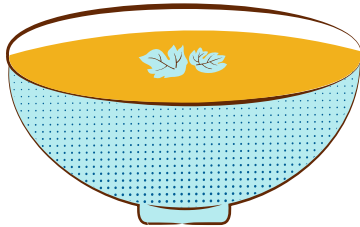




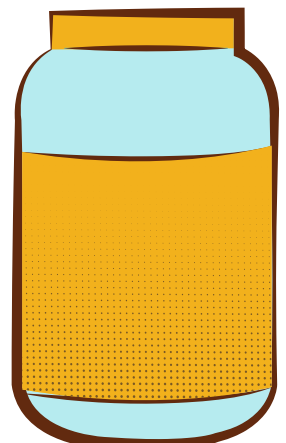
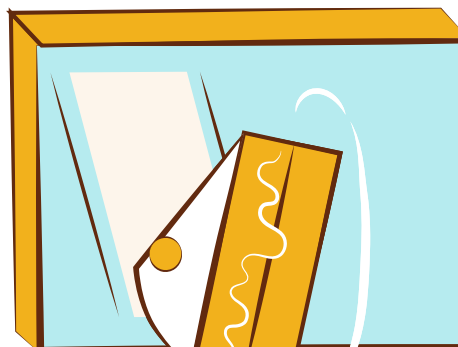
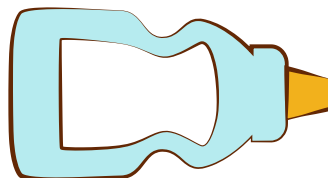
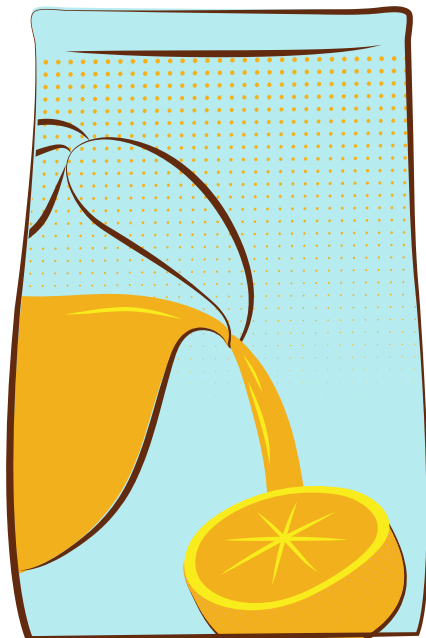
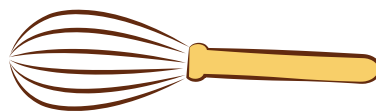
**ROQUETTE**

*Offering the best of nature™*



# Glucidex® 39 DE

**Dried Glucose Syrup**



## *Introduction*

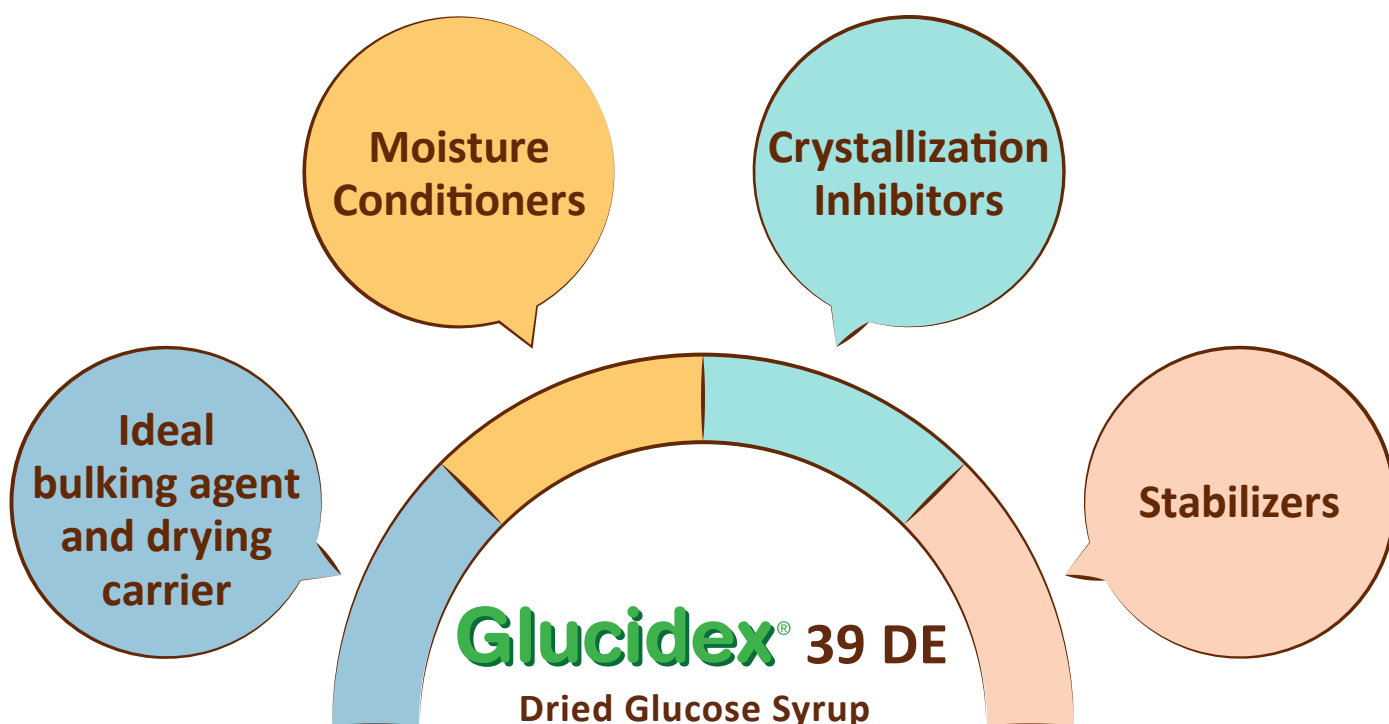
### **GLUCIDEX® 39 DE – a special grade of Dried Glucose Syrup Solids**

