

## About DuPont Nutrition & Biosciences

DuPont Nutrition & Biosciences, a DowDuPont Specialty Products Division business unit, applies expert science to advance market-driven, healthy and sustainable solutions for the food, beverage, dietary supplement and pharmaceutical industries. We also use cutting-edge biotechnology across a range of markets to advance bio-based solutions to meet the needs of a growing population, while protecting our environment for future generations. We are innovative solvers who help our customers turn challenges into high-value business opportunities. For more information: [www.dupontnutritionandhealth.com](http://www.dupontnutritionandhealth.com) or [www.biosciences.dupont.com](http://www.biosciences.dupont.com)

Nutrition & Biosciences



# SeaGel® Soft Capsule Technology



If you have any questions please visit [www.pharma.dupont.com/pharmaceutical-products/seagel.html](http://www.pharma.dupont.com/pharmaceutical-products/seagel.html) and complete the contact us form. A DuPont expert will connect with you.



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# SEAGEL® CAPABILITIES

## SeaGel® Soft Capsule Technology

### The Rise of Plant-based

A revolution is underway in markets, restaurants and family dining tables around the world. More people than ever before are including meat-free and plant based options in their diets, driving an unprecedented rise in people who identify as “vegetarian” and “vegan.”

While diets limiting or excluding meat, dairy and eggs used to be on the fringe, today they are becoming mainstream:

- In the U.S., there was a 600% increase in people identifying as vegans between 2015 and 2018. A report by research firm GlobalData showed that only 1% of U.S. consumers claimed to be vegan in 2014 compared to 6% in 2017.
- The UK has shown similar exponential growth as the number of people identifying as vegans has risen 350% in the last decade.<sup>1</sup>

- Google Trends search data<sup>2</sup> shows a global surge in the interest in veganism from 2004 to 2018 in regions such as Israel, Australia, Canada, Austria, and New Zealand.

Plant-based options are becoming more important to consumers in the nutraceutical and pharmaceutical realms, too. Vegetarians and vegans are opposed to ingesting gelatin capsules that use animal byproducts. As soft capsule manufacturers search for viable solutions, DuPont Nutrition & Biosciences is on the forefront of the plant-based movement and has developed SeaGel® Soft Capsule Technology.

### A Natural Alternative

SeaGel® is a plant-based alternative to gelatin in the production of softgel capsules. Naturally derived from non-animal sources, our SeaGel® technology helps deliver the highest quality vegetarian softgel capsules.

SeaGel® technology is easy to use, versatile and proven effective. It has the ability to maintain structural integrity under high temperatures and can deliver a pure, superior quality end product, time after time.

Our relentless innovation has advanced the use of plant-based sources for capsules and brought about one of the most advanced technologies in the industry. When you combine our knowledge of plant-based science with a commitment to customer success, you get the clear choice for a better and more reliable, sustainable soft capsule technology.



**Increase your capabilities with the range of capsule colors, sizes and shapes available with SeaGel®.**

The superior appearance of SeaGel® capsules represents the naturally derived ingredients.



**SeaGel® technology is heat stable and pH neutral.**

SeaGel® capsules maintain structural integrity under higher temperatures than gelatin-based capsules. That means they won't deform or agglomerate. They're also easier to transport and maintain a longer shelf life.



**SeaGel® technology is plant-based and naturally derived.**

SeaGel® technology can accommodate a wide range of diets and lifestyles. It's vegetarian, Halal, Kosher and non-GMO.

