



Turning a new leaf:

# Opportunities in Functional Beverage Formulation



# Contents

---

- 02 Connecting with the conscious consumer
- 02 Plant-based and multi-tasking nutrition
- 03 Functional benefits across different formats
- 06 Powerful plant-based ingredients
- 07 Big opportunities for micronutrients
- 08 Prinova: Bringing you the best branded ingredients
- 09 Prinova: Your resource for functional formulation expertise
- 10 References



## Connecting with the conscious consumer

71% of global consumers say that they seek out functional food and drink products to some extent.<sup>1</sup>

As the post-pandemic lifestyle redefines how we approach preventive health, consumers are increasingly mindful of products featuring active ingredient claims and benefits.

Within the North American market, 89% of consumers prefer food and drink formats over supplements when selecting functional products.<sup>2</sup>

Plant-based beverages are perfectly placed to capitalize on this growing opportunity. The plant-based trend has been enjoying spectacular momentum in recent years and these drinks offer a health halo that makes them an ideal platform for functional ingredients.

Research carried out by Mintel shows that the majority of US shoppers see food and drink with plant-based claims as healthy (56%) and natural (53%) – outperforming regular products and those with all-natural claims on both counts.<sup>3</sup> The International Food Information Council's 2021 Food and Health Survey, meanwhile, found that more than four in ten shoppers see plant-based options as healthier even when two products have the same nutrition facts label.<sup>4</sup>

In this white paper, we explore the growing demand for plant-forward functional beverages, their vast potential across a range of different formats, and trending ingredients to deliver the functional benefits that modern consumers expect to see.

## Plant-based and multi-tasking nutrition

The global market for plant-based foods and beverages is reaching new heights. The category is expected to record a compound annual growth rate (CAGR) of 11.9% between 2020 and 2027, when it will reach a value of \$74.2 billion.<sup>5</sup>


The trend's popularity is leading a growing number of manufacturers to promote their drinks' plant-based credentials. Milk alternatives have played a key role in growing the plant-based beverage market and they alone are now estimated to be worth \$17 billion a year globally.<sup>6</sup> However, they represent only part of the category's success story. Beverage brands have been utilizing plant-based claims to boost a range of different products in recent years, from meal replacement drinks to fruit juices, and now consumers want more multi-tasking beverage benefits.

**"The time is ripe for nutrition brands to shine. Two years into a pandemic, consumers are primed for solutions that will set them on the path to health. Leading into the pandemic, general functionality sufficed as a calling card. Moving forward, consumers will be discerning of brands and ingredients, and will want formulations that are proven to deliver a specific wellness benefit."**

AMANDA TOPPER, US RESEARCH DIRECTOR, MINTEL

The number of Americans following a diet jumped to 52% in 2022, according to the International Food Information Council's Food and Health Survey in 2022.<sup>8</sup> Interestingly, a separate health and wellness study by FMCG Gurus revealed 72% of dieting US consumers consider a weight loss diet to be balanced and compromise-free.<sup>9</sup> To address the aspirational American dieter's palate, brands have the challenge of redefining the boundaries of better-for-you food and beverage.





## Functional benefits across different formats

There are opportunities to provide functional benefits across a broad range of plant-based beverages including:



### Plant-based dairy drinks

Plant-based milk products are big business, with the global dairy alternative market projected to grow at a CAGR of 11.4% from \$21.4 billion in 2020 to \$36.7 billion by 2025.<sup>10</sup> A range of plant sources are used for milk alternatives, but coconut dominates. Recent advances in processing technology mean that some of these products taste just as good as, or even better than, cows' milk. However, plant milks can lack some of the nutritional benefits of dairy, so it is important to incorporate micronutrients such as vitamins B12 and D and calcium. These beverages can also be adapted to include additional functional ingredients. Plant-based dairy alternatives enriched with probiotics could tap into this opportunity.





