



Upgrading convenience products with functional label-friendly starches

Convenience is a major driver in the food industry. A growing number of consumers depend on meal kits, grab-and-go entrees and ready meals to get food on the table fast. At the same time, many of those same consumers crave products made with simple and recognizable ingredients.

Thanks to innovations in native starches, it's easier for formulators to deliver upgraded convenience products that meet the needs of today's more discerning consumers.

90% of consumers buy packaged frozen hot meal items for heating or microwaving at home.¹

66% of Americans seek product claims which avoid negatively perceived ingredients.²

Convenience foods are often produced under challenging processing conditions and have demanding shelf-life and storage needs. "In the past, modified starches played a great role in solving a lot of problems in the food system," explains Cargill Senior Technical Services Manager Shiva Elayadeth. With more consumers interested in simpler ingredients, Cargill experts have been developing more label-friendly starches. "The greatest opportunity is re-looking at native starches," says Elayadeth.

Native starches, typically derived from corn, cassava, potato, rice and tapioca, can be physically adapted to help them handle processing heat and moisture. While they may not yet have all the functional benefits of traditional modified starches, Cargill experts have made significant progress in making them physically stronger so they are more versatile in food applications.

Label-friendly convenience foods

Elayadeth has had success using native starches in place of modified starches in convenience products. "We have been able to leverage native starches to really function more like a modified starch and withstand the freezing and thaw cycles that these products go through," he explains. For example, frozen convenience foods can form ice crystals which may degrade a product's texture when reheated in the microwave, oven or on a stovetop. For years, modified starches have been used to help sauces retain their moisture. "Now we are able to deliver a similar texture using potato and tapioca starches," he explains. These native starches have proven to be good solutions, giving products a pleasing mouthfeel and body.

Choosing a native starch

When choosing a starch ingredient for a convenience product, Elayadeth suggests starting with the consumer in mind: What taste experience are they looking for? What do they want to see, or not see, on the label? He then reviews the other ingredients in the product, the processing parameters and the product's final state (frozen, refrigerated or shelf-stable). "Which starch is going to survive all of these processes and at the same time deliver to the consumer the experience they are looking for?"

READY MEALS ON THE RISE³

\$194 billion

The global ready meals market was valued at \$194 billion (USD) in 2016.

13.6%

The global market is expected to grow 13.6% by 2023.

52%

Frozen meals comprise 52% of the ready meals segment.

SimPure™

Simple ingredients. Pure functionality.™

The Cargill SimPure™ portfolio

The Cargill SimPure™ portfolio of functional, label-friendly starches helps formulators meet consumers' desire for simple and recognizable ingredients. These plant-derived ingredients offer food and beverage manufacturers solutions that deliver superior functionality, such as greater process tolerance and enhanced shelf life and stability.

SimPure™ 99500 is a label-friendly, cook-up potato starch that provides high viscosity and excellent water binding in low-temperature, low-shear processing. It is ideal for meat and meat analog applications, as well as soups and sauces.

SimPure™ 99530 is a potato-based, cook-up starch that offers exceptional dispersibility, strong water binding and high viscosity. It delivers a smooth texture to neutral pH applications such as dry-mix soups, sauces and pudding mixes.

SimPure™ 99560 is specifically designed for frozen-ready meals and other convenience products. This starch system can replace modified starches without compromising taste, texture or appearance.

SimPure™ 99570/99571 provide instant binding for cold-prepared soups and sauces. These label-friendly instant starches offer instant water binding for up-front viscosity and appealing texture upon adding water.



Contact Cargill's formulation and technical experts for help finding the right label-friendly starch solution for your specific application.

Learn more about the Cargill SimPure portfolio.

¹ Packaged Facts. "Frozen Foods in the U.S.: Hot Meals, Sides, and Snacks," 6th Edition.

² SHS FoodThink, Snacker Nation, 2015.

³ Mordor Intelligence. Global Ready Meals Market – Growth, Trends, and Forecasts (2018-2023)
<https://www.mordorintelligence.com/industry-reports/ready-meals-market>