

Revolutionary Gummy Technology

That Solves for The Supply Chain Constraints of Other Gummy Formats and Enhances Consumer Experience



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Introduction

Brands, manufacturers, and suppliers of VMS products today face the challenge of ensuring that their products can maintain their quality and integrity across the different steps involved during the supply chain distribution, particularly during summer season. One of the VMS formats that faces the highest challenge is one that has been portraying significant growth within this category over the past years, the gummy. Between 2017 and 2021, according to Mintel, gummy product launches in the global market increased by 172%, launches in the US represented a 25% of total launches in 2022, evidencing an exponential rise in the demand for products in this format¹. Gummies are now the single most popular supplement delivery format, according to Nutrition Business Journal's (NBJ) Delivery Format Report 2022, and big supplement brands are strongly focused in adding top-selling gummy supplements to their pipelines.

Gummy product launches in the global market increased by 172%

However, due to the nature, agents and ingredients that create a gummy, most products that come in this format may be prone to melt when exposed to high temperatures across

its supply chain, which can affect not only their physical but also their chemical properties, resulting in a serious issue for many brands, marketplaces and ultimately affecting the end-consumer experience. As mentioned on a recent article by Natural Products Insider, *Gummy grand slam: Understanding the opportunities in chewable supplements*, formulating a winning gummy product is complex, it requires the appropriate technology, specific materials knowledge, experience, versatility, and addressing this issue, the required level of expertise in product development on how to find the right combination of gelling agents and ingredients that can allow the gummy to maintain itself undamaged even if exposed to different temperatures during its distribution.

“Formulating a winning gummy product is complex”

For this reason, partnering with an experienced contract manufacturer that understands the gummy-specific nuances and is also able to leverage on its expertise to create a final product that doesn't only overcome supply chain challenges, finding cost efficiencies for its customers, but also exceeds consumer experience expectations, has become a key factor for supplement brands when searching for the right partner to develop and manufacture the new products they intend to launch to their different markets.

In this paper, we will explore the encounters faced by gummy products during the supply chain, specifically when referring to time-to-market and marketplace requirements, and learn how Funtrition[®] by Procaps Group, a leading developer and manufacturer of high-end gummy products, introduces a revolutionary technology to address this current issue, while also increasing sensorial experiences for consumers today.



¹ Source: Mintel. **GNPD Global launches where Sub-Category matches Vitamins & Dietary Supplements (with Format Type matches Chew/Gummy) and Date Published is between Jan 2017 and Dec 2022**

Cold-Shipment: The solution?

As mentioned, gummy products can experience multiple constraints across the different stages of the supply chain. In fact, it is during the stages of storage, loading, unloading and transportation, that the high sensitivity of gummies to temperature fluctuation poses the most significant challenge. Any variations presented during these stages could affect the physical and chemical properties of the final product, which is why it becomes so critical to maintain a consistent temperature throughout the whole process.

Nevertheless, this isn't the only constraint faced by gummy products. When they reach the distribution stage, gummy (and other likely-to-melt products) are faced with increasing strict marketplace requirements. In some cases, like in the specific case of the marketplace giant Amazon, who has implemented a "Meltable Product Shipping Policy", brands must ensure that their products meet quality standards and are not susceptible to melting during the stages of storage and transportation.² In order to guarantee this,

“ Meltable Product Shipping Policy”

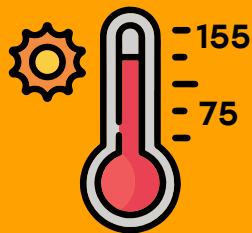
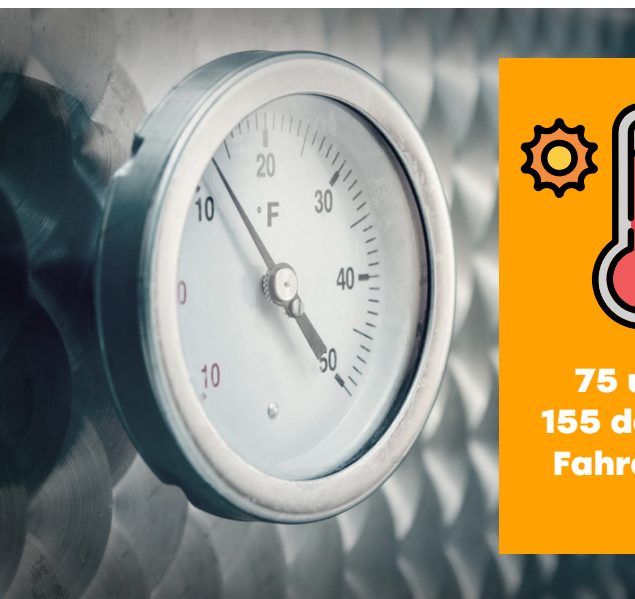


manufacturers must conduct a temperature test that can certify their ability to withstand extreme temperatures ranging, in some cases, from **75 up to 155 degrees Fahrenheit**.³ It is mandatory for manufacturers and brands to comply with these policies to ensure that their products are not disposed of or rejected by fulfillment centers. If the product doesn't live up to the promised quality standards, the marketplace risks receiving complaints related to melted products which can lead, in turn, to the brand's account suspension.⁴

