

# Roquette Unlocks the Power of Flexibility with Launch of New LYCAGEL® Flex Softgel Capsule Shell System

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La Madeleine, France – May 14, 2024. Roquette, a global leader in plant-based ingredients and a leading provider of pharmaceutical and nutraceutical excipients, is pleased to announce the launch of its new LYCAGEL® Flex hydroxypropyl pea starch premix for nutraceutical and pharmaceutical softgel capsules. Built on Roquette's market-first LYCAGEL® pea starch technology, the new plasticizer-free excipient gives manufacturers freedom to select the optimal plasticizer combination and customize formulations for a range of production and end-user needs, while setting new standards in quality, stability and performance for plant-based softgels.

#### Unlocking the power of flexibility

Gelatin-based softgel capsules are a long-standing staple across the nutraceutical and pharmaceutical industries thanks to their widespread patient acceptance, safety profile and mechanical stability. Despite their popularity, however, these dosage forms can be challenging to manufacture successfully. Interactions with specific fill types, molecular crosslinking and sensitivity to heat and moisture during storage may compromise the stability of gelatin-based capsules, leaving patients with sticky, deformed, or ineffective medicines and supplements. These issues are compounded when working with more advanced formulations. Here, manufacturers must precisely balance the ratio of gelatin to plasticizers, such as glycerol or sorbitol, to ensure optimal shell elasticity without increasing the risk of capsule leakage or other defects. What's more, as a growing number of consumers pursue vegetarian, vegan or flexitarian diets, animal-derived ingredients, like gelatin, are becoming less of a universally accepted standard.

LYCAGEL® Flex represents the ultimate solution for manufacturers seeking a quality, plant-based alternative to gelatin, with the added flexibility to handle a wide range of – often complex – soft capsule formulations. The new premix features the same hydroxypropyl pea starch and carrageenan foundation as the original LYCAGEL® VS 720 Premix, with a new formula that allows producers to select the perfect plasticizer or combination of plasticizers for truly unique softgel formulations. Versatile and easy to use, LYCAGEL® Flex offers countless opportunities to work with specialized capsule fills and process parameters to meet the demands of the evolving pharmaceutical and nutraceutical markets.

"At Roquette, our guiding purpose is to solve the toughest challenges in drug delivery," comments Steve Amoussou-Guenou, Technical Developer Manager Europe at Roquette. "This can take many forms; with the development of our LYCAGEL\* VS 720 Premix, the primary goal was to provide softgel producers with a high-quality ready-to-use alternative to gelatin. Now, as vegan capsules become more established, we recognize that our customers need greater control to customize their formulations. LYCAGEL\* Flex is the answer, offering the same stability and performance with the added flexibility to differentiate."

## Firmer, better, faster, stronger

Similar to its predecessor, LYCAGEL® Flex offers softgel producers a plant-based solution that not only replaces gelatin, but equally offers significant process benefits. These include a reduced degassing time of just five minutes, versus the minimum 60 required for gelatin formulations, and the potential for easy equipment cleaning with only



hot water.

Looking beyond the production line, the new premix delivers market-leading performance and stability throughout a product's shelf life. Upon testing, capsules produced using LYCAGEL® Flex maintained a clear, shiny appearance and optimal hardness with no sticking or seal leakage following six months of storage at 40° C and 75% relative humidity (RH).¹ With no significant increase in disintegration time or water content after months in storage, the capsules did not display crosslinking, demonstrating their ability to maintain the same mechanical strength and capsule integrity at day 180, as they had directly after the production process. These results taken together with Roquette's dedicated technical and on-site support make LYCAGEL® Flex the ideal solution for crafting strong, stable plant-based softgels that deliver for producers and patients alike.

To learn more about Roquette and its comprehensive range of solutions for pharmaceutical and nutraceutical formulations, visit: www.roquette.com.



## About Roquette: "Offering the best of nature"

Roquette is a family-owned global leader in plant-based ingredients and a leading provider of pharmaceutical excipients. Founded in 1933, the company currently operates in more than 100 countries, through more than 30 manufacturing sites, has a turnover of around 5 billion euros, and employs almost 10,000 people worldwide.

Life and nature have been our sources of inspiration for decades. All our raw materials are of natural origin. From them, we enable a whole new plant-based cuisine; we offer pharmaceutical solutions that play a key role in medical treatments; and we develop innovative ingredients for food, nutrition and health markets. We truly unlock the potential of nature to improve, cure and save lives.

Thanks to a constant drive for innovation and a long-term vision, we are committed to improving the well-being of people all over the world. We put sustainable development at the heart of our concerns, while taking care of resources and territories. We are determined to create a better and healthier future for all generations.

Discover more about Roquette on this link.

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<sup>&</sup>lt;sup>1</sup> Roquette Pharma Solutions, Internal data study, 2024, Customer Technical Services



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