



Executive Insights

How the Clean-Label Megatrend Is Changing the Food Ingredients Landscape

The maker of Butterfinger recently overhauled its signature candy bar's recipe, removing the synthetic antioxidant TBHQ from the ingredient list. Campbell's has removed all artificial flavors and colors from its products, including the iconic condensed tomato and chicken noodle soups. And Panera has eliminated all artificial colors, sweeteners, flavors and preservatives from its menu. Why are these brands retooling some of their most popular foods and beverages?

As consumers have become increasingly educated about the deleterious effects of processed, unnatural foods and artificial ingredients, they're challenging companies to provide more transparency about what is actually in their food (see Figure 1). In fact, according to a recent L.E.K. Consulting survey, more than 60% of consumers prefer products with "no artificial ingredients" and "no preservatives" and that are "all natural" (see Figure 2). And as with any consumer-driven trend, manufacturers and retailers are trying to get ahead of the curve by reformulating recipes with new, cleaner food ingredients.

And get ahead they must. Consumers have shown no sign of backing down, and their scrutiny on labels and "artificial"

ingredients is driving food and ingredient suppliers to reformulate and develop new, "cleaner" solutions as the demand landscape evolves. In fact, valuations have been on the rise as interest in the space has picked up dramatically over the past few years. In this *Executive Insights*, we discuss some of the food ingredients on the leading edge of the clean-label trend and examine how manufacturers and investors are using them to capitalize on a trend that shows no sign of slowing down.

A shift in food ingredients

New technology and food science are helping food ingredient manufacturers provide innovative solutions to meet the consumer-fueled clean-label megatrend. From hunting for the "holy grail" of clean-label bakery mold inhibitors to freeze-drying fruit and vegetables to using the stevia plant as a natural sweetener, they are employing inventive ways to make delicious food without sacrificing quality for health claims.

1. Hydrocolloids: gums and pectins

Hydrocolloids are increasingly being used to provide texture and particle suspension while helping products maintain a clean label, creating steady growth in the global hydrocolloids market. One type of hydrocolloid in particular — gums — has become quite popular with food manufacturers and consumer packaged goods (CPG) companies for its thickening and stabilizing properties. However, while gums have been around for quite some time, there has been a shift toward those gums that are acceptable on the clean-label spectrum.

How the Clean-Label Megatrend Is Changing the Food Ingredients Landscape was written by **Rob Wilson** and **Peter Walter**, Managing Directors in L.E.K. Consulting's Food & Beverage practice. Rob is based in Chicago, and Peter is based in New York.

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Figure 1
Manufacturers and foodservice providers go 'clean label'

Food manufacturer announcements



"Removing artificial colors and flavors in all products by 2018"



"Removing artificial colors and flavors from all CPG brands"



"Removing artificial colors and flavors in all products by 2018"



"Reformulating 6,500+ products since the last decade for improved health and nutrition"

Restaurant announcements



"Eliminating all artificial colors, sweeteners, flavors and preservatives by 2016"



"No artificial ingredients, minimally processed; no nitrates added"

Source: Company websites, Food Business News, Food Navigator, Forbes, The Wall Street Journal, Natural Products Insider, Nielsen, L.E.K. analysis

For instance, carrageenan gum is used as a thickener and emulsifier to improve the texture of ice cream, yogurt, cottage cheese, soy milk and other processed foods. Its use has become controversial, though, as animal research indicates that it causes cancer in its non-food-grade form. As a result, manufacturers are substituting carrageenan with "cleaner" gums, such as gellan.

Other gums that are aiding the clean-label trend are acacia gum, due to its low sugar content, and guar gum, which packs a hefty dose of fiber. And while the name may give consumers pause, xanthan gum is a safe and versatile stabilizer and thickener produced by fermenting plant-derived sugars.

Pectin, which is used primarily as a gelling agent in jellies and jams, is another type of hydrocolloid that is riding the clean-label trend. Its growth outlook is positive as it gains popularity in other applications.

2. Natural mold inhibitors

The bakery market is far from immune to the clean-label trend, so it's no surprise that clean-label bakery is the holy grail. For instance, one ingredient — calcium propionate — does a great job at preserving freshness in bakery products. While finding an alternative has been challenging, bakery CPG companies have been working on developing clean-label bakery products.

One example is J&K Ingredients' Bred-Mate and Cake-Mate. The mold inhibitors used in these products employ naturally fermented sorbic acid to keep cakes and bread fresh. Another formulator, Corbion, replaced calcium propionate with its natural mold-inhibitor solution, Verdad MP100 — a combination of

vinegar and natural flavors that matches the mold-inhibiting functionality and neutral flavor of calcium propionate. The jury is still out, though: Corbion reports that consumers were equally split on their preference for breads containing MP100 and calcium propionate during taste-testing.

3. Stevia

As consumer preferences continue to evolve toward clean label, so does the hunt for alternatives to sugar. To succeed in the marketplace, sugar alternatives must deliver taste, natural purity and value (see Figure 3). While there are a number of all-natural sweeteners on the market — from allulose to monk fruit — stevia is one that delivers on those three key criteria.

Derived from stevia plants — stevia is gaining in popularity given its affordability, improving flavor profile, lack of any health or safety concerns, and advancements in stevia technology that could lead to explosive growth. And it can be found in numerous food and beverage products ranging from soda to yogurt, either alone or in combination with other sweeteners such as Splenda or cane sugar.