² Amazon. Seller-forums. New MFN meltable product shipping policy. <https://sellercentral.amazon.com/seller-forums/discussions/t/46508a01e243b30d118d5544b675610f>

³ Amazon. Meltable FBA inventory. <https://sellercentral.amazon.com/help/hub/reference/external/G202125070?locale=en-US>

⁴ Amazon. Seller-forums. New MFN meltable product shipping policy. <https://sellercentral.amazon.com/seller-forums/discussions/t/46508a01e243b30d118d5544b675610f>



**75 up to
155 degrees
Fahrenheit**



However, meeting these requirements can also result challenging for brands because it implies careful planning and potential additional resources. Said differently, in order to distribute and sell products that are susceptible to melt, brands need to plan ahead, making sure that they are not caught with an excess of “meltable” inventory during the marketplaces’ restricted period, which in Amazon’s particular case is between April 15 and October 15 2023.⁵ If caught with excess inventory, brands would have to liquidate through sales or submit removal orders which can result costly and of course, time consuming.

“Cold shipment, or any other temperature-controlled solution, can significantly elevate logistic costs”

As a response to these challenges, supplement brands are having to incur in “cold-shipping”, a service provided by transportation companies to keep temperature-sensitive shipments between 35°F and 46°F, in some cases, for up to 96 hours. However, **cold shipment, or any other temperature-controlled solution, can significantly elevate logistic costs**, adding surprising charges in the chain and ultimately affecting overall brands’ profitability.

So, the question remains... is cold shipment the solution or the obstacle?

⁵ Amazon. Seller-forums. Request to remove meltable FBA inventory by April 15. <https://sellercentral.amazon.com/seller-forums/discussions/t/20bca526e-794ddb2318y82d1b2660f785>

Non-Cold Ship Gummies: The Real Solution

A gummy technology with a temperature-resistant formulation as well as an elevated sensorial experience in terms of texture, color, and flavor? A gummy with these characteristics would not only solve the problem, allowing brands to eliminate cold shipment from the supply chain costs, minimizing time-to-market and complying with marketplace requirements, but would also take brands’ products to the next level, offering end-consumers a unique and memorable experience. How is this possible?





Introducing gummieX

A Gummy Technology that can take the Heat!

Funtrition®, a leading developer and manufacturer of innovative gummy technologies, has been working for years on extensive research and development in new technology platforms that can solve any type of formulation challenges, bringing exciting products to consumers, while elevating sensorial experiences, and now, overcoming critical challenges that could potentially affect the product during its distribution.

Introducing GummieX™, a gummy technology trademarked by Funtrition® that provides the means to maintain the quality and integrity of gummies when exposed to high temperature conditions. GummieX™ is designed to achieve desired flavor, texture, and performance by mixing in the right matrix of gelling agents. **By using a mixture of thermo-reversible and thermo-irreversible gelling agents, this technology increases the thermal resistance of the gummies** allowing them to resist high temperatures. Compared to traditional gelatin-based gummies, products under GummieX™ technology are considerably less sensitive to temperature fluctuations, maintaining their shape, taste, and efficacy across the different stages of the supply chain, even in hot and humid conditions, eliminating the need for cold chain logistics and reducing, significantly, logistic costs.

Additionally, GummieX™ gummies comply with marketplace requirements, meeting all necessary quality standards.

**“This
technology
increases
the thermal
resistance of
the gummies”**

To ensure the desired behavior of the gummies, at Funtrition® we are continuously conducting certain tests, such as texture tests, where attributes like hardness, cohesiveness, elasticity, and adhesiveness are evaluated, as well as “gummy melting tests”, where the final state of the gummies, after being exposed to high temperatures, is examined. These tests help Funtrition® ensure that gummies can withstand different temperature conditions during transportation, making them a **reliable product that can meet the requirements of today’s marketplaces and retailers, as well as allowing brand owners to save enormous costs across the supply chain.**

GummieX™ addresses the supply chain and time-to-market challenges by developing gummies using a blend of hydrocolloids and providing a solution for time-to-market challenge as it avoids having to add actives on chewiness, stickiness, and elasticity, and allows gummies to be produced efficiently on an industrial scale.

