

A close-up photograph of a hand holding a large quantity of yellow, oval-shaped softgel capsules. The capsules are piled together, and their translucent, gelatinous texture is clearly visible. The background is a soft, out-of-focus light color. The image is partially overlaid by a green geometric shape in the top right corner.

iff

Where science
& creativity meet

**IFF Vegan Softgel
Technology Platform:
Unlocking Possibilities**

Changing consumer preferences for quality, trust and performance necessitate continuous development and innovation of new softgel products. IFF's vegan softgel technology platform delivers our well-known SeaGel® technology and the all-new VERDIGEL™ SC - each with distinctive benefits that make your softgels stand-out in the market and deliver optimal performance.

SEAGEL® AND VERDIGEL™ SC VEGAN SOFTGEL TECHNOLOGIES ENABLE



Excellent, high-quality softgels with superior application performance



High versatility and formulation flexibility



Efficient softgel manufacturing and yields



Unmatched labeling options

So, what are you waiting for? Leverage IFF's decades of softgel experience, rich heritage in pharmaceutical and dietary supplement markets, and global technical support capabilities to make your softgels shine and succeed in the marketplace.



Softgels are an ideal option for people seeking a convenient, easy-to-swallow, and effective way to take their OTC drugs, vitamins, and dietary supplements.

Softgels are an increasingly popular choice for over-the-counter (OTC) drugs, vitamins, and dietary supplements because they offer several benefits to consumers. Some of the advantages are:

- The size, shape, and smooth surface make them easy to swallow for adults from all age-groups
- A versatile delivery format - making them appealing and easy to consume regularly.
- Allow for a range of sizes and shapes – e.g. can be made as a chewable for enhanced consumer experience or as twist-off to deliver cosmetics.
- Enable masking of unpleasant odor and taste from APIs or dietary ingredients. In addition, they can be customized with colors and flavors for enhanced appearance and consumer experience.
- Facilitate a high dose of healthy ingredients in a highly convenient format that is portable and easy to carry – making it ideal for a busy life and for people who are always on the go.
- Softgels represent an option to enhance the bioavailability of APIs and nutrients. They can be formulated as immediate-release, controlled-release, and delayed-release softgels.
- They dissolve quickly in the body and provide fast absorption of nutrients and APIs.
- Softgels seal the ingredients and provide excellent protection of sensitive ingredients from air and moisture, preserving their potency and stability.
- The soft capsule shell can be made sugar-free and with only very few ingredients addressing consumers' preferences for clean-label products.



Vegan softgels are a great option for consumers who seek a safe, natural, and eco-friendly way to take their OTC drugs, vitamins, and dietary supplements. Take a look at some of the recent trends and insights:

- Consumers' increased focus on personal health and global sustainability affect their purchase decisions. They view plant-based options as being more healthy and environmentally friendly ¹.
- The global vegan supplement market is estimated to grow at a CAGR of 11.3% between 2022 and 2032 ².
- The number of new vitamin and dietary supplements entering the global market each year with a vegan claim enjoys a 5-year CAGR of 27% ³.
- Vegan softgels are an increasingly popular choice for consumers who look for a natural and healthy alternative to traditional softgels.
- Free from animal products and are safe for those who are vegan, vegetarian, or have dietary restrictions.
- Vegan softgels support consumers' trend toward plant-based ingredients, botanicals or options to replace fish oil by plant-based omega-3 alternatives.
- The soft capsule delivery form ensures excellent thermal and storage stability. They are not prone to melting or changes in appearance and properties during transportation and storage.

IFF vegan softgel technology platform provides options to address your formulation needs, processing challenges, and softgel product label needs

SeaGel[®] allows for the encapsulation of a wide variety of fill formulations without sacrificing quality or efficiency in processing. SeaGel[®] is offered as a single component, providing flexibility in choosing the capsule shell composition. SeaGel[®] Premixes are customized ready-to-use blends to simplify your supply chain and logistics.

VERDIGEL[™] SC, is a carrageenan-free vegan softgel option with superior softgel quality and process efficiency compared to alternative options. It's the best choice for vegan softgel producers looking for a carrageenan-free option that doesn't compromise on performance.