## Protein-based sports drinks

The market for protein-based sports nutrition products is no longer restricted to bodybuilders and athletes. With nearly half (45%) of shoppers worldwide saying they monitor their protein intake on a daily basis<sup>11</sup>, these products now appeal to a much broader range of health-conscious consumers. Lifestyle brands have targeted flexitarian consumers with a blend of plant-based formulations plus collagen, effectively positioning functional wellness claims through the better-for-you, beauty-from-within, and healthy aging categories all at once.



## Meal replacement

Meal replacement applications have also been most commonly associated with the sports nutrition industry, but that's not the only growing segment. Next-generation meal replacement powders are appealing for younger generations of consumers—specifically 16-35 year-olds. Unlike previous meal replacement offerings, these offerings are not focused on addressing a particular health issue like weight loss or muscle gain; they promise a complete and balanced lifestyle. As this category emerges, there's still plenty of room for product developers to take advantage of this convenience trend.

Plant-based protein sources that can be used in beverages include:

- **Soy:** Soy is the most commonly used vegan protein source and is commonly used in nutritional beverages
- **Pea:** A natural high protein source, rich in amino acids, pea protein is widely used in beverages and nutrition products
- **Oats:** Easily digestible with a desirable mouthfeel, oats have been clinically shown to reduce the risk of heart disease by lowering cholesterol
- **Lentils:** Rich in amino acids, polyphenols and antioxidants, lentils have various health benefits including a lowered risk of high cholesterol, diabetes, cancer and cardiovascular disease
- **Flax:** Ideal for beverage formulations, flax is a good source of omega-3 fats with healthy-heart benefits
- **Sunflower Seed:** The nutty flavor and creamy mouthfeel of sunflower seed protein is suitable for use in a wide variety of product formulations, sunflower seeds' health benefits include antioxidant and anti-inflammatory properties as well as providing a good source of minerals and amino acids
- **Watermelon Seed:** With a neutral flavor, watermelon seed protein is a source of essential fatty acids and minerals with medium stabilizing properties.
- **Mung Bean:** Very neutral in flavor, mung bean protein improves the mouthfeel of pea protein, has strong stabilizing properties and can replace a number of creamers and gums.
- **Pumpkin Seed:** A good source of magnesium and zinc, pumpkin seed protein's neutral flavor can improve the mouthfeel of pea protein with medium stabilizing properties



## Energy drinks

The market for energy drinks continues to post positive growth rates.<sup>12</sup> However, there remains some resistance to energy drinks among consumers who are concerned about the ingredients they contain. For example, sugar and calorie reduction continue to be a concern for 73% of American consumers.<sup>13</sup> There appears to be a generational divide on sweetener preferences, in which Gen Z and Millennials are more interested in low/no-calorie sweeteners than Gen X and Boomer consumers. Label-friendly, plant-based sweeteners have continued to draw interest from consumers, notably stevia extracts, erythritol, and monk fruit.<sup>14</sup>

There are also many plant-based nootropic ingredients that make the perfect addition to energy drinks with a natural positioning. They include natural caffeine from yerba mate, green tea, green coffee, guarana and ginseng.



