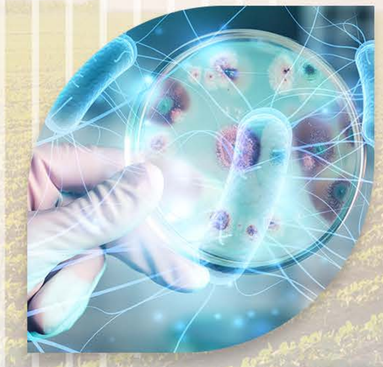
TO BE
A LEADING GREEN CHEMICAL COMPANY

By Creating
Sustainable Value



- Sweetener & Flavor
- Probiotics & Postbiotics
- Natural color & Anti-oxidant
- Botanical Extract & Protein Substitute

Sweetener and Flavor

Artificial Sweetener

A low-calorie sweetener or non-nutrient sweetener.
Due to the extremely high sweetness thus use very low doses and it has no effect on blood sugar levels or tooth decay.
Therefore, it is used in obese and diabetic patients.

Aspartame

- About 180-200 times sweeter than sucrose
- 4 calories per gram of energy
- More sweetness at a lower temperature
- Heat-resistant

Acesulfame K

- About 200 times sweetness of sucrose
- No energy / zero-calorie
- Stabilized at a wide pH range
- Low-heat resistance
- Heat-resistant

Sucralose

- About 600 times sweeter than sucrose
- Almost sweet like sugar without a bitter taste tongue
- No energy / zero-calorie
- Heat-resistant
- Suitable for use in cooking and all types of desserts that call for high heat without losing sweetness

Applications

Beverage
Culinary & Savory
Nutraceutical
Dairy & Non-Dairy
Confectionary & Bakery

Natural Sweetener

Stevia

*Stevia leave is **100%** natural sweetener, a plant originally from South America. It is up to 400 times sweeter than sugar with zero-calorie.*

Key Properties

- Tooth friendly
- Heat stable
- Photo stable
- pH stable
- Non-fermenting
- High solubility
- Low glycemic index
- Safe for diabetics
- Non-GMO
- Excellent shelf life

Erythritol

A type of carbohydrate called sugar alcohol, is one of the most common sweeteners available.

Taste : Erythritol tastes sweet. It's similar to table sugar.
Appearance : It's in the form of white crystal granules or powder

Flavor

A flavoring is a food additive used to improve the taste or aroma of food. It changes the perceptual impression of food as determined primarily by the chemoreceptors of the gustatory and olfactory systems.

