

SIMOGEL™: DRIVING INNOVATION IN SOFT GUMMY DOSAGE FORMS

Consumers today want an efficient and fun way to ingest their supplements and medicines. SiMoGel, Rousselot's next-generation formulation solution, has the potential to bring soft gummy delivery forms to the next level, for both nutra and pharmaceutical applications, and to support customers all the way through the NPD process.

The difference is clear

Rousselot
Functional Ingredients



Consumer interest in nutritional supplements keeps gaining ground, and while ingredient innovations keep evolving to adapt to the latest demands, delivery forms still have a lot of untapped potential, whether that is in terms of texture, taste or format.

Driven by consumers' proactive approach towards health and prevention, the global market for vitamins and dietary supplements is expected to grow by **7% (CAGR 2020-2025¹)**, and even greater is the estimated growth for global OTC drugs (**8.5% CAGR 2019-2024²**). But while people's attention constantly shifts to a healthier lifestyle, they also crave a better way of receiving their supplements.

Within the supplement market, functional gummies are on the rise with 16,5% average growth rate in the past years, the strongest growth as a delivery form³. In the OTC market, most products are still sold in tablets or capsules, although chewable formats are gaining in popularity.

The need for consumer-friendly dosage forms is definitely an important trend that manufacturers of supplements and OTC products can't overlook.

GUMMIES ARE POPULAR BECAUSE:

- **THEY ARE FUN AND TASTY**
- **BOTH CHILDREN AND ADULTS FIND FUNCTIONAL GUMMIES APPEALING**
- **NOTHING LESS THAN A TREAT!**



THEY OFFER A UNIQUE CONSUMER EXPERIENCE

- Melt in the mouth, offering unique texture and mouthfeel
- Soft chewable texture, a highly desired feature by consumers
- Tasty with unlimited flavor possibilities
- Coming with all kinds of shapes and colors

THEY ARE A SAFE DELIVERY FORM:

- No choking hazard
- Allow for natural and clean label positioning

SiMoGel designed for optimized gummy delivery forms

SiMoGel is a gelatin solution, specifically designed for functional gummy production. It allows to create gelatin-based nutrient-rich gummies without relying on starch moguls, eliminating the risk of cross-contamination of active ingredients inherent to the conventional confectionery production.

SIMOGEL IMPROVES CONSUMER EXPERIENCE BECAUSE...

- It provides flavor release and a large texture scope
- It creates transparent gummies
- It allows for endless shape possibilities, including 3D
- It is compatible with a broad range of nutrients
- It can be sugar-free or reduced sugar

SiMoGel also optimizes the production process, how?



IT'S HYGIENIC

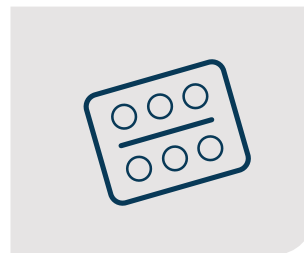
Use of easily cleanable silicon or metallic molds for depositing, removing any product residue, or any other types of cross-contamination, due to the absence of starch.

Eliminates dust during production and risk for dust explosion.



IT'S HIGHLY EFFICIENT

Only takes 10-20 minutes to gel (setting time) – compared to the 24 hours needed in conventional starch-based production.



IT'S TECHNOLOGICALLY FLEXIBLE

Depositing in silicon or metal molds. **Direct depositing into a blister pack also possible.**

Production equipment is commercially available and can be bought as such.



IT'S COST-EFFECTIVE

Output of a starchless line ranges from 50 to 1.500kg/hr or about 25.000-750.000 pieces/hr (2g)⁴.

It requires no starch drying equipment, less storage space and speeds up the production process with reduced setting time.

No netting potentially reduces waste in production.

