

Overcoming taste and texture challenges in high-protein snacks



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Not only is consumer demand rising across demographics¹, but a legislative push towards healthier snacks has manufacturers looking for ways to incorporate this high-impact functional ingredient into their snack portfolios. It appeals to a broad range of demographics, from Gen Alpha to Boomers, and from gamers to sports enthusiasts looking for a performance-boosting, health-supporting snack they can pick up and eat on the go.

The opportunities this presents are massive – but so are the challenges. To maximise the potential of this growing market, manufacturers must ensure their products meet more than just the functional requirements of consumers – they must meet the required taste and texture quality standards, too.

The power of protein

It's easy to see why protein is so popular. In a market that can often fall victim to confusing health claims, protein's benefits are easy for companies to explain and simple for consumers to understand. It also provides a feeling of fullness that can help people control hunger cravings when



trying to lose weight or gain lean muscle.

As a result, today's consumers recognise the importance of key nutrients, with four in ten actively purchasing food that they link to better immune health². If these time-poor shoppers can get those nutrients in a convenient grab-and-go snack bar or beverage, without having to cook up a batch of egg whites and steak every day, then that's even better.

In addition, protein can help snack brands maintain their market share despite the upcoming junk food advertising ban, which will prohibit paid advertisements of in-scope products from being shown on television before the 9pm watershed, and from being shown online at any point. This system scores food products based on their energy, salt, fat, and sugar content, then subtracts points based on fruit, veg, nuts, fibre, and protein content. If a food product from one of the 13 target categories scores 4 points or more, or a beverage scores one point or more, it will be classed as "less healthy" and considered in-scope



for the ban. In other words, adding protein to a formulation could be the difference between being classed as a 'junk food' and escaping the advertising ban.

The growing protein trend also serves consumers with dietary needs. Now, there is no reason why a vegan can't enjoy the same protein intake as a meat and dairy eater thanks to an ever-growing market full of protein-rich foods – including meat alternatives, plant-based protein shakes, and more. These products now offer a huge variety of sensory experiences, with different tastes and aromas all available to delight consumers.

A buffet of protein options

Arguably, the most important feature of a snack product in the current market is texture. It's one of the strongest drivers of rejection in a food item³, especially in the modern market, where consumers often look for a hit of indulgence⁴ in their bite-size snacks. This means manufacturers must consider their options carefully when sourcing high-protein additives for healthy snack formulations.

Fortunately, one of the benefits of protein as a functional ingredient is that there is no shortage of options available when creating different textures for different applications. However, these ingredients should be considered as part of an end-to-end product design process, one that adds value to the finished product.

Not every protein is created equal. Soy and pea protein, for example, can offer very different taste and mouthfeel profiles to create complementary or contrasting sensory experiences. Pea protein is commonly used as a powder, which can be extruded to create a fibre-like structure that mimics the chewy bite of meat while remaining taste neutral. It is also highly soluble, and can also be dispersed into liquids to achieve the desired level of viscosity during production.

Soy protein, on the other hand, is available in a number of formats including crispies, nuggets, flakes, and powders, each one with its own applications in snack bars. This presents a wide range of options for exploring different textures, from a satisfying crunch to an indulgent chew.

This presents an all-or-nothing opportunity for

manufacturers. Getting it right can deliver an experience that will have consumers returning to purchase a product again and again. Getting it wrong will result in a product with a substandard mouthfeel, potentially putting off consumers for



good. While health claims such as 'high in protein' may be hugely influential in consumers' purchasing decision, it's not always the wisest decision to load up recipes with the highest concentration of protein powder they can find.

Incorporating protein from the ground up

This is because it's vital to consider how protein ingredients interact with other important functional additives such as emulsifiers and hydrocolloids. Some formats of soy protein can act as natural emulsifiers themselves⁵, limiting the requirements to include common ingredients like lecithin and xanthan gum. It means that simply 'adding protein' to existing products should be off the table to any manufacturer that is serious about solving the taste and texture challenges of functional snacks. Instead, they should work with supply chain partners and experts to rethink their recipes from the ground up, taking a more holistic look at how to create products that balance health benefits with an indulgent snacking experience.

This approach will also enable manufacturers to tailor the concentration of protein, supporting differentiation by enabling the creation of subtly different sensory experiences that also unlock several protein content-related health claims. As

an example, our portfolio includes products like SUPRO® soy protein isolate powder, which offers 90% protein content. It can be used to create a softer texture in bars that lasts throughout their shelf life. However, those looking to create a product with a crispier texture may benefit from using TRUPRO® pea protein crisps, which contain between 55-70% protein.

As high-protein snacks play a crucial role in delivering on consumer demands for healthy, indulgent foods, it's never been more important for manufacturers to work with ingredient suppliers with a wide range of high-quality ingredients. This ensures that they will always have a huge variety of options available to develop high-protein products without compromising on taste or texture.

References:

- [1 https://www.foodmanufacture.co.uk/Article/2024/03/14/consumer-demand-for-healthy-snacks-on-the-rise/](https://www.foodmanufacture.co.uk/Article/2024/03/14/consumer-demand-for-healthy-snacks-on-the-rise/)
- [2 https://www.thegrocer.co.uk/analysis-and-features/from-soaring-sales-to-growing-cynicism-how-immune-supporting-claims-are-shaping-food-and-drink-ncpd/654622.article](https://www.thegrocer.co.uk/analysis-and-features/from-soaring-sales-to-growing-cynicism-how-immune-supporting-claims-are-shaping-food-and-drink-ncpd/654622.article)
- [3 https://today.tamu.edu/2023/11/09/the-texture-of-food-determines-whether-people-go-back-for-seconds/](https://today.tamu.edu/2023/11/09/the-texture-of-food-determines-whether-people-go-back-for-seconds/)
- [4 https://www.foodnavigator.com/Article/2023/02/15/the-rise-and-rise-of-healthy-indulgence-in-tough-times-food-offers-opportunity-for-delicious-escapism](https://www.foodnavigator.com/Article/2023/02/15/the-rise-and-rise-of-healthy-indulgence-in-tough-times-food-offers-opportunity-for-delicious-escapism)
- [5 https://iopscience.iop.org/article/10.1088/1755-1315/792/1/012017/pdf#:~:text=Effect%20of%20emulsifier%20on%20Emulsification,a%20certain%20period%20of%20time.](https://iopscience.iop.org/article/10.1088/1755-1315/792/1/012017/pdf#:~:text=Effect%20of%20emulsifier%20on%20Emulsification,a%20certain%20period%20of%20time.)

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