Additionally, what's truly unique about GummieX™ is the ability this technology offers to create the ideal gummy since its formulation design. Carefully choosing the right **gelling agents, animal or plant-based, to achieve desired texture, delicious flavor, and maximum performance, elevating overall consumer experience**, especially appealing for consumers who have desirable sensory characteristics and to those who engage in free from diets, such as flexitarians and vegetarians.



“What's truly unique about GummieX™ is the ability this technology offers to create the ideal gummy since its formulation design.”



When it comes to texture, the mixture of certain ingredients, acid flavors and sweeteners can strongly affect the final texture of the gummy, impacting the final consumer experience such as finding a gummy being too hard to chew, long mastication timings, odd flavors, among others.





With GummieX™, we combine “the best of different worlds”, mindfully choosing and combining the right hydrocolloids to create formulations that are able to incorporate all the actives necessary to create a successful final product. Under this technology, actives that would normally affect the final product’s texture, are counteracted, maintaining the overall sensorial experience that is well known in the world of gummies, resulting in an indulgent, rich-in-nutrient, and delicious product. For example, certain beauty gummy actives make the gummy hard to chew, with GummieX, by bringing a new mixture of hydrocolloids, the final product

will bring an easier to consume, elastic, digestible and great tasting gummy.

Other ingredients in a gummy such as Omega-3 in high levels can add stickiness to the gummy texture, and these type of gummies, which can also have an incomplete gelling process, can affect the consumer experience by easily sticking in the mouth or teeth, adding a “sandy” texture to the consumption experience. With GummieX, blending the ideal agents for this product would result, first and foremost in a gummy that can complete its gelling process, and one that offers consumers a clean bite, allowing the delivery of ingredients and flavors to do its magic.

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+15 gummy developments using GummieX™ technology

Over the last year, at Funtrition® we’ve been strongly focused on the development of new gummy formulations, with more than +15 gummy developments using GummieX™ technology across key nutritional categories such as **Gut**

Health, Brain Health, Beauty, and others.



Funtrition® inspires to create, design, and deliver the best gummy product!



As a customer-centric company, at Funtrition® we make it a priority to truly listen to our customers at every touchpoint along the customer journey. In the face of this challenge, we've made it our mission to gather feedback from them, discuss and go through specific requirements, working together in finding the right solutions without impacting the performance of their brands.

For over two years now we have started identifying how the challenges mentioned would represent an increasing issue, mostly for brands whose gummy formulations are essentially all gelatin-based, understanding that time-to-market is key, especially for well-known brands who have

been sometime already on the market. By working closely with our customers' teams, integrating our knowledge with their input, feedback, needs and concerns, adding value at every stage of their supply chain, at Funtrition® we offer our partners the possibility of shifting current products to other matrices in a timely manner, being able to adjust project timelines to sustain the shift of existing formulas, keeping the supply steady. We can co-develop with our customers and make them a part of the solution and the change.

By pivoting existing formulations from gelatin to a combination of gelatin with pectin, for example, we can offer solutions that can positively impact their supply chain costs

allowing them to trust and rely on our expertise. It's all about our customers needs and how we can work with those needs, address them, and customize them to deliver the best gummy product for their consumers.





We are
Art & Science

Why the perfect mix between Art & Science?

At Funtrition® we're proud to be driven by Art and Science! Combining the perfect gelling agents to obtain **delicious flavors, exquisite aromas, unique and memorable sensorial sensations is an Art.** Developing new innovative technologies, mixing just the right quantities of hydrocolloids to achieve maximum performance and resistance is a Science.

We are a leading integrated contract manufacturer and developer of advanced gummy technologies for the global nutraceutical industry. We are expanding the power of fun, with two state-of-the-art manufacturing facilities, strategically located in USA and Colombia, and a new Inspiration Center, located in our Colombian headquarters, home to over 20 scientists and diverse technological resources. Dedicated to research & development, product ideation, gummy design, prototyping, feasibility evaluation, process & packaging engineering, and regulatory and marketing support, we are your key partner for portfolio renovation!

Sources



Inspiration
Center

1. Source: Mintel. [GNPD Global launches where Sub-Category matches Vitamins & Dietary Supplements \(with Format Type matches Chew/Gummy\) and Date Published is between Jan 2017 and Dec 2022](#)
2. Amazon. Seller-forums. New MFN meltable product shipping policy. <https://sellercentral.amazon.com/seller-forums/discussions/t/46508a01e243b30d118d5544b675610f>
3. Amazon. Meltable FBA inventory. <https://sellercentral.amazon.com/help/hub/reference/external/G202125070?locale=en-US>
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5. Amazon. Seller-forums. Request to remove meltable FBA inventory by April 15. <https://sellercentral.amazon.com/seller-forums/discussions/t/20bca526e794ddba2318y82d1b2660f785>
6. Funtrition R&D, Customer Success, Market Intelligence and Marketing interviews.

Contact us!

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