

Whey Replacers Benefit Baked Goods

Despite recent fascination with low-carb fare, consumers continue to enjoy baked goods at nearly every meal, whether as an ingredient, side dish, main course or dessert.

Formulating dairy-free or kosher baked goods can be difficult because of one ingredient: whey, a dairy product that supplies important attributes to many bakery items. In response, Flavor Dynamics, Inc. has created an innovative line of natural whey replacers that provides whey's functional and flavor characteristics in dough and batter without the potential problems associated with dairy-sourced ingredients.

Whey lends unique texture and flavor qualities to a wide variety of baked goods but, as a dairy-derived ingredient, it cannot be included in allergen-free or kosher products. Flavor Dynamics' line of whey replacers, made from nondairy protein, fiber and other ingredients, allows the complete removal of whey from bakery formulations without compromising quality. The replacers substitute for whey on a 1:1 basis and mimic whey's natural dough-tenderizing properties through a series of enzymatic reactions that break down a dough's protein fibers. In breads, this produces a tender texture with a crunchy crust, while maintaining loaf volume.

The whey replacers were developed with numerous applications in mind, including stuffed breads, breadsticks, biscuits, pie crusts,



pastries and even cakes. "Our original product, Natural Whey Replacer, has a milky top note that, like whey itself, contributes to - but does not characterize - the flavor of the end product," says Ken Kraut, flavor lab manager. "We have also created a variety of products that provide the functional benefits of the original whey replacer while enhancing the taste of baked goods with characterizing flavor profiles, such as rye bread, sourdough and butter, macadamia butter, and cinnamon blueberry crumble, which is used primarily in pastries."

The flavor-enhanced products rely on the latest technologies to deliver accurate flavor profiles. For example, Natural Whey Replacer (bread type) is produced by starting with a complex process that simulates the Maillard reaction, followed by fermentation and browning to realistically impart bread's natural yeast and brown notes. This replacer

can benefit a wide variety of loaf breads by bolstering many of the fresh-baked flavor characteristics that can diminish over time.

"The baking process is an inherently hostile environment for flavors, where lighter volatiles are easily lost," adds Kraut. "We developed the Natural Whey Replacer line using a variety of techniques -including special precursor approaches, the use of specific solvent systems and microencapsulation - that enable these products to withstand baking, microwave heating and diverse storage conditions." ■

Flavor Dynamics, Inc.
 640 Montrose Avenue
 South Plainfield, NJ 07080
 Phone: 888/271-8424
 Fax: 908/822-8547
 Website: www.flavordynamics.com
 E-mail: customercare@flavordynamics.com