

Natural Products **Insider**

PRODUCT DEVELOPMENT GUIDE

Delivery systems dispatch growth, opportunity

Consumers are embracing the ease and taste of new supplement formats, offering formulators and brands broad potential for innovative products.



PAID CONTENT



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Natural Products Insider leads CPG brands from ideation through manufacturing, supporting the development of innovative, healthy and compliant products in the dietary supplement, functional food and beverage, and sports nutrition industries. As an official content provider for SupplySide, Natural Products Insider connects ingredient buyers and suppliers with executives across the health and nutrition marketplace.



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DEMANDING NEW DELIVERY SYSTEMS

Taking a dietary supplement used to mean either swallowing a big pill or choking down an unappetizing liquid. Not anymore. With today's vast array of delivery systems, supplements can also be chewed, sipped, licked, dissolved on the tongue or tipped back like a shot of booze.

While there's nothing inherently wrong with old-school supplement formats, delivery system innovation has revolutionized the industry, offering up a breadth of choices to meet most any consumer need or want. Seeking a supplement that's packable, portable and poppable on the go? Gummies, chews, lozenges or quick-dissolve strips could fit the bill. Prefer to drink your daily vitamins or sip medicinal herbs? Ready-to-drink beverages and ready-to-mix beverage powders make that possible.

Besides ease of use, many alternative delivery systems deliver great flavor, delighting the taste buds and potentially helping consumers establish and stick with their supplement regimens. Plus, these formats are typically more exciting and aesthetically pleasing than the standard pill — attributes that matter in the age of TikTok, Instagram and Snapchat. After all, brightly colored gummies play a lot more interestingly in videos and photos than the average pill.

But beyond benefiting consumers, diverse delivery systems also suit supplement formulators and brand owners. With innovation no longer bound to just a handful of formats, product developers can get incredibly creative, pursuing whichever delivery system best advances their vision.

The ticket to turning those great ideas into market-winning, differentiated products is partnering with ingredient suppliers, contract manufacturers and other service providers on the leading edge of delivery systems. Working together, the possibilities become pretty much endless.

SUPPLEMENT SALES SHOW DELIVERY DIVERSITY

A look at U.S. dietary supplement sales for 2023, presented in Nutrition Business Journal's (NBJ) [Supplement Business Report 2024](#), confirms that consumers are buying supplements in a range of formats. In fact, continuing a trend that started in the late 2010s, non-pill supplements (gummies, chews, liquids, powders, etc.) outsold pill formats (tablets, capsules and softgels) last year — and by a big margin. Non-pills claimed roughly 65% market share; pills took 35%.

As for individual formats, gummies, with \$15.7 billion in sales, owned the most market share by a long shot, NBJ reported, accounting for a whopping 24.4% of all supplement purchases in 2023. Another non-pill format, powders, finished in second place, with \$10.5 billion in sales and 16.4% market share.

Next came softgels (\$8.7 billion), making up 13.5% of all supplement purchases, followed by liquids (\$7.6 billion) with 11.9% market share. After that, capsules (\$7.4 billion) claimed 11.5% of total supplement sales, tablets (\$5.1 billion) took 7.9%, effervescent (\$2.8 billion) owned 4.3%, vegetarian capsules (\$1.6 billion) grabbed 2.5% and chewables (\$1.4 billion) claimed 2.1% market share. The remaining 5.5% of all supplement sales fall into the “other” category, which includes quick-dissolves, shots, lozenges, pill packs and other novel formats.

Moving onto market growth, the big story continues to be gummies. After logging yet another double-digit-growth year (12.2%) in 2022, gummies posted an impressive 8.7% sales increase in 2023, NBJ reported. Astoundingly, almost half of the dollars added to the supplement market last year came from growth in gummies. NBJ expects gummy growth to dip only slightly this year, to 8.3%, and then stay north of 7% annually through 2027.

But gummies aren't the only format fueling industry-wide growth. Powdered supplements, including stick packs, posted 8.3% sales growth in 2023. NBJ expects powder sales to increase 9% or more each year through 2027, when they'll displace gummies as the fastest-growing format.



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Quick-dissolve is another emerging delivery system to watch, per NBJ, with sales surging 6.3% in 2023. Liquid supplements are also trending upward, with sales rising 4.4% last year and predicted to jump 6.6% in 2024. By 2027, liquids' growth rate should hit 7.4%, NBJ predicted, eclipsing that of gummies. Chewable supplements are riding a similar trajectory, increasing 4.2% in 2023 and projected to post annual growth above 6% in the coming years.