Introducing a new OTC delivery form powered by SiMoGel: center-filled soft gummies

*Rousselot creates the first **gummy caps** on the market*

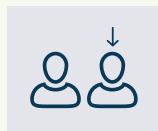
WITH GUMMY CAPS POWERED BY SIMOGEL IT IS POSSIBLE TO MAXIMIZE THE EFFICIENCY OF THE ACTIVE INGREDIENTS WHILE CREATING FUN, TASTY AND EASY TO SWALLOW DELIVERY FORM!



SiMoGel now allows to create soft gummies with a pasty liquid heart. The filling boosts the palate experience and elevates the dosing efficiency with active ingredients, improving both consumer experience and processing efficiency.



FOR THE NUTRACEUTICAL AND OTC MARKET, SIMOGEL CENTER-FILLED SOFT GUMMY CAPS MEAN:



- Ability to launch an **innovative** and **attractive format** for specific target audiences



- **No API-gelatin interaction**, allowing a broader range of active ingredients compared to traditional nutraceutical gummies



- **Dosage accuracy.** No degradation of nutrient/API during the production process due to managed and lower temperature in processing, results in more accurate dosing, compared to traditional nutraceutical gummies

AN 80MG VITAMIN C CENTER FILLED GUMMY REQUIRES 30% LESS VITAMIN C IN THE FORMULATION!



- **Higher nutrient content** compared to traditional nutraceutical gummies

A MULTI-VITAMIN CENTER FILLED GUMMY HAS THE RDI OF 10 VITAMINS IN 1 GUMMY, WHEREAS WE WOULD NEED 3 REGULAR NUTRACEUTICAL GUMMIES TO REACH RDI!



Reaching Further Together with Rousselot's expertise

- Rousselot is the ideal partner to assist you in your product developments.
- We work in close partnership with our customers to support co-development and create innovative prototypes that turn into ready-to-launch products.
- We have state-of-the-art facilities available, including a center-filled depositor in our Ghent Innovation Center (Belgium), making it possible to perform product trials.
- We provide recipe development and formulation advice with our team of highly trained scientists.
- We can provide on-site support to make sure the production starts smoothly.
- We can provide specific samples upon customer request.



THE INSPIRATION CORNER:

"GOOD FOR THROAT GUMMY CAPS"

- Nutrient content in the center-filling: pure propolis, Vitamin C, Acacia Honey
- Function: Antibacterial, antiviral, antifungal, anti-inflammatory properties. Against sore throat, wounds, etc.

"VITAMIN "GUMMY CAPS"

- Nutrient content/ soft gummies: Vitamin C
- Function: Protection against immune system deficiencies cardiovascular disease, prenatal health, eye disease, skin wrinkling
- RDA: 15-75 mg for children, 75-90 adult men/ women

As the world's leading gelatin producer⁵, Rousselot has extensive experience in gummy production, traditional and starchless. We have built extensive expertise in our Application lab on gummy recipes, fillings and processing, validated on Baker Perkins equipment. Contact us to see how we can help develop your gummy caps.

References

- 1) Vitamins and Herbal Dietary Supplements Market – Forecast (2020 - 2025), IndustryARC
- 2) <https://www.marketdataforecast.com/market-reports/over-the-counter-drugs-market>
- 3) Innova Market Insights (2015 – 2019)
- 4) standard production lines of Baker Perkins
- 5) Global Gelatin Market Insights Forecast to 2026, Calibre Research, 2020

Your Rousselot sales contact information

About Rousselot® Functional Ingredients

A clean label ingredient with a long tradition, gelatin, is Rousselot's primary business and our world-class gelatins are leading the market. Designed by nature, Rousselot standard and specialty gelatins provide unmatched functional advantages, resulting in superior end-products for the consumers. Rousselot's gelatins are safe, come from sustainable sourcing, and answer consumers' concern for a preserved world. Rousselot Functional Ingredients works in partnership with the food, pharmaceutical and technical industries and helps them achieve their formulation and business goals. With us, "The difference is clear!"

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rousselot.com/functional

Rousselot Headquarters

Rousselot B.V.
Kanaaldijk Noord 20
5681 NM Son
The Netherlands

+31 499 364 100
collagen@rousselot.com