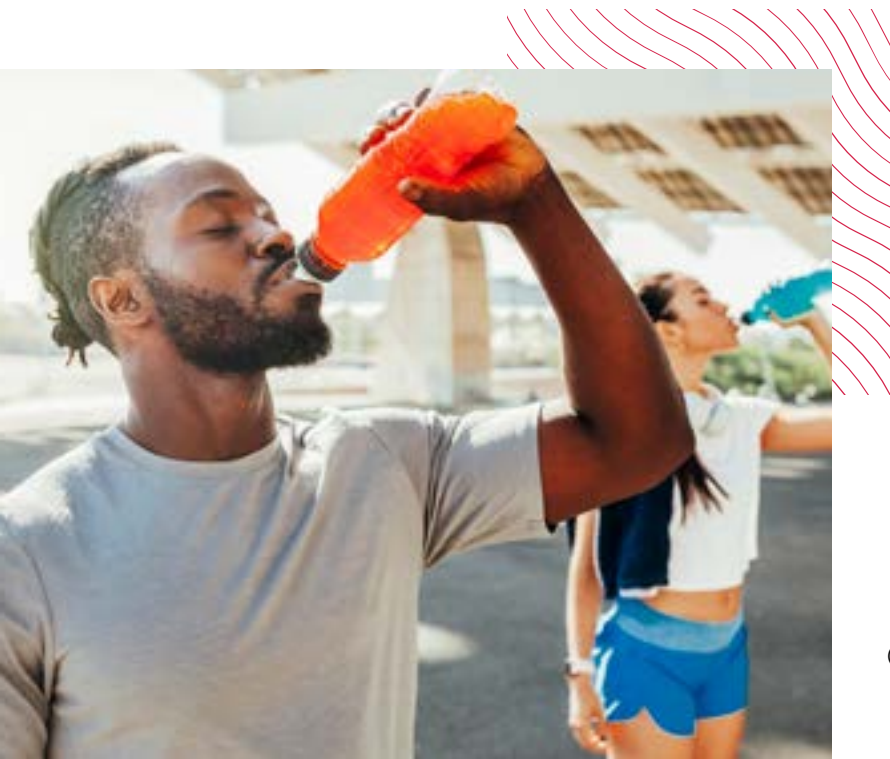
## Low-No Alcoholic Beverages

RTD cocktails continue to be a popular and convenient choice for consumers looking for beverages to enjoy at home. The US flavored alcoholic beverage space is projected to grow to \$22.4 billion in 2023, significantly beyond the \$17.5 billion projected for 2022.<sup>15</sup> The category's growth is seen in the lower ABV range, which also indicates the growing potential for non-alcoholic beverages in functional mocktail formats. Organic, plant-based, and botanical ingredients figure prominently in both categories.



## Kombucha

Kombucha beverage launches experienced an impressive 47% CAGR between 2016 and 2021, according to Innova reports.<sup>16</sup> In an additional point of their research, it was found that most of these new kombucha product launches hailed from North America. Organic, probiotic, and gut health claims have contributed to their natural and functional appeal in both alcoholic and non-alcoholic product lines.



# Powerful plant-based ingredients



## Ginseng

Ginseng is one of the most popular medicinal herbs with energy-boosting effects. This extract may help stimulate physical and mental activity and reduce stress. It can also lower blood sugar and cholesterol levels.



## Turmeric

The golden-hued rhizomes of the turmeric plant have been revered for thousands of years not just in culinary dishes but in natural remedies as well. The unique chemical compounds of turmeric — known as “curcuminoids” — have the ability to support health and wellness, including antioxidant and anti-inflammatory properties.



## Green Tea

Green tea has been consumed for centuries for its numerous health benefits. It naturally contains caffeine and polyphenols that act as powerful antioxidants. Catechins make up most of the solid part of the green tea leaf and these are the plant-based nutrient and specific type of flavonoid (from polyphenols) that are said to provide the most health benefits.



## Green Coffee

Green coffee bean extract is taken from unroasted coffee beans, whose primary active compound is chlorogenic acid – a powerful antioxidant and anti-inflammatory. Since the product contains caffeine, it is used as an energy booster and appears to be beneficial for weight loss.



## Yerba Mate

Sourced from the dried leaves and twigs of the Ilex Paraguariensis plant, yerba mate is used to make a traditional South American beverage that is said to have the strength of coffee, the health benefits of tea, and the joy of chocolate.<sup>27,28</sup> It is also widely used in supplements and, due to its caffeine content, it can help increase mental focus and energy levels



## Guarana

Guarana, also known as Paullinia cupana, is a plant native to South America. Guarana extract contains caffeine, which stimulates the central nervous system, heart and muscles, and is mainly used as energy booster and weight management.



## Lion's Mane

Lion's mane mushrooms are used in Asia for both culinary and medicinal applications. This ingredient is associated with brain health and acute cognitive improvement due to the powerful bioactive compounds it contains.