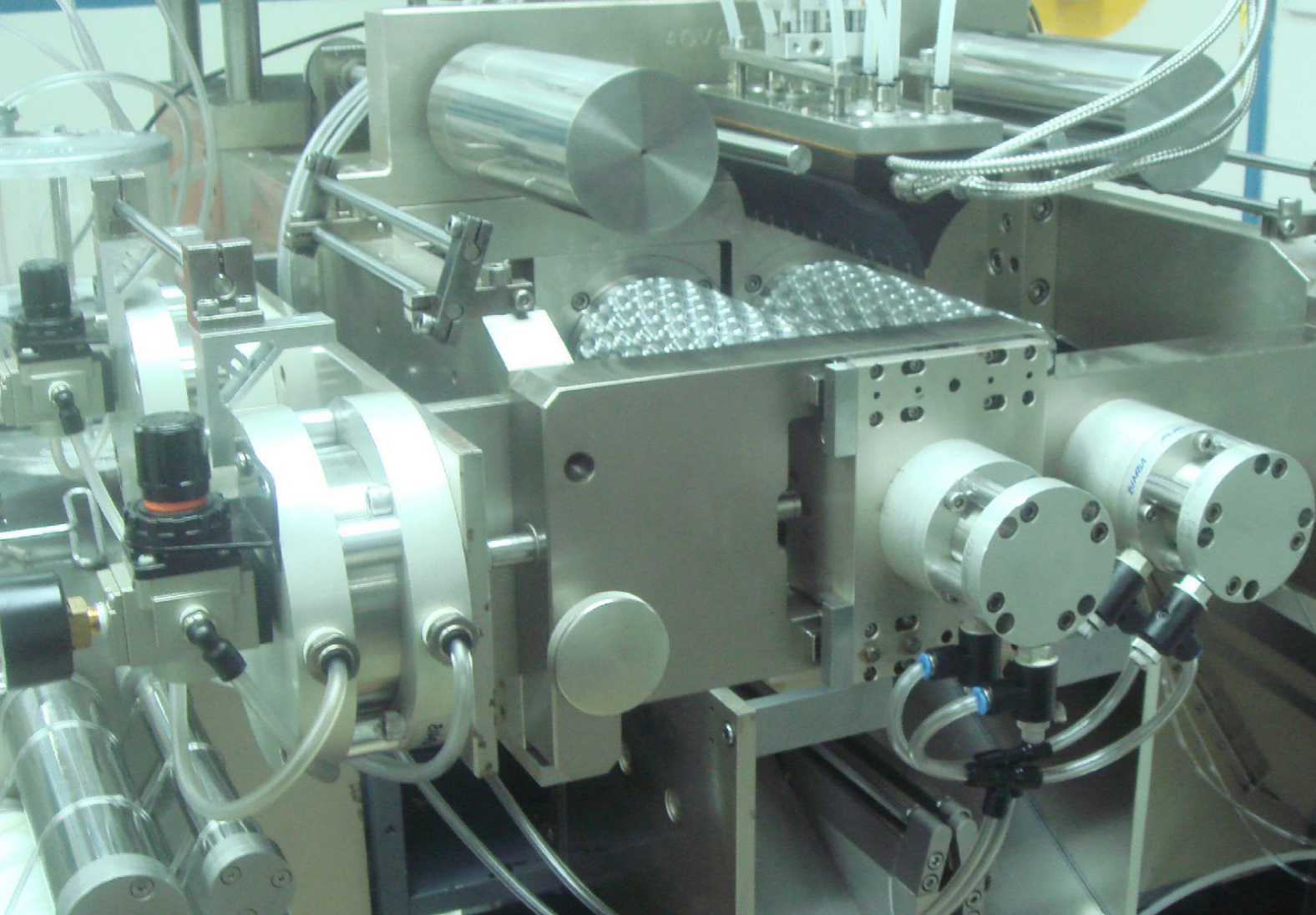


**SeaGel® technology is eco-friendly and entirely sustainable.**

To create SeaGel® soft capsules, we naturally source our materials from renewable resources.

<sup>1</sup> Vegan Society in partnership with Vegan Life magazine - <https://www.ipsos.com/ipsos-mori/en-uk/vegan-society-poll>

<sup>2</sup> Google Trends search data: [https://trends.google.com/trends/explore?date=all&q=%2Fm%2F07\\_hy](https://trends.google.com/trends/explore?date=all&q=%2Fm%2F07_hy)



## Our Technology is in Your Control

### Get big change in capsule technology without spending much coin.

SeaGel® technology is easily adaptable to existing gelatin operations, so it requires minimum capital investment to implement.

### SeaGel® technology installed in-house, to your specifications.

DuPont Nutrition & Biosciences' experts will be there throughout the adaptation process helping you to successfully make SeaGel®-based vegetarian capsules. Using our SeaGel® technology in-house enables you to meet your specifications, supported by the experience and expertise of DuPont Nutrition & Biosciences. We'll deliver the technology, familiarize you with any equipment changes and guide you through installation and adoption so you can continue to benefit from technology that has been pushed to be the best it can.

### Technology as flexible as your business needs it to be.

Consumer preferences grow and change, and capsule markets demand a technology that can grow and change with them. SeaGel® gives you the ability to adapt to many brand strategies, take on any shape and clearly present many colors.

### DuPont Nutrition & Biosciences is your partner in success.

We take pride in listening closely to your specific needs and working to identify additional improvements that will guarantee continued success. Everything we do is informed by your vital feedback and supported by extensive research.

## SEAGEL® TECHNOLOGY: A STRONGER SOFT CAPSULE



Naturally sourced SeaGel®

### SEAGEL®-BASED CAPSULES



ARE MADE OF  
THREE SIMPLE  
INGREDIENTS



Glycerin



Water

WHAT MADE SEAGEL® BRAND  
THE GO-TO SOFT  
TECHNOLOGY FOR CAPSULES?



It's made of naturally derived,  
carefully sourced ingredients



Its reliable structural integrity,  
even at high temperatures



The guidance of DuPont Nutrition & Biosciences experts,  
innovators in plant-based and capsule technologies

SEAGEL® SOFT CAPSULES ARE 100% ANIMAL BYPRODUCT FREE, UNLIKE GELATIN-BASED TECHNOLOGY.

SEAGEL® SOFT CAPSULES ARE SAFE FOR VEGETARIAN, KOSHER AND HALAL LIFESTYLES.

Proven safe for use in food & pharma products by the USDA, our plant-based and naturally derived ingredients have long been the go-to sources for innovation in softgel technology.

DUPONT NUTRITION & BIOSCIENCES PROVIDES ITS SEAGEL® TECHNOLOGY  
TO PARTNERS WHO BENEFIT FROM OUR

# 75 YEARS

WORTH OF EXPERTISE IN PLANT-BASED TECHNOLOGIES.

# SEAGEL<sup>®</sup>

## BENEFITS



- Addresses the needs of vegetarians and vegans who are opposed to ingesting gelatin-based soft capsules.
- Naturally derived from non-animal sources.
- Enhances consumer safety preferences by allowing non-GMO, vegan, vegetarian, Halal, Kosher and clean label.
- Adaptable to many brand strategies, including the ability to allow for different shapes and printing.
- Technology is easy to use, versatile and proven effective.
- Maintains structural integrity under high temperatures.
- Sustainably sourced from non-GMO, plant-based resources.

