

SIMOGEL™

**Gelatin,
one step ahead**

Rousselot

| by Darling Ingredients



Driving innovation
in **functional**
gummies

The difference is clear

rousselot.com/functional



Consumer interest in nutritional supplements keeps gaining ground, and while ingredient innovations continue to evolve 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 dietary supplements is expected to grow by 5.5% (CAGR 2021-2028)¹. 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. In the US, gummies are now the single most popular supplement delivery format. 27.4% chose gummies as their preference.² Globally, number of new supplement launches in a gummy format grew by +41% since 2018 (CAGR 2018-2023).³

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!***



GUMMIES 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 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 allows for endless shape possibilities, including 3D
- It is compatible with a broad range of nutrients
- It delivers safely and accurately the active substances
- It keeps all the usual features of gelatin in terms of texture variety, transparency and ease of use.

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.

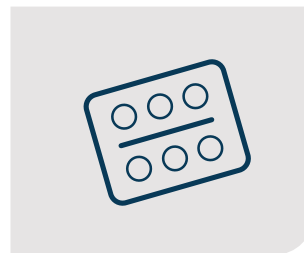
IMPORTANT INFORMATION

This rapid SiMoGel patented setting solution allows you to confidently use a process that sets your gummies in less than 30 minutes. Ask your sales representative.



IT'S HIGHLY EFFICIENT

Only takes 10-30 minutes to gel (setting time) – compared to the 24 hours needed in conventional starch-based production. Optimizes equipment utilization and production output.



IT'S TECHNOLOGICALLY FLEXIBLE

Depositing in silicon or metal molds.

Direct depositing into a blister pack also possible: **industrial trials** have demonstrated the technological feasibility of SiMoGel.



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*

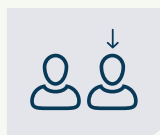
GUMMY CAPS POWERED BY SIMOGEL: OPTIMIZE ACTIVE DELIVERY AND ENHANCE CONSUMER EXPERIENCE!



SiMoGel now allows to create 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.** The lack of interaction between the API and the gelatin shell enables a broader range of ingredients compared to traditional nutraceutical gums. No degradation of nutrient/API in the liquid fill.



- **Formulation with heat-sensitive substances:** the liquid center allows for active ingredients to be kept separate from the gelatin excipient.



- **Higher nutrient content** compared to traditional nutraceutical gummies "An 80mg vitamin C center-filled gummy requires 30% less vitamin C in the formulation!»



Regular gummies

=



Gummy cap

A multi-vitamin center filled gummy has the Recommended Daily Intake (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.
- Building on successful industrial validation trials on SiMoGel based gummies with various confectionery equipment manufacturers, as well as with Baker Perkins on gummy caps, we can also 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
- RDI: 15-75 mg for children, 75-90 adult men/ women

Contact us for our recipes!

As the world's leading gelatin producer, Rousselot has extensive experience in gummy production, traditional and starchless. We have developed a unique expertise in our Application Center on gummy recipes, fillings and processing, validated on confectionery equipment manufacturer such as Baker Perkins. Contact us to see how we can help develop your functional gummies.

References

- 1) Euromonitor
- 2) Natural Product Insider (2023); Nutrition Business Journal's (NBj) Delivery Format Report 2022
- 3) Innova Database

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 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!"

Disclaimer All rights reserved. No part of this brochure may be reproduced, distributed or translated in any form or by any means, or stored in a database or retrieval system, without the prior written permission of Rousselot. Rousselot alone retains the copyright to the entire content of this brochure and the intellectual property rights to all designations of our products stated in this brochure and intellectual property rights to the products themselves. Nothing in this brochure constitutes a license (explicit or implicit) of any of Rousselot's intellectual property rights. The duplication or use of product designations, images, graphics and texts is not permitted without Rousselot's explicit prior written consent. Rousselot makes no representation or warranty, whether expressed or implied, of the accuracy, reliability, or completeness of the information, nor does it assume any legal liability, whether direct or indirect, of any information. Use of this information shall be at your discretion and risk. Nothing herein relieves you from carrying out your own suitability determinations and tests and from your obligation to comply with all applicable laws and regulations and to observe all third party rights. This product is not intended to diagnose, treat, cure, or prevent any disease. You should always consult your medical provider when using the product together with medical treatments, diets or fitness programs. The uses and claims for Rousselot's products recommended in the brochure should be adapted to the current local regulatory environment. This statement has not been evaluated by the Food and Drug Administration.

X @RousselotFi in Rousselot
rousselot.com/functional

Rousselot Headquarters

Rousselot B.V. +31 499 364 100
Kanaaldijk Noord 20 collagen@rousselot.com
5681 NM Son
The Netherlands

Rousselot
| by Darling Ingredients