CONSUMERS' FAVORITE FORMATS

While sales figures offer valuable intel, layering consumer survey data atop the numbers provides a fuller picture of today's marketplace. In 2023, NBJ polled more than 1,200 frequent dietary supplement users to learn about their purchasing patterns and preferences, presenting the results in its Delivery Format Report 2023.

When NBJ asked respondents which delivery formats they take currently (select all that apply), pills dominated, with 59% naming tablets, 49% choosing capsules and 33% selecting softgels. As for non-pills, 37% of dedicated supplement consumers use gummies, 24% purchase powders, 15% take liquids and 8% use quick-dissolve supplements.

But common usage aside, which formats do frequent supplement users actually prefer? Well, just as gummies are the top-selling individual format, they're also the most favored, picked by 26% of consumers (38% of Gen Z and 30% of Millennials) surveyed by NBJ. By comparison, 24% of respondents chose tablets as their most preferred delivery system, 20% picked capsules, 15% selected softgels and 5% chose powders.

The top reason why gummy fans favor them is probably no surprise: 44% like the flavor, according to the NBJ survey. Beyond taste, 22% appreciate that gummies are easy to swallow, 13% like that they're easy to take on the go and 11% say gummies make it easy to take multiple supplements.

But despite gummies' good qualities, they can have downsides too. Chiefly, they can be high in added sugars, and bad for teeth and overall health, which concerns many consumers — even gummy users. Among NBJ's gummy-preferring survey respondents, almost half say they try to limit or avoid their sugar intake from supplements. Clearly, gummies with reduced or no added sugar present a major innovation opportunity.

Another knock against gummies is that fewer bioactive ingredients can typically fit into them, requiring consumers to take more gummies to get a comparable dose as provided by fewer pills. But this only spells another opportunity: If formulators can address or even solve the dosage issue, they could really advance the category.

While gummies and other newfangled formats may be attracting the most buzz, pills are not over — far from it. Remember, pills are still selling well, and according to NBJ's survey, frequent supplement users still view them favorably. In fact, 50% say pills are easier to take more frequently and 45% think pills are less expensive than other formats.

Additionally, 40% of dedicated supplement users think pills are more effective and 39% percent believe they have greater health benefits than gummies and other delivery systems. Although consumer perception of efficacy is subjective, product developers and brand owners should keep this sentiment in mind as they formulate, position and market new supplements.

FORMULATION FACTORS

As consumers go all in on new supplement formats, most don't understand what it takes to create these products. They don't know what gives a gummy its fruity flavor and supple bite, for example, or what makes a quick-dissolve dissolve quickly. Nor do they know what enables a swallowed softgel to glide down the throat with ease.

Frankly, most consumers don't really care to know this stuff. As long as a supplement delivers on desired attributes — and does so using only clean, label-friendly ingredients — they're usually happy.



The top reason why gummy fans favor them is probably no surprise: **44% like the flavor**, according to the NBJ survey. Beyond taste, **22% appreciate that gummies are easy to swallow**, **13% like that they're easy to take on the go** and **11% say gummies make it easy to take multiple supplements**.





Product developers and brand owners, on the other hand, need to get granular, as the most minor of formulation details can derail an entire product. Choosing the wrong (or wrong-for-the-job) ingredient is an all-too-common mistake, as is selecting a delivery mechanism that's not ideal for the supplement at hand. Selecting low-quality products, such as active ingredients with poor bioavailability or inefficient delivery technologies, can also devastate a developer's dream for an innovative new supplement.

There is also flavor to consider with non-pill formats, along with texture, appearance, aroma and other characteristics that are key to food and beverage formulation but haven't historically mattered as much for supplements. Organoleptic attributes aside, alternative-format supplements still need to deliver efficacy, or consumers will have no real motivation to take them.

These are just a few of the considerations product developers and brand owners must mull over — and fortunately, they don't have to go it alone. Tapping into the extensive knowledge, capabilities and resources of trusted suppliers and service providers is the best way to create next-gen supplements that make a real splash in the marketplace. ♦





Science-backed gummy goodness

Visit our website today to access our e-book and learn how our science-backed R&D team is up to address any challenges you may have. Whether it's a holistic approach to reducing sugar, balancing clean label solutions, or maintaining the efficacy of functional ingredients, we set you up for success.

When you're dedicated to gummy supplement greatness and being the gold standard, you leave no ingredient unturned. We collaborate with you to craft bespoke solutions that excel in flavor and texture, all through a seamless end-to-end partnership.

