R&D APPLICATIONS/FLAVOR B

Lavor Dits add fortification, value and distinction

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Flavor bits help bakers add healthful ingredients or distinguishing characteristics. More bakers are turning to custom-made bits to achieve flavor goals.

by Erin Rigik, assistant editor

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dd pizazz and eye appeal to products with flavor bits' vibrant colors, unique shapes, lasting aroma and tasty flavor combinations. Popular, custom-created bits can help manufacturers add value to products and simultaneously distinguish one company's products from the competition, creating equity within the brand. Bits also can help bakers overcome the otherwise difficult obstacles that come with adding certain flavors or components to baked products.

Bread, for example, is one product not easily flavored because of its gluten structure. Just adding dried garlic or onion to the dough does not work, because the gluten encapsulates the flavor, so the flavor cannot escape, says James Curry, PhD and director of product development, Custom Ingredients, New Braunfels, Texas. He blames the problem on a lack of fresh volatiles in the dried inclusion. The solution, he says, is adding a flavor bit made from fresh ingredients that has not been heat treated, so the volatile components are not destroyed. The bit protects the fresh flavor, and this allows the flavor and aroma to fill the bread.

"With savory flavors, the key is to use

fresh vegetable concentrates because you have a lot of volatile compounds in herbs and also in vegetables. In the past people have tried to use onion powder, garlic powder, and you get some background earthiness, but you do not get a good flavor profile because you've lost a lot of key components," Curry says. "The secret to flavoring bread is to use herb and vegetable concentrate." ()

The concentrate can be added to bits that can then be added to the product. "The thing about bits is you can put them in bread and these bits or flakes will [provide] a real nice concentrated flavor impact," he adds.

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Add flavor bits to tortillas during the last 30 seconds of the mix cycle to avoid breakage.

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Trends

Consumers today are demanding organic, all-natural flavor bits with an emphasis on natural flavors and colors. In the past year, the trend toward trans fat-free and betterfor-you products, as well as the call for increased product creativity, has skyrocketed. Today's most popular shapes include hearts, stars, cups and movie characters.

Adding movie character-shaped bits is one way manufactuers can update products, making them trendier as well as more marketable.

Gertrude Hawk Chocolates, Dunmore, Pa., has found success creating flavor bits in the shape of characters from the movies *Shrek* and *Toy Story*. Currently, the company is planning to launch a product featuring minature shapes of the Care Bears, which are celebrating their 25th anniversary this year, says Shawn Sullivan, senior vice president, Gertrude Hawk Ingredients, division of Gertrude Hawk Chocolates.

Creating new flavor combinations or staying abreast of the most popular taste sensations is another way to increase sales. Today's popular flavors include cinnamon, cinnamon apple, maple, blueberry, chocolate, sundriedtomato basil, fresh herb garlic, spinach pesto and chocolate peanut butter cup.

"The profile of peanut butter and chocolate enables the product to have a wide assortment of uses, and then also the [cup] shape shows well in the product," Sullivan says. He

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The secret to flavoring breads is using bits containing herbs and vegetable concentrate.

adds that shell-moulding technology allows for large varieties of moulded shapes, which are gaining popularity. In addition, some manufacturers say new flavor combinations also are drawing consumer attention.

Bakers also are purchasing bits that allow them to add healthful product claims on labels, a trend that has many manufacturers opting for custom-made flavor bits. Sullivan says 50 percent of

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Gertrude Hawk's business is proprietary driven. To keep up with the demand for healthful bits, Gertrude Hawk offers 100 percent kosher flavor bits, as it has since the company began producing ingredients 12 years ago, and it recently received organic certification for its organic bits, to meet the demands of consumers. "We thought it was important that we follow our customers," Sullivan says. Using healthful bits also allows manufacturers to display the heart healthy labels that attract consumers, providing manufacturers a value-added situation and an increased profit margin. Custom Ingredients' sundried tomato bits, for example, include a high level of lycopene, which bakers can note on the label.

Bit makers also can add calcium, Omega 3 fatty acids and fiber to bits,

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so bakers can add fortification to products in a protected form. Plant sterols also can be added to bits, allowing manufacturers to place a health claim from the FDA that states the product may reduce the risk of heart disease as part of a diet low in saturated fat, says Curry. When such healthful inclusions are added through bits, product flavor is not affected, Curry adds.

"When we add Omega 3 fatty acids to bits, we're able to encapsulate those so they don't become oxidized whereas if you just throw them into bread, sometimes you have a problem of them turning fishy," he says.

Some manufacturers say the only disadvantage to flavor bits is their cost, although bit makers argue the cost is worth the increased value and success of the product as a result of the bits.

"The bigest challenge I see in the industry are companies trying to look at everything only on cost. By doing this, they limit their own creativity and potential product success. In order for companies to launch potential break through products, they need to be willing to work closely with ingredient suppliers and their R&D teams. These partnerships will help create winning products for consumers," Sullivan says.

Best time to add

Some flavor bits can be designed for inclusion during the beginning of the baking process. When adding bits to bread, for example, the bits can be made dense enough to withstand the production process and thus can be added early. Then, they will soften during the proofing process, Curry says. Tortillas on the other hand, are chemically leavened products with a shorter proof process and quick baking times, so flavor bits should be added during the last 30 seconds of the mix cycle to avoid breakage. A bit sized for a loaf of bread could poke a hole in the belt of tortilla presses, so "you have to have smaller bits, which are more prone to being broken. If added in the beginning, they're going to break up so small you can't see them, so you want to add them at the very end," he adds.

Sullivan says their Bakeable cups, shell-moulded, chocolate-coated shapes

with filled centers, created for use in sweetgoods, are made to resist melting and handle the entire baking process.

In the future, manufacturers predict that the trend toward organic and natural ingredients will continue along with a call for heightened creativity. In addition, more companies will be producing equity shapes, as consumers hunt for healthful, upscale products.

When it comes to flavor bits, "our creativity is endless," Sullivan says.



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