- With its uniform powdered format and high bulk density, it is equivalent to sucrose, yet with lower sugar content
- Functionality at par to liquid glucose in an easy to handle and store- powder form

## *Properties*

- **Nutritional value:** similar to other carbohydrate sources at 4 kcal
- **DE equivalence:** 38-41 DE
- **Sugar content** as (mono and disaccharide): 34 %
- **Sweet taste:** w.r.t. Sucrose – 1 vs. 39 DE -0.4
- **Bulk density:** close to sugar
- **Osmolarity:** at 175 mOsm/kg, it's far lower than sugar, dextrose and lactose

## *Key Functionalities*



## *Other Features*

- Nutritional Balance
- Energy Source
- Excellent Digestive Tolerance
- Formulation Performance
- High Solubility
- Easy to Handle
- Easy Dispersibility
- Dust Reduction

## Applications in Beverage Industry

### Powdered Beverages and Energy Drinks

#### Challenges

- High in sugar formats to meet the regulatory need of total dissolved solids
- More flavor and acid dosage for the right profile



#### Solutions

- Bulking – sugar reduced
- Improved mouthfeel
- Rounded flavor
- Dispersing agent in premixes

### Hot Beverages

#### Challenges

- Quick settling of the foam
- High sugar for improved mouthfeel
- More use of milk solids for foaming



#### Solutions

- Improves foam stability
- Higher rate of dissolution
- Uniform blending in powder 3-in-1 premixes
- Ideal for detailed latte art

## *Applications in Dairy Industry*

### **Ice Creams and Softy Premixes**

#### **Challenges**

- Sandiness in frozen dairy products
- High electric power consumption to attain freezing temperatures
- Quality deterioration due to temperature deviation in the supply chain transport



#### **Solutions**

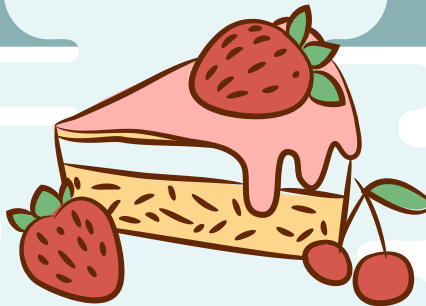
- Anti-crystallizing agent
- Freezing point depression
- Smooth texture

## *Applications in Confectionery Industry*

### Marzipan and Almond Paste

#### Challenges

- Larger pack size – Drums pose challenges for bakers
- Maintain optimum Storage
- Cracking and drying off leading to brittle decorations



#### Solutions

- Smoothness and glossiness
- Prevents crystallization

### Glazes and Dehydrated Fruits

#### Challenges

- Overpowering sweetness due to use of sucrose



#### Solutions

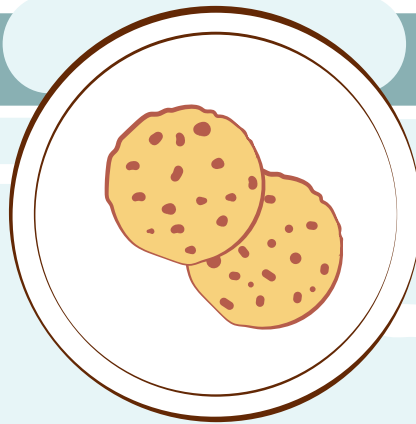
- Smoothness and glossiness
- Clear solution
- Lower water activity

## Applications in Bakery

### Biscuits and Cookies

#### Challenges

- Reduction of water activity for longer shelf life
- High sugar content
- Sugar reduction
  - Textural changes
  - Uneven spreading