Download our e-book to learn more about how ADM can help you address formulation challenges, prototype case studies, and explore our full pantry of ingredients to build the perfect gummy.

**Develop gold-standard gummy supplements
with our science-backed ingredients**





PRODUCT DEVELOPMENT GUIDE

Q & A

Vaughn DuBow
Senior Director, Product Portfolio
Health and Wellness

Sarah Diedrich
Senior Marketing Director, Global Sweetening
and Texturizing Solutions

ADM

What specific delivery format options do you provide for dietary supplement brands?

We offer a wide array of delivery formats for dietary supplement brands, from traditional capsule and tablet formulations to gummies, fast melts, flash melts, stick packs and ready-to-drink (RTD) formats, as well as various functional food and beverage applications. We know that consumers today are looking for unique dosage formats that meet their individual preferences, so we offer as many options as possible to ensure that our customers can formulate the best product for their given demographic.

Are there new advancements or technologies that support innovation, new applications or effectiveness of your specific delivery formats?

New advancements in microbiome solutions have opened the doors to enhanced efficacy and new dosage formats in recent years. One such advancement is in postbiotics — heat-treated or inactivated bacteria that provide a health benefit to the end user. Postbiotics are particularly noteworthy, as they can easily be formulated into products that have harsh processing conditions, including high heat or liquid, enabling us to formulate directly into challenging dosage formats, including gummies, RTDs, bars, shakes, snacks and more.

SweetRight® Reduced Sugar Glucose Syrup (RSGS) is a one-to-one replacement for traditional corn syrup, maintaining functionality while reducing sugar up to 30%. Proprietary SweetRight Stevia Edge-M is a next-generation stevia that has improved sweetening, reduced bitterness and improved cost savings to market. It is extracted from the stevia leaf, not produced by bioconversion or fermentation methods.

ADM ingredient and flavor scientists work side by side to create complete turnkey solutions that make it simple to meet sugar-reduction goals through our proprietary Replace Rebalance Rebuild™ approach to replicate full-sugar taste and performance.

In this competitive field, how do you define your company's point of differentiation in the delivery format market?

ADM's point of differentiation in the delivery format market revolves around our ability to formulate with the most challenging dosage formats, including those featuring high heat or liquid, while maintaining the clinically studied efficacy of key active ingredients. ADM offers everything needed for an end-to-end solution formulation journey, from raw ingredients backed by gold-standard science to coloring, flavoring, sweetening and beyond.

A wide range of consumers are seeking new delivery formats that align with their lifestyle and supplement goals. Explain how your delivery formats meet these evolving demands.

Our available delivery formats are limited only by our customers' imaginations. No matter if it's a simple capsule or tablet formulation or a more challenging gummy, RTD or functional food or beverage, we understand that dosage formats must align with incredibly challenging and ever-evolving consumer demands. As such, ADM creates unique product concepts and prototypes that include every possible format, allowing our customers to choose whichever form best resonates with their target consumer.

Taking Delivery Formats to the Next Level

CONFIXX®
For next Generation Gummies

SOLUFORM™
Hybrid Smart Technology

VERISOL® HST
Beauty from Within



GELITA® RXLR²
Revolutionary Release

GELITA® RXL
Improving capsule shelf life and stability

GELITA® EC
Enteric Capsule Release

EASYSEAL®
Reliable Softgel Seams



PRODUCT DEVELOPMENT GUIDE

Q & A



Jessica Pfoehler

Global Marketing, Business Unit Performance Solutions
GELITA

What specific delivery format options do you provide for dietary supplement brands?

GELITA offers innovative solutions for a variety of delivery formats: softgels, hard capsules, tablets and gummies. Our aim is to enhance these formats — by making them better for consumers or better to process for manufacturers.

Are there new advancements or technologies that are helping to support innovation, new applications or effectiveness of your specific delivery formats?

GELITA's latest innovation, EASYSEAL®, minimizes leaking softgels, boosts production speed, enhances process efficiency and unlocks substantial cost savings in capsule production. This is all achievable by simply changing to the right gelatin.

With GELITA's portfolio of targeted-release softgels, product developers can now determine when and where in the body the active components will be released. Manufacturers can choose between extraordinary fast release or enteric release in one-step production.

GELITA's latest breakthrough in fortified gummies is CONFIXX®, a fast-setting gelatin designed for use in starch-free molding equipment, which reduces production time. Set to revolutionize the market for gummy supplements, CONFIXX helps reduce cross-contamination and aids in manufacturing formulations with heat-sensitive active ingredients.