Examples of IFF vegan softgel technology platform products:

Product	Description	Key Benefit
SeaGel [®] CAP 101	Single component	Maximum shell composition flexibility
SeaGel [®] CAP 201 SeaGel [®] CAP 203	Premix	Ready-to-use formulation
VERDIGEL [™] SC 303	Premix	Ready-to-use formulation, carrageenan-free

Consumers increasingly turn to softgel products, that match their expectations for quality and transparency. Therefore, IFF softgel technologies are kosher and halal certified. All grades support claims such as vegan, vegetarian, and non-GMO. IFF softgel technologies supporting organic label claims are available on request.

Our heritage and global experience in regulated markets such as pharmaceuticals and dietary supplements is an unmatched foundation to meet your quality and regulatory needs.

Let us know what documentation and certifications you need by contacting us at [pharma.iff.com](https://www.pharma.iff.com)

¹ <https://www.foodingredientsfirst.com/news/innova-market-insights-top-ten-trends-for-2022-health-of-the-planet-overtakes-personal-health-priorities.html> , visited on 2-Feb-2023

² <https://www.futuremarketinsights.com/reports/vegan-supplements-market> , visited on 2-Feb-2023

³ Mintel GNPD, all Vitamins & Dietary Supplements, 2018 – 2022

We understand the importance of efficient development and implementation. Our team of experts is with you every step of the way to guide you to the best solutions for your softgel needs.



For successful vegan OTC or dietary supplement softgel products, the following key considerations concerning the choice of shell-forming materials must be made:

1

Does it enable high encapsulation rates and hence high efficiency?

3

Does it consistently provide sufficient seal strength and film properties to allow formulation flexibility, superior quality and stability?

2

Is it easy to adapt to standard processes and equipment, e.g. industry standard die rolls?

4

Does it address the required quality and regulatory requirements?

Partnering with the IFF softgel experts allows you to benefit from our 10+ years of softgel experience, unmatched application expertise, and softgel development capabilities, ensuring you don't miss a beat on your way to a successful vegan soft capsule.





Benefit from our softgel experience, unmatched application expertise, and development capabilities that ensure you don't miss a beat on your journey to a successful vegan soft capsule. Here is the simple three step approach:

1 Discuss your specific softgel formulation and production requirements.

2 Provide tailored advice and support on formulation-specifics, processing technology or technical issues to help you quickly develop and implement your next softgel product with SeaGel® or VERDIGEL™ SC.

3 Always at your service - when you upscale or seek options to further optimize your softgel manufacturing.

Since IFF vegan softgel technologies are so versatile, once implemented, they can easily be expanded to other formulations without the need to change your process or equipment.



FOR MORE THAN A DECADE, IFF VEGAN SOFTGEL TECHNOLOGIES HAVE BEEN USED BY OUR CUSTOMERS GLOBALLY

Leading softgel producers around the globe have been using IFF vegan softgel technologies and benefitted from IFF experts' help in developing unique and high-quality softgels. Connect with us to discuss your vegan softgel tasks and for short time to market, leverage our library of existing concepts such as:

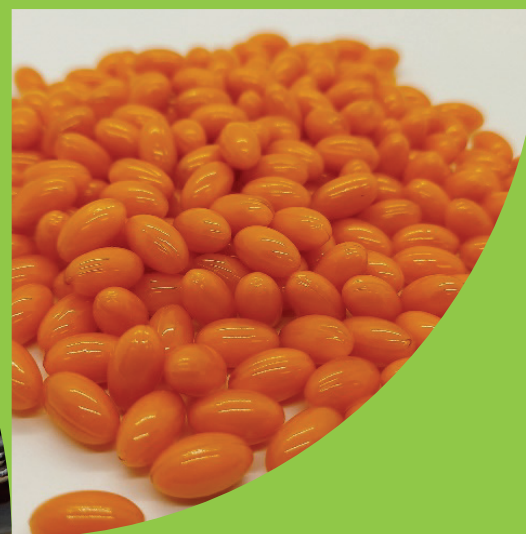
Curcumin softgels



Algae oil softgels



CoQ10 softgels



MCT oil softgels



Flaxseed softgels



Vitamin D

IFF relentlessly develops innovative solutions for cutting-edge dosage forms and product concepts to help your business succeed.

If you want to learn more about our vegan softgel technology platform or other innovative dosage form technologies, then visit pharma.iff.com

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