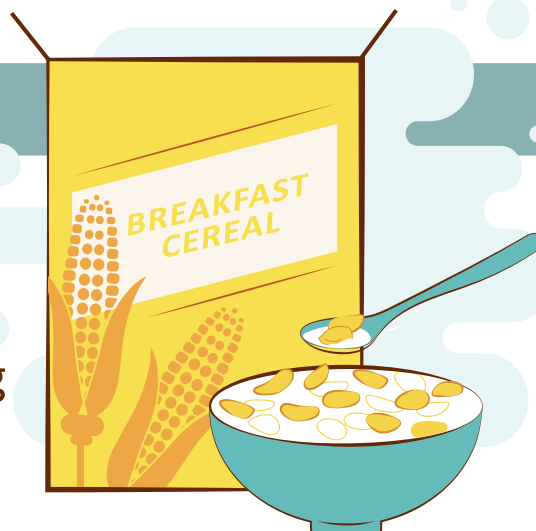
#### Solutions

- Improved mouthfeel
- Stability
- Promotes browning
- Dough viscosity
- Controlled spreading

### Breakfast Cereals

#### Challenges

- Sogginess
- Sugar reduction – high sugar coating



#### Solutions

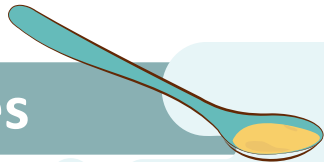
- Balances the sweetness
- Gloss and coating resistance in cereal bars and cereal range

## Applications in Savory

### Soups

#### Challenges

- Watery mouthfeel
- Low viscosity
- Acidic taste
- Lower dissolution



#### Solutions

- Viscosity to improve the mouthfeel
- Smoothness and glossiness
- Low sweetening power to mask the acidity
- Higher rate of dissolution

### Dips

#### Challenges

- Water separation
- Acidic taste



#### Solutions

- Dispersing agent in premixes
- Low risk of retrogradation
- Low water activity
- Smooth flowability

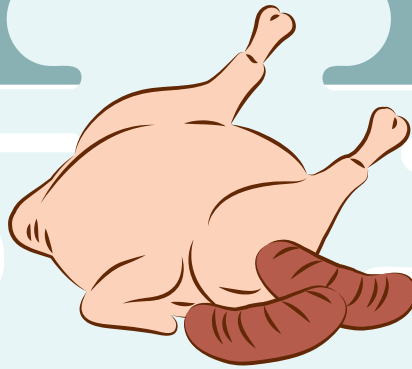


## *Applications in Savory*

### Processed Meat

#### Challenges

- Dryness on surface
- Uneven cutting
- Binding – minced meat



#### Solutions

- Tenderizer
- Promotes browning
- Good binding
- Starter fermenters
- Curing agent

## *Applications in Specialized Nutrition*

### Energy Bar

#### Challenges

- Reduction of water activity for longer shelf life
- High sugar content
- Poor binding



#### Solutions

- Glossiness
- Good binding
- Highly stability to shear damage during mixing
- Partial sugar replacement

### Nutritional Drinks

#### Challenges

- High sugar content
- Low dissolution



#### Solutions

- Rate of dissolution
- Energy source
- High dispersibility ensures the powdered beverage dissolves quickly when added to water or milk
- Partial sugar replacement

## *Applications in Animal Nutrition*

### Animal Feed

#### Challenges

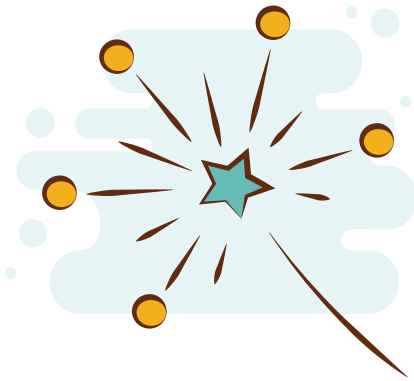
- Low palatability
- Low dry matter digestibility
- Dustiness
- Poor binding



#### Solutions

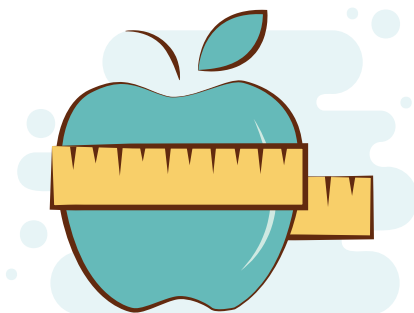
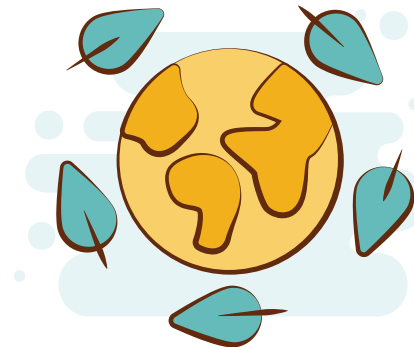
- Viscosity to improve the mouthfeel
- Low sweetness
- Bulking agent
- Low risk of retrogradation
- Improves flavor
- Higher rate of dissolution
- Use as a binder for feed palletization
- Increases energy density of the ration

## *Meeting customer expectations*



**Make it  
INDULGENT**

**Make it CLEAN for ME  
and the PLANET**



**Make it  
BETTER for ME**



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