SOLUFORM® is GELITA's new solution for reduced-sugar and high-protein gummies — without compromising taste or texture.

VERISOL® HST empowers manufacturers to harness beauty-from-within trends by creating beauty gummies that deliver the recommended daily dose in just three gummies.

In this competitive field, how do you define your company's point of differentiation in the delivery format market?

GELITA's solutions show that we are focusing on real market innovation. Our products are designed to meet specific market demands and improve consumers' quality of life. This is complemented by our excellent technical service, which includes helping our customers find the right gelatin for their needs and supporting product development.

A wide range of consumers are seeking new delivery formats that align with their lifestyle and supplement goals. Explain how your delivery formats meet these evolving demands.

No matter the delivery format, consumers clearly want a safe and effective product. With softgels that release their fill at the right time and in the right place, GELITA has solutions that noticeably increase the effectiveness of supplements.

Innovations in active ingredients — botanicals, for example — are becoming more and more challenging in terms of shelf life and stability. GELITA's RXL® range is a promising solution to encapsulate challenging fill materials.

With CONFIXX®, GELITA offers a unique solution for fortified gummies while ensuring the taste and texture experiences consumers love.

All of these solutions enable innovation but also ensure safe and effective finished products for consumers.

ENHANCING THE POWER OF PHYTONUTRIENTS

PHYTOSOME™
The Delivery System

OVER 4 BILLION SERVINGS DELIVERED GLOBALLY*

Leverage Indena Phytosome™, the original multi-talented technology platform, to unlock the unique power of a wide range of phytonutrients. Creating a solid dispersion within a 100% food-grade matrix, based on natural lecithin, Indena's breakthrough delivery system includes phospholipids that inhibit the self-aggregation of botanicals – which therefore are free to express their full potential and, in turn, avoid the self-aggregation of phospholipids. This synergy improves the absorption and pharmacokinetic profile of the natural compound, while optimizing interaction with the gut microbiome and enhancing their technological performance. Achieve stunning results with optimal stability and safety, proven by rigorous tests and decades of successful applications.

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more about
PHYTOSOME™



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*Based on 2004-2021 internal sales data regarding nutraceutical Indena Phytosome™ products (all SKUs), taking into consideration daily intakes recommended by Indena.



PRODUCT DEVELOPMENT GUIDE

Q & A



Serena Tongiani
Chief Portfolio Officer
Indena SpA

What specific delivery format options do you provide for dietary supplement brands?

Indena's Phytosome™ food-grade delivery system is a multifunctional technology platform that unlocks the power of phytonutrients, optimizing the bioabsorption and pharmacokinetic profile of many natural ingredients. Some of Indena's leading ingredients that include Indena Phytosome™ technology are Berbevis® Berberine Phytosome™, Relissa™ Melissa Phytosome™ and Meriva® Curcumin Phytosome™.

Indena Phytosome™ technology combines lecithin with a botanical or natural substance, maintaining the original structure and biological activity of the active components. Indena Phytosome™ ingredients offer optimized bioabsorption and proven efficacy, as supported by numerous scientific studies, which also support the ingredients' safety and well-tolerated profile over time. They are also vegan friendly.

Recently, Indena announced a strategic partnership with dsm-firmenich to develop novel scientific evidence to support the effectiveness of new natural solutions. At Vitafoods Europe 2024, the partnership introduced several jointly developed concepts combining probiotics, essential nutrients and active botanical extracts to target a wide range of health platforms while elevating the consumer experience through delicious, easy-to-use formats such as gummies and oral dispersible granules.

Are there new advancements or technologies that support innovation, new applications or effectiveness of your specific delivery formats?

Indena recently introduced Berbevis® Berberine Phytosome™ for healthy metabolism with an optimized bioabsorption profile due to the Phytosome™ delivery system. Scientific evidence has shown that Berbevis® is effective at maintaining balanced blood sugar and lipid metabolic profiles, and managing healthy body parameters.

Indena and dsm-firmenich jointly introduced new product offerings during Vitafoods Europe 2024, including two different dietary supplement gummy solutions. Other products that focus on brain health and healthy aging are forthcoming.

In this competitive field, how do you define your company's point of differentiation in the delivery format market?

For Indena Phytosome™, over four billion servings have been delivered globally, supporting its effectiveness and market viability. Indena has supported its Phytosome™ delivery system with decades of scientific evidence, confirming its benefits and safety over time. The secret lies in solid dispersion of botanical compounds into a 100% food-grade matrix based on natural lecithin, which allows botanicals to give their best.

