

Next-Generation Rice Flour

The majority of baked goods and snack foods in the U.S. have historically been based on wheat flour, an ingredient that a growing number of consumers avoid because of its gluten content. Gluten is not actually present in wheat flour and some other grains, rather, gluten is an elastic substance that forms when two proteins—glutenin and gliadin—in the grains, are mixed with moisture. These two proteins bind

water and connect and cross-connect to form elastic strands of gluten. A new line of next-generation rice flours from AKFP has been designed to mimic these properties.

Gluten has long been considered essential in baked goods and snacks foods, because it brings many desirable attributes to the finished product, including structure, elasticity and stretch to batters and doughs. It also helps trap air bubbles developed by leavening agents.

In the early years of gluten-free baking, formulators relied on complex ingredient systems composed of gluten-free flours and starches, along with varied hydrocolloids

including fibers, gums and proteins, to replace wheat flour. Replacing one ingredient with typically around five is not attractive to today's label-reading consumers who are looking for short and simple ingredient lists.

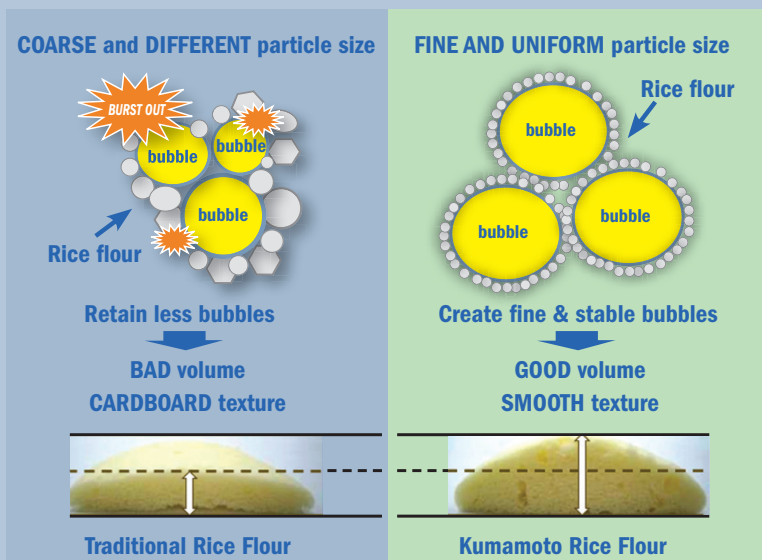
"Many of these products made with complex gluten-free ingredient systems were mediocre at best," says Mel Festejo, COO at AKFP. "We knew there had to be a better solution."

The company has been an active player in the gluten-free market since 2010, when it launched its proprietary Premium Cassava Flour. It has become an increasingly successful, unique gluten-free ingredient that has proven its versatility in baked goods and



Smart Solution: One Ingredient for Improved Volume and Texture

In order to attain desirable volume and texture in gluten-free baked goods and snack foods, formulators have historically relied on multiple ingredients to replace the function of wheat flour. Rice flour has long been part of the system, but usually with help from other ingredients. Kumamoto's special milling process yields a super-fine rice granulation that allows for 90% of the flour particles to be sized at 70 µm or less. The particle size distribution is tighter than other rice flours, providing the benefit of higher rise and a more uniform consistency in crumb structure, even when used as the sole flour or starch ingredient. Kumamoto Premium Rice Flours can be used in baked goods and snack foods, providing a smart approach to volume and texture challenges in gluten-free formulations.



snack foods. AKFP now brings to North America a new line of premium ingredients: superfine white and brown rice flours from Kumamoto Flour Milling Co. Ltd.

Using a proprietary milling process, Kumamoto distinguishes its white and brown rice flours from others in the market. These rice flours are processed from short-grain rice varieties, using exclusively whole rice grains and no broken rice kernels. This helps to enable the rice flours to attain the water absorption, viscosity and related functional characteristics necessary in gluten-free baking. Moreover, the starches in short-grain rice varieties have a higher amylopectin content relative to medium- and long-grain rice varieties. This translates to improved shelf life and freeze/



thaw stability in baked goods versus medium- and long-grain rice flours.

These next-generation rice flours also contribute to a soft texture in gluten-free baked products. This is true even in very delicate products, such as baked donuts, sponge cakes and sandwich bread.

“Extensive research and tests have shown that when Kumamoto Premium Rice Flours are used exclusively as the only flour or starch ingredient in a gluten-free batter or dough mix, they outperform other ‘superfine’ flours in terms of the rise in breads and cakes, the softness of the texture and in the consistency of the crumb structure,” says Mr. Festejo.

Smart Solution: Simplify Gluten-Free Pancakes

Many gluten-free pancake mixes and frozen pancakes currently in the market rely on complex ingredient systems, with some of the components contributing to off-flavors, gritty textures and undesirable cooked surfaces. Kumamoto Premium Rice Flours can be used as the sole flour in gluten-free pancakes, providing a smart approach to delivering on flavor, mouthfeel and visual appeal.

Simple Recipe:

1 cup Kumamoto Premium White Rice Flour
3 tsp. baking powder
1 tbsp. sugar
½ cup milk
1 egg
2 tbsp. vegetable oil
½ tsp. salt