Principle types of flavor

- Natural flavorings
- Nature-identical flavorings
- Artificial flavorings

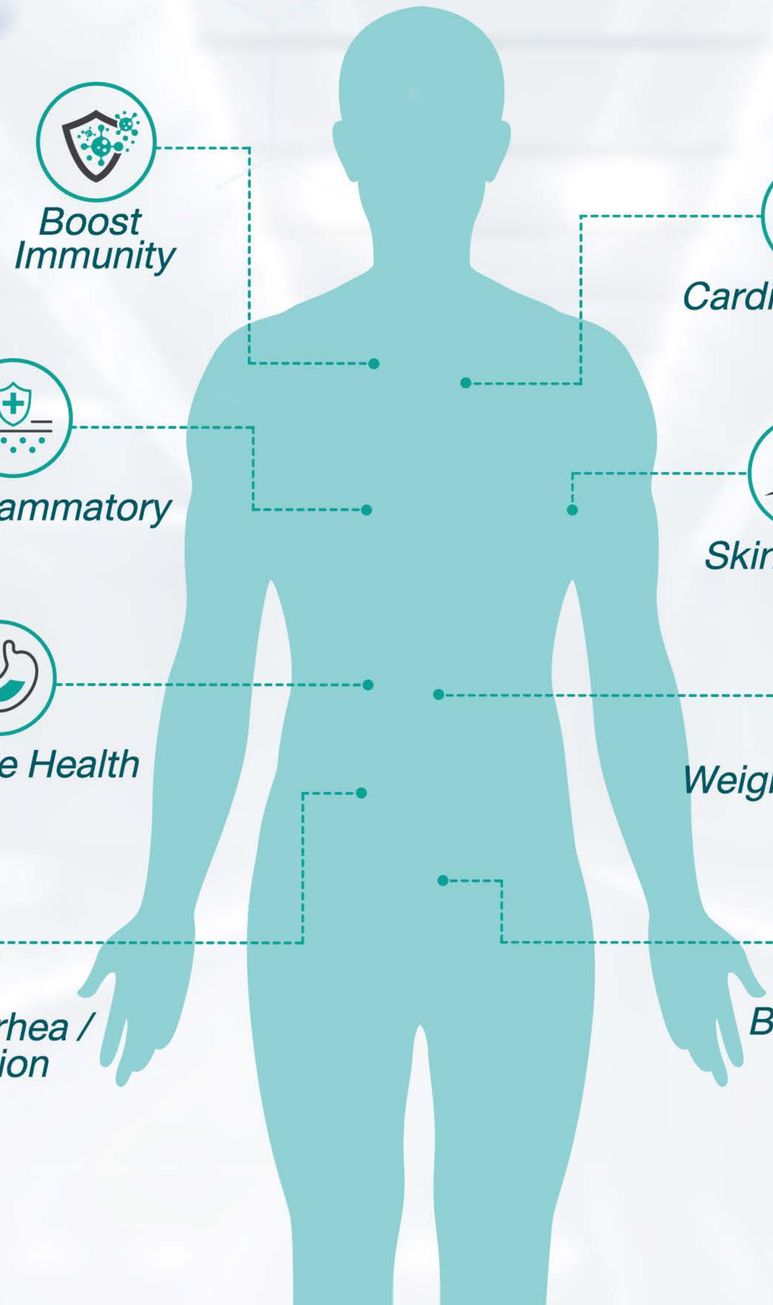
Probiotics and Postbiotics

Probiotics

Probiotics are live microorganisms that confer a health benefit on the host when ingested in adequate amounts.

Key Features

- High Performance
- High Functionality
- High Stability
- Offer condition-specific strain via unique screening pipeline & clinical evaluation
- More than 700 clinical studies
- Several approved health benefits claims
- Well known in USA



Postbiotics

Postbiotics are the end-products of probiotic bacteria, as inanimate bacterial cells and bacterial metabolites.

Key Features

- A better choice for immune-compromised people
- Applicable for different formats (e.g. heated products) which live probiotics could not survive
- Postbiotics are even better at protecting against diversity loss when used with antibiotics

Natural Color and Anti-oxidant

Natural colours

are based on carotenoids that have scientifically recognized health benefits. Only lycopene extracted from tomatoes is an approved for stable food colour.

Claims

- Natural
- EU & FDA approved
- Non-GMO
- Kosher
- Halal

Applications

- Beverage

- Dairy

- Confectionary

- Sauce

Key Properties

- pH stable
- Heat stable
- Light stable
- Ascorbic acid stable
- Vegetarian-friendly
- Safe
- Easy to use
- Listed as E160d
- Non-GMO tomato

A range of natural colours formulated to suit most food and beverage applications

Astaxanthin

The strongest natural antioxidant in the world

Astaxanthin is belong to carotenoids and can be found in natural resources, such as algae, salmon,lobster, prawn, and flamingo feathers. These organisms are orange or red in color depending on astaxanthin content.

Efficiency of Natural Astaxanthin

- A powerful antioxidant
- Crosses blood-brain barrier
- Immunity Boosters
- Reduce inflammation
- Cell protection
- Deliver benefits to multiple system
- Enhances the action of other antioxidants
- Helps to degrade free radicals

Key Properties

- A powerful antioxidant
- Crosses blood-brain barrier
- Immunity Boosters
- Cell protection
- Enhances the action of other antioxidants

6,000 times Stronger than vitamin C	**3,000** times Stronger than resveratrol	**800** times Stronger than coenzyme Q10	**560** times Stronger than green tea catechins	**500** times Stronger than Vitamin E

Botanical Extract

Plant & Herbal

A selection of Plant & Herbal extracts around the world to provide health benefits and fulfilled your recipe

A common concern about vegetarian and vegan diets is that they may lack sufficient protein. But vegans can get protein from various plant sources, though some may be better than others.