The partnership between Indena, the leading developer of high-quality and scientifically sound active botanical ingredients, and dsm-firmenich, an innovator in nutrition health and beauty, will offer the industry unmatched scientific support and delivery format options.

A wide range of consumers are seeking new delivery formats that align with their lifestyle and supplement goals. Explain how your delivery formats meet these evolving demands.

Indena and dsm-firmenich are combining strengths to create next-generation dietary supplement solutions that meet the demands of today's health-conscious consumers, with a focus on scientific substantiation, maximum efficacy and enhanced flavor experiences.

These solutions address certain key health areas such as gut health, digestive comfort, cognitive performance and healthy aging.



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FlashRelease™
TECHNOLOGY

Easy to Consume, (non-choking hazard)
High Bioavailability
Fast Acting
No Water, No Bulky Containers



PRODUCT DEVELOPMENT GUIDE

Q & A



Ben Bartel

CEO
Nutrastrips

What specific delivery format options do you provide for dietary supplement brands?

We provide oral dissolving film strips.

Are there new advancements or technologies that support innovation, new applications or effectiveness of your specific delivery formats?

When people think of oral dissolving strips, they typically associate them with breath fresheners. However, Nutrastrips is revolutionizing this technology by incorporating dietary supplementation. Our innovative approach leverages the inherent advantages of oral strips as a water-soluble delivery system, offering faster onset times and enhanced bioavailability. This transformation not only redefines the potential of oral dissolving strips but also sets a new standard in the field of dietary supplements.

In this competitive field, how do you define your company's point of differentiation in the delivery format market?

Oral dissolving film technology is well established, primarily within the pharmaceutical sector. Nutrastrips is pioneering this application in the nutraceutical industry. We have developed dozens of popular formulations that are market ready, and our in-house R&D team excels at creating custom formulations with remarkable speed. Nutrastrips stands out as one of the few manufacturers focused exclusively on dietary supplements using oral dissolving strips, and we are proud to be one of only three companies worldwide to hold NSF certification for oral dissolving film manufacturing. This unique focus and certification underscore our commitment to quality and innovation in this competitive field.

A wide range of consumers are seeking new delivery formats that align with their lifestyle and supplement goals. Explain how your delivery formats meet these evolving demands.

Studies reveal that 40% of Americans have difficulty swallowing pills while many others prefer alternative delivery systems. Our oral strips address these preferences by offering a convenient and user-friendly solution. Each strip is individually pouched in a sachet the size of a business card, making it easy to carry in a wallet, a purse or luggage. This portability ensures that consumers can take their supplements on the go, integrating seamlessly with their busy lifestyles. Furthermore, our oral strips are sugar free, vegan, non-GMO and free from fillers commonly found in other supplements. This commitment to quality and convenience aligns perfectly with the evolving demands of health-conscious consumers seeking effective and accessible supplement solutions.

SCIENCE-BACKED INGREDIENTS FOR MAXIMUM IMPACT

BEAUTY FROM WITHIN
COGNITIVE PERFORMANCE
BONE, JOINT, MUSCLE
ENERGY
CARDIO HEALTH
SPORTS/ACTIVE NUTRITION
STRESS & MOOD
WEIGHT MANAGEMENT



FUNCTIONAL BEVERAGES

Ingredient Features You Want

- Water-dispersible
- Clinical science
- Taste-neutral
- Color-neutral
- RTM friendly
- RTD friendly
- Fast-acting
- Low dose
- GRAS

Functional beverages are one of the hottest trends in Health & Wellness today. And consumers are demanding more function from their functional beverages. What's been lacking, however, are ingredients that are backed by solid clinical science, that don't affect organoleptics and, at the same time, are easy to formulate. All that is changing now. PLT Health Solutions offers a growing portfolio of neutral tasting, water-dispersible and 'beverage friendly' ingredients with gold-standard clinical scientific support. These are available for a broad range of applications – from sports nutrition and weight management to healthy aging for joints and skin.

With these PLT ingredients, as a beverage producer, you can bring wellness support to new delivery systems and product forms. You can offer science-backed messaging in differentiated products. And you can deliver more functionality than ever before. Whatever your application, PLT can support you in concept and product development with these ingredients.

* THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE.

Contact PLT Health Solutions for samples and more information.

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PLT
HEALTH SOLUTIONS

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Steve Fink

Vice President of Marketing
PLT Health Solutions

What specific delivery format options do you provide for dietary supplement brands?