## Ashwagandha

Ashwagandha is one of the most ancient herbs in Ayurvedic medicine. It is mainly used for stress relief, enhancing concentration and increasing energy levels. Its content of withanolides may also help in treating anxiety and depression.



## Berry Extracts

A variety of superfood berries can provide functional benefits. Acerola, for example, is a cherry that is high in vitamin C. The extract powder is mostly used as a supplement to prevent vitamin C deficiency, but it can also help to support the immune and digestive systems. Acai berries are commonly used to support the immune system as they are rich in antioxidants. Studies have shown that acai may enhance memory and reduce risk of heart attack. It can also be used as anti-aging in personal care to heal damage skin cells and revive skin. Goji berries, meanwhile, are packed with nutrients including vitamins A and D and iron.

Prinova is one of the world's leading suppliers of botanical and superfood extracts, offering a vast array of functional ingredients for different health claims

## Big opportunities for micronutrients

Vitamins and minerals are an important aspect of many plant-based drinks, whether providing a replacement for the micronutrients present in animal products or delivering additional functional benefits. Some of the most popular micronutrients for functional beverages include:

### Vitamin B6:

Commonly included within energy drinks, B6 is a water-soluble vitamin. It is used by the body to break down and release energy from food and keep the nervous system healthy.

### Vitamin B12:

B12 is absent from virtually all plant-based foods. It is important for the brain and nerves, and for the production of red blood cells.

### Vitamin D:

Vitamin D is the world's hottest micronutrient due to growing knowledge and awareness of how important it is for wellbeing and its association with immune health. Further benefits include promoting cardiovascular health, boosting mood and providing weight-loss support.

### Calcium:

Calcium is required to maintain strong bones and teeth as well as supporting bodily functions including muscle movement. As dairy products provide the main source of calcium for many number of consumers, it is an important addition to plant-based alternatives.

### Vitamin K2:

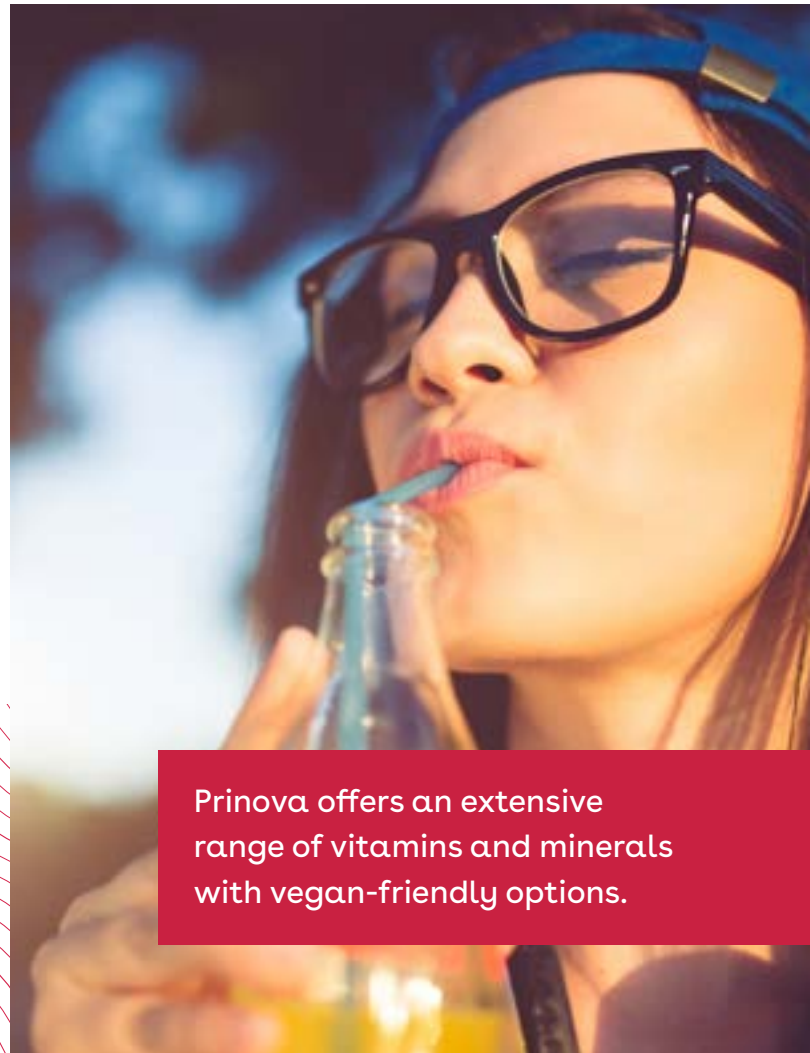
Vitamin K2 is often paired with Vitamin D3 to maximize calcium absorption. The synergies between the two vitamins have been increasingly researched, leading to a greater awareness and demand for these ingredients.