Protein Substitute

A growing range of plant-based proteins is becoming available for people seeking to reduce their intake of animal-based foods

Soy / Pea / Wheat / Canola / Chickpea / Fava Bean / Lentil / Lupin / Mung Bean / Peanut / Sunflower / Almond / Corn / Oat / Potato / Quinoa / Rice / Sorghum / Pulses / Spirulina

Botanical extracts offers a great opportunity to boost your products with active ingredients or add more naturalness to the recipe. The use of botanical extracts enhance health benefits and provide anti-microbial properties for foods and beverages.

Applications

Beverage

Dairy

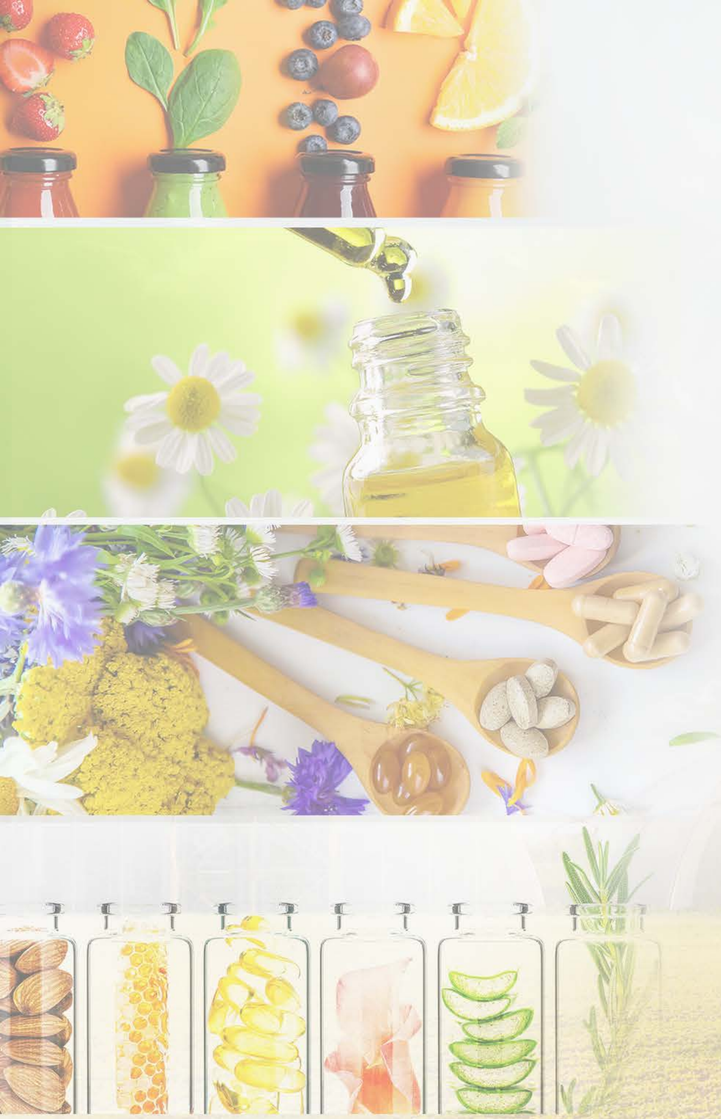
Confectionary

Meat

Key Properties

- Protein content & quality
- Historical use
- Functionality
- Nutrition & claims
- Certifications
- Familiarity with use
- Allergenicity, intolerance
- Availability
- Cost
- Consumer perception
- Safety
- Aroma, flavor, texture, mouthfeel, color
- Source (geographic,commercial)
- Regulatory

Product group	Application						
	Beverage	Bakery Confectionary Snack	Fat & Oil	Dairy Ice-cream	Seasonings Soup Sauce Dressing	Food Supplement	Personal Care & Cosmetic
DHA Algal Oil						●	
Astaxanthin	●					●	●
Beta Carotene	●					●	●
Natural Colors Red, Yellow, Orange, Pink, Green, Brown	●	●	●	●	●	●	●
Emulsifiers	●	●	●	●	●	●	●
Sweeteners	●	●		●	●	●	●
Collagen		●	●	●	●	●	●
Flavors	●	●	●	●	●	●	●
Glycerin	●	●		●	●	●	●
Herb extracts	●				●	●	●
Lycopene	●	●		●	●	●	●
Plant Extracts	●	●		●	●	●	●
Probiotics	●	●		●	●	●	
Plant Based Protein	●	●		●	●	●	
Vitamins & Minerals	●	●	●	●	●	●	●



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