Currently, PLT Health Solutions is engaged in an across-the-board campaign to either create or modify our ingredients to make them formulation friendly in new delivery systems. Today we have a growing portfolio of beverage-friendly ingredients that provide a broad range of science-backed benefits for the burgeoning functional beverage market. PLT markets more than a dozen water-dispersible and water-soluble solutions, primarily botanical ingredients, across key health categories.

Key areas of focus for beverage-friendly ingredients at PLT are energy, active nutrition, weight management, and stress and mood support.

PLT offers both stimulant and nonstimulant energy ingredients with our **zumXR® Targeted Release Caffeine** and **Zynamite®** via the recently introduced Zynamite S format.

As part of our burgeoning sports and active nutrition portfolio, our beverage-friendly ingredients include **MegaNatural-BP®** grape seed extract for enhanced blood flow and endurance and **RipFACTOR® Muscle Accelerator**, with extensive clinical science demonstrating improved muscle strength and endurance.

In the weight management category, **Slendacor® Weight Management Complex** is a globally successful nonstimulant ingredient that promotes calorie burning and weight loss. **Supresa® Crave Control**, derived from the flowers of a special cultivar of *Crocus sativus L.*, offers a special mechanism of weight loss support: It enhances the neurotransmitter serotonin and reduces the desire to snack between meals.

It should be noted that both MegaNatural-BP and Slendacor also have clinically demonstrated cardiometabolic benefits.

For the white-hot stress, mood and cognitive health categories, PLT offers **Rhodiolife® Rhodiola rosea**, which leads the exciting adaptogen trend, and **Zembrin® Sceletium tortuosum**, which has extensive clinical data showing reduced stress and enhanced mood in less than two hours after ingestion.

Importantly, if ingredients work well in beverage systems, they will also work well in gummies, stick packs, ready-to-mix powders and more. If you can get a beverage right, you can easily adapt to other important delivery systems.

Are there new advancements or technologies that support innovation, new applications or effectiveness of your specific delivery formats?

In the last eight months, PLT has launched three new water-soluble and -dispersible ingredients: Zynamite S for mental energy, water-dispersible RipFACTOR for muscle strength and endurance and a water-soluble version of our adaptogen, Rhodiolife *Rhodiola rosea*. Each of these botanical complexes required significant R&D to meet the standards of the beverage industry.

For example, studies conducted on Rhodiolife used a low-pH orange-flavored formulation. Over the study period, it was confirmed that the introduction of Rhodiolife did not affect the Brix or pH of the orange beverage. There was no change in either the flavor or color profile. No change in total bioactives content was observed. In this study, pasteurization did not have any effect on the properties of the orange beverage.

In this competitive field, how do you define your company's point of differentiation in the delivery format market?

In approaching this development work on our beverage-friendly ingredients, PLT has focused on characteristics that beverage producers want: uniform particle size and density, good water dispersibility and solubility, neutral taste and color, and stability. At the same time, our beverage-friendly ingredients maintain features that every product developer wants: fast acting to the point of being experiential, low dose and, maybe most importantly, backed by quality clinical science.

A wide range of consumers are seeking new delivery formats that align with their lifestyle and supplement goals. Explain how your delivery formats meet these evolving demands.

Sometimes it's not how you deliver — it's what you deliver. With functional beverages, ingredients like protein, vitamins and minerals are a great starting point, but today's consumers are looking for more impactful, innovative health benefits. They want more functionality from their functional beverages. Our ingredient portfolio delivers exactly that.



A Singular Focus

Your softgel contract manufacturing needs are the center of our attention. Our team offers full-service solutions using solvent-free, custom and stock formulas in a variety of sizes, shapes and colors — all supplied from a GMP-certified, U.S. facility.

Let us be your partner in softgel production.
Visit soft-gel.com to learn more.

Delivering custom and branded softgels, naturally.™





SOFT GEL
TECHNOLOGIES, INC.®

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Q & A



Alfredo (Freddy) Reyes
General Manager
Soft Gel Technologies, Inc.

What specific delivery format options do you provide for dietary supplement brands?

Soft Gel Technologies is a leading softgel contract manufacturing company based in Los Angeles.

Softgel production is a unique and complicated process. Not every manufacturer has the expertise to do it or do it well. Many steps that must be executed flawlessly, including using proven, state-of-the-art equipment; encapsulating in temperature-controlled areas; tailoring the drying process to the type of softgel capsule being manufactured; and training operators to tightly monitor the gelatin temperature, ribbon thickness, seam width, fill quantity and moisture content.