### Folic Acid:

Folic acid is a water-soluble B vitamin. It is used by the body to form red blood cells and reduce the risk of central neural tube defects.

### Pantothenic Acid:

Also known as vitamin B5 or calcium pantothenate, pantothenic acid is one of the most crucial B vitamins for humans. It is necessary for making blood cells and helps convert food into energy.



Prinova offers an extensive range of vitamins and minerals with vegan-friendly options.



## Prinova: Bringing you the best branded ingredients

Prinova's branded ingredients can help beverage brands stay ahead of consumer trends.

Here is a selection of our branded ingredients for innovative functional beverage formulations:

### SMOOTH PROTEIN™

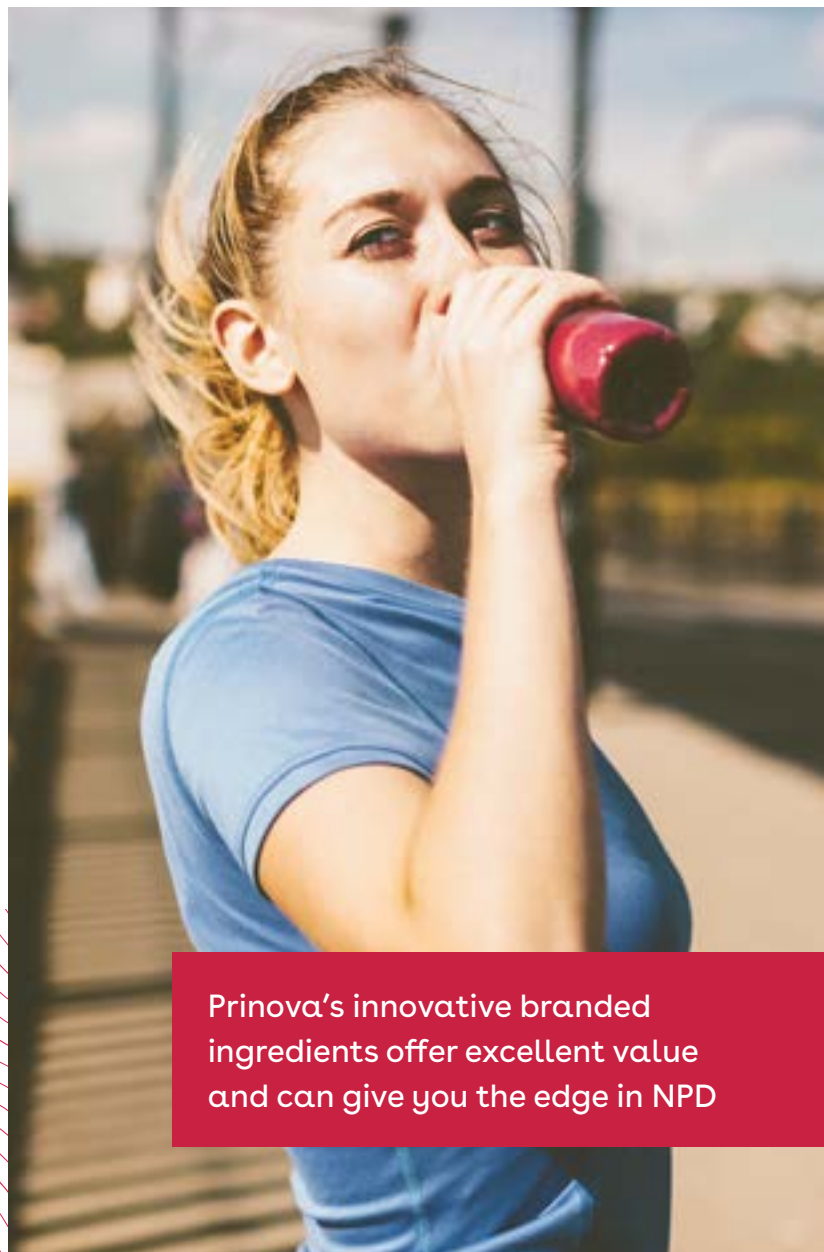
Smooth Protein™ is a premium plant-based protein that comes in four new choices, including pumpkin seed, sunflower seed, mung bean, and watermelon seed. These high-quality protein alternatives plug and play with traditional commodity pea protein to deliver better mouthfeel, reduced bitterness, and smoother finish.



