



Clean Labels, Commoditization and Cost Controls

Challenges and solutions for savory flavor formulations

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Consumers are reading labels more than ever and becoming increasingly suspicious of the food industry and science in general. Many really don't believe that the industry has the consumer's health in mind. Some consumers are even suspicious of the words "natural flavor" appearing on the label.

I have to admit—even I don't like seeing a short dissertation on an ingredient declaration. But what is "natural?" The US Food and Drug Administration has a definition of "natural flavor," but that doesn't apply to the non-flavor part of the product. Items such as hydrolyzed vegetable protein (HVP), monosodium glutamate (MSG) and autolyzed yeast extract (AYE) are commonly used in savory flavors, but many consumers wouldn't consider them natural. Yet, all have a reasonable claim to natural status. So far, other than the US Department of Agriculture's designation for "minimally processed" meat products, there have been limited attempts to define "all natural."

Often, food manufacturers refer to the guidelines published by Whole Foods, Inc. as a way to determine if the ingredient they are using falls into the all natural category.^{*} However, products that are "Whole Foods compliant" may contain HVP, polysorbate 80 and propylene glycol.

When presented with a brief that declares that the customer requires all natural, I usually go back to the account manager and have them find out how the customer is defining the term. Once I am clear what the customer is expecting, I can formulate based on their standards.

A word of caution: ingredients purchased from other vendors often have extra ingredients that the customer may not want. The choice is either to be very selective in what is purchased, or to produce ingredients internally. Raw materials that are "organic compliant" typically do not have ingredients that are objectionable. Savory flavor

reactions are a good way to control what goes into a flavor. Flavorists can even create their own reactants by enzymatic or fermentation processes.

Fighting Commoditization

Commoditization is a natural part of any specialized line of products. As soon as one company can manufacture the same (or nearly same) flavor, the product is on its way to commoditization. Flavor companies don't help themselves by accepting matching projects. These projects tend to be tedious for the flavor chemist, and rarely result in long-term new business. And, of course, the consolidation of food manufacturers, the major flavor company customers, provides food manufacturers greater clout in negotiating prices. Many companies actively try to reduce the number of flavors purchased to control inventory, and then shop around for companies to supply them at lower cost.

Make something unique, different, something the competitors haven't thought of. While they are imitating, you are creating.

Another trend is for the food ingredient suppliers to look for more lucrative niches. A number of the food ingredient commodity suppliers with flavor impact, such as HVPs, AYEs and seasoning blends, have engaged in value-adding, turning more generic ingredients into products that are more like flavors. Savory flavor companies need to work harder to differentiate themselves.

Solutions

Customization: This solution encompasses products formulated expressly for specific customers or processes. This is the opposite of commoditization. This is very effective when a flavor company partners with a customer. With confidentiality agreements, a flavor company can learn more about the product and process and talk directly to the product developers and make customized solutions.

Creating products that are harder to match: Proprietary reaction, fermentation and enzyme technology, when used in tandem (e.g. a fermentation product used

^{*}The list, its purpose and use are briefly described in a post on Whole Story (<http://blog.wholefoodsmarket.com>) by Joe Dickson, quality standards coordinator at Whole Foods Market: "One of the most simple and important tools we give our team members is a list of ingredients, each marked acceptable or unacceptable. This list covers most of the food ingredients on the market and represents significant research into where it's from, how it's made, and what our stance is. For every ingredient reviewed, we try to answer: 'Is this something that our shoppers would expect to find in a natural food?' Some ingredient reviews are very straightforward. Artificial colors are banned, as are artificial flavors and preservatives. Preservatives such as citric acid—which is naturally derived—are acceptable, whereas preservatives like BHA and BHT—which are very clearly synthetic—are banned."

as a reactant) are much more difficult to match compared to conventional offerings. Using essential oils, oleoresins, and other extracts make products more difficult to match than compounds of chemicals due to the more complicated GC traces.

Making partially reacted products tailored for a customer process: A good example of this solution is a partially reacted flavor that is incorporated in a bread baker's dough, which will complete its reaction in the customer's ovens. This will only work if the flavor house works with the customer to design the flavor to perform under the precise process of the customer.

Dare to be different: You are being paid to use your creative abilities. Make something unique, different, something the competitors haven't thought of. While they are imitating, you are creating.

Niche marketing: Can you become a big fish in a small pool?

Justify every chemical and ingredient in the flavor. At some point, extra chemicals no longer impart a rounded flavor profile or a special nuance; they just muddy the finished flavor profile and add cost.

In addition to these strategies, of course, there is the strategy of patented and proprietary new processed ingredients, flavor chemicals, and delivery systems that offer a competitive advantage. Invest in R&D and technology to make your products ahead of the competition.

Controlling Costs through Formulation

The most important aspect of a flavor house's business is knowing its customer's needs. Some like sophisticated, nuanced products; others are more price-sensitive. While a flavorist may pride themselves on their artistic creations, customers also want the most bang for their buck. Therefore, one must know the customer and focus all efforts accordingly.

Some ideas for on how to reduce costs while formulating:

1. Formulate for the end product, not the blotter. A roasted beef nuance that is readily appreciated on a blotter may not be noticed in the finished brown gravy.
2. Determine the customer's labeling requirements. Does it have to be natural? Organic compliant?
3. Understand how your company costs its products. Does creating a separate premix incur extra allocation of fixed costs and labor that would be avoided if the chemicals were incorporated into the main formula? Is a "2X" version less expensive for the customer on a cost-in-use basis due to the fact that your company allocates on the basis of units of weight?

4. Check to see if ingredients you make yourself can't be more economically purchased. For instance, is it better to create your own buttery flavor notes for a savory flavor, or to purchase starter distillate?
5. Does the customer understand cost-in-use? If you formulated a very strong flavor that is expensive per pound but less expensive as used, will your customer appreciate that? Or will they focus on the sticker shock?
6. Look at the cost contribution of the various ingredients in your flavor. What is adding the most cost? Can it be reduced without affecting the profile? Can an expensive ingredient be replaced by one or more less expensive options? Is a reaction more economical, or should you use a chemical compound?
7. Justify every chemical and ingredient in the flavor. The more ingredients, the more the cost—and the more complicated to manufacture. At some point, extra chemicals no longer impart a rounded flavor profile or a special nuance; they just muddy the finished flavor profile and add cost.

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