Because we are focused exclusively on softgels, Soft Gel Technologies is able to dedicate all of our financial resources and expertise to perfecting the manufacture of this one delivery form. In fact, we have spent more than two decades setting the gold standard for softgel manufacture.

Are there new advancements or technologies that are helping to support innovation, new applications or effectiveness of your specific delivery formats?

Some of the most common problems dietary supplement manufacturers encounter when developing softgel formulations arise from working with difficult ingredients.

Soft Gel Technologies has invested considerable time and resources into developing proprietary technologies to overcome these challenges, unlocking the potential of numerous ingredients to support human health. We currently hold 32 U.S. patents, most of which are for significant technological breakthroughs in the areas of nutrient bioavailability, dissolution and efficacy, with other patents awarded for unique compositions and delivery methods.

In this competitive field, how do you define your company's point of differentiation in the delivery format market?

We are the softgel experts. You will not find another company more well-versed in all facets of softgel manufacturing than Soft Gel Technologies.

1. We pride ourselves in going where others dare not. We specialize in encapsulating formulas others thought were impossible to achieve with softgels, and we embrace ingredients that are difficult to absorb, difficult to encapsulate or fragile to work with.

2. We are more than just a manufacturing company. When you partner with us, we can assist you with developing unique formulations, sourcing safe and pure ingredients, providing real-time stability data and offering a portfolio of marketing resources.

3. We operate a world-class manufacturing facility. We make all of our supplements in our onsite plant according to current good manufacturing practices (GMPs) for dietary supplements. We have invested millions of dollars to purchase precision, state-of-the-art blending and encapsulation equipment, which enables us to consistently manufacture the finest softgels for our customers.

4. We operate our own in-house analytical laboratory. Our well-equipped, state-of-the-art chemical analytical laboratory is staffed by highly trained chemists and lab technicians. Here, we perform testing through all stages of production, from incoming raw material quality testing and identification to in-process quality checks to final product testing for potency and purity.

5. We embrace corporate transparency. We encourage our customers to perform regular audits of our facility, where they can look at batch records, raw material certificates of analysis and quality control test results.

A wide range of consumers are seeking new delivery formats that align with their lifestyle and supplement goals. Explain how your delivery formats meet these evolving demands.

The conventional wisdom is that with the soaring popularity of gummies, shots and drink mixes, traditional supplement delivery forms such as tablets and capsules will eventually become extinct. However, this is simply not the case.

Solid delivery forms have advantages newer ones cannot match. For example, due to taste constraints, gummies, shots and drink mixes often cannot provide therapeutic dosages of ingredients. Tablets, capsules and softgels can.

Softgels have distinct advantages over tablets and dry capsules too. They are unparalleled in their ability to protect ingredients from oxygen. They are easy to swallow. And they are an elegant dosage form with a unique aesthetic appeal.



Smell the **sun-warmed citrus** when you crack the lid.

And the tea concentrate you drink every morning? It's so fresh-tasting you'll think the kettle's still warm. As for your afternoon powerbar, it's pure chocolate brownie, without any pea protein bitterness. Virginia Dare gives you natural flavors and extracts without compromising taste.

FULL-SERVICE FLAVOR CREATION | MASKING | MODULATION



PRODUCT DEVELOPMENT GUIDE

Q & A



Philip Caputo

Marketing and Consumer Insights Manager
Virginia Dare

What specific delivery format options do you provide for dietary supplement brands?

At Virginia Dare, our applications team creates supplements in many forms. These range from traditional gummies, pressed tablets, shots and ready-to-mix stick packs to more innovative formats reminiscent of confections, like candy straws, soft chews or hard candies.

In this competitive field, how do you define your company's point of differentiation in the delivery format market?

Virginia Dare focuses on flavor and only flavor. Because of this single-minded pursuit, we've developed a deep, nuanced understanding of how taste buds interpret flavor and how we can fine-tune those perceptions using our masking and modifying flavor portfolio. We can reduce bitterness from caffeine and botanical extracts, limit beany and earthy flavors from plant proteins and improve characterizing flavors in a reduced-sugar environment. We continue to evolve this technology to meet changing consumer preferences in flavor and format.

A wide range of consumers are seeking new delivery formats that align with their lifestyle and supplement goals. Explain how your delivery formats meet these evolving demands.

Innovation in delivery formats is everywhere. However, newer delivery formats have a crucial hurdle that capsules can ignore: taste. Managing flavor and potency is a balancing act. Products need to be effective, but people don't want them to taste effective, so indulgent wellness is rising to fill the gap.