Pacific Peptides wild-caught, marine collagen provides a quick and simple way to bring your collagen offering directly to market—or, a powerful head start on seamlessly developing your own creations.



Harness the natural power of organic mushrooms with TruShroom™ by Prinova. This line of organic mushroom powders and extracts brings a powerful wellness tradition to modern dietary supplement products. Mushroom powders have been clinically studied, showing improvements in immunity, brain function, and fitness performance — validating centuries of mushroom use in traditional Chinese remedies.



Prinova's innovative branded ingredients offer excellent value and can give you the edge in NPD

## Prinova: Your resource for functional formulation

---

**Prinova can deliver the cutting-edge ingredients and formulations you need to create a wide variety of on-trend functional beverages.**

Leaning on our insight into the latest market and consumer trends, we can collaborate with you to create a unique concept that differentiates your brand. Our experts then turn your concept into a formulation, evaluating and refining your product until the desired sensory response is achieved.

Prinova offers a wealth of knowledge and experience in the functional beverage sector. We can provide vegan-friendly versions of many of our ingredients, including amino acids, proteins and hydrocolloids, in addition to fortified premixes.

**Contact us now and discover how we can help you create market-leading beverages: [info@prinovaglobal.com](mailto:info@prinovaglobal.com)**



# References

---

- <sup>12</sup> FMCG Gurus: Proactive Health in a Post-Pandemic Environment (May 2022)
- <sup>3</sup> Mintel 'Are plant-based claims the next "all natural"?' (2021)
- <sup>4</sup> International Food Information Council '2021 Food and Health Survey' (2021)
- <sup>5</sup> Research and Markets 'Plant Based Food Market by Product Type (Dairy Alternatives, Meat Substitute, Plant- Based Eggs, Confectionery), Source (Soy Protein, Wheat Protein), and Distribution Channel (Business to Business and Business to Customers) - Global Forecast to 2027' (2020)
- <sup>6</sup> Financial Times 'The battle for the future of milk' (2021)
- <sup>7</sup> Mintel 'Nutrition Drinks, US' (2022)
- <sup>8</sup> International Food Information Council 'Food and Health Survey' (2022)
- <sup>9</sup> FMCG Gurus: Health and Wellness: Conscious Indulgence in 2022 (February 2022)
- <sup>10</sup> Markets and Markets 'Dairy Alternatives Market by Source' (2020)
- <sup>11</sup> FMCG Gurus 'Meat, Dairy, or Plant Based Protein' (2020)
- <sup>12</sup> International Food Information Council '2022 Food and Health Survey' (2022)
- <sup>13</sup> NielsenIQ Product Insight (Feb 2022)
- <sup>14</sup> Innova market Insights 'Category Insider: Flavored Alcoholic Beverages and Hard Seltzers in the US' (2022)
- <sup>15</sup> Innova Market Insights 'Editor's Choice, Kombucha' (2021)