Mapping Out New Territories for Texture

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INGREDIENTS

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Texture is being discovered. Or more precisely “rediscovered” by today’s food formulators. And on their voyages of exploration, these “Columbuses” are using more sophisticated—and disciplined—approaches to arrive at a better understanding of texture and how this attribute can be better “mapped out” in its expansion into new territories.

Over the years, much attention has been spent on the development of flavors and colors in product formulation, but texture seems to have been taken mostly for granted, perhaps even regarded as an afterthought. And yet texture is as important as flavor and color to the success of a product in the marketplace.

Many of today’s challenges—whether they be gluten-free formulating or the reduction of sugar or the balancing of fats—directly involve texture, as these products need to be developed without compromising that attribute. Texture, in that sense, is on equal terms with flavor and color. To develop products that will succeed in the marketplace requires that texture rises to the occasion.

Let’s now look at how some companies are approaching texture and the solutions they are bringing to the table.

The Role of Eggs in Texture
While eggs are known for providing protein and other nutrients, they also
provide important textural properties that can improve formulations such as baked desserts. Functionality videos from the American Egg Board, Park Ridge, Ill. (phone 847-296-7043, www.aeb.org), that explore this functionality aspect of the egg can be viewed on the FunctionalEgg.org website.

As the videos explain, it is the process of denaturation followed by coagulation that enables the proteins to entrap either air or moisture and impact the mouthfeel and texture of the finished product. When air is entrapped, a foam is formed—think of meringue or the springiness of a cupcake. When water is entrapped, a gel is formed, influencing the bite of a cheesecake or the dissolving of custard.

But it is not just the protein in eggs that impacts mouthfeel and texture. Egg lipids typically play an important role as well—being able to produce a more tender, softer crumb, or a creamy, smooth filling. (Exceptions are desserts based on egg white foam because fat mixed with egg white reduces foaming ability.)

Egg yolks are a choice emulsifier for creating baked desserts because in addition to emulsifying, they contribute rich flavor and color. “And in today’s back-to-basics, clean-ingredient-label, food-formulating environment, egg yolks appear on ingredient statements very simply: egg yolk,” noted a video. This gives egg yolks another benefit over other types of ingredients designed to replace them.

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