Virginia Dare helps brands strike that balance through our emphasis on full-service flavor. We create the base flavor profile and keep adjusting until we achieve the desired taste while using the least amount of raw material needed. For very harsh, bitter functional ingredients, this usually means multiple rounds of characterizing flavor options, taste modulation and flavor masking. Taste modulation brings out the good flavors in products and tones down the worst, such as making a berry flavor bright with a refreshing tartness or downplaying excessive sourness and bitterness in a functional ingredient.

Our delivery formats appeal to those looking for something fresh and exciting to combat capsule fatigue. Consumers are also looking for on-the-go formats to use throughout the day. A soft chew is portable and can taste like candy or an indulgent dessert, all while delivering a high dose of supplement actives.

Consumers may also be looking for new formats to give their kids. Gummies are great, but they come in large bottles and often contain copious amounts of added sugar. A vitamin candy straw is an innovative, portable alternative that we can make taste great while being sugar-free.

Discover ConCordix Smart Chews

The next generation
of dietary supplements

High
Potency

Enhanced
Bioavailability

Unsurpassed
Stability

NON-GMO



SUGAR-FREE



GREAT TASTE



NATURAL
FLAVORS & COLORS



Learn more at
www.concordix.com



Original Norwegian Innovation



PRODUCT DEVELOPMENT GUIDE

Q & A



Kristine Cosgrove

Director of Sales and Innovation, Americas
Vitux AS

What specific delivery format options do you provide for dietary supplement brands?

ConCordix is the first chewable dietary supplement that is designed for your body. This innovative delivery system mirrors the structure of food for efficient digestion and absorption of nutrients. We've proven this through clinical research showing 43% greater uptake of omega-3 when compared to softgels. Rather than delivering one bolus dose of liquid fill, ConCordix delivers a chewable emulsion containing tiny droplets of oil and dispersed nutrients to improve absorption and reduce gastric upset.

Are there new advancements or technologies that are helping to support innovation, new applications or effectiveness of your specific delivery formats?

Supplements are consumed with the intention of a positive health impact — that can't happen without absorption of the nutrients. ConCordix technology packages delicate nutrients into a delivery vehicle that is not only delicious and fun but delivers them in such a way that they are actually absorbed.

We are obsessed with finding ways to improve nutrient stability and absorption. Since 2011, we have reduced the droplet size tenfold, which is directly linked to absorption. We continue to improve this and expect to demonstrate the effect on absorption through new clinical research soon.

ConCordix supplements are individually sealed in blister packs to protect each dose from oxidation. The stability of our products is unsurpassed by any other dosage form, as evidenced by stability studies.

In this competitive field, how do you define your company's point of differentiation in the delivery format market?

There is only one ConCordix. It is the first dietary supplement designed to work harmoniously with your body's needs. By studying how the body processes nutrients from food, we have developed a delivery system that packages nutrients so that they are ready for absorption. No other dosage form can compare.

While the technology is complex, the concept is simple. We asked, "What is actually right for the body?" And the answer was ConCordix.

ConCordix is designed as a dietary supplement from start to finish. As the only chewable supplement created as a supplement first (this is not health-washed candy), we can protect delicate nutrients — including nutritional lipids — throughout our production process, throughout shelf life and until consumption.

A wide range of consumers are seeking new delivery formats that align with their lifestyle and supplement goals. Explain how your delivery formats meet these evolving demands.

Taking a dietary supplement to improve your health should be a positive experience, not a dreaded process. Just like a healthy diet should be enjoyable and filled with vibrant flavors, so should the addition of supplements to your routine. The choice should not be between compromised quality, sugar-laden formulas, poor-tasting liquids or hard-to-swallow tablets. There is an alternative — one that will stick in your routine, not your teeth.

We want to teach kids early on that creating a lifestyle centered around health is enjoyable — but not so enjoyable that it starts with candy every morning. ConCordix is the delicious alternative. It is a pleasant way to add a supplement to a child's routine. We might be depriving them of this new "candy before school" trend, but we are gifting them the nutrients they need for brain development and growth. Our study with children and their caregivers yielded 99% compliance over four weeks. While children might initially be drawn to a sugary gummy due to the likeness to candy, they will soon request their ConCordix daily.

With the increase in chewable supplements consumed by adults, it's clear that people of all ages are seeking an improved supplementation experience. Until now, no delivery system could offer both a pleasant experience and effectiveness. ConCordix offers all the benefits consumers are seeking in one format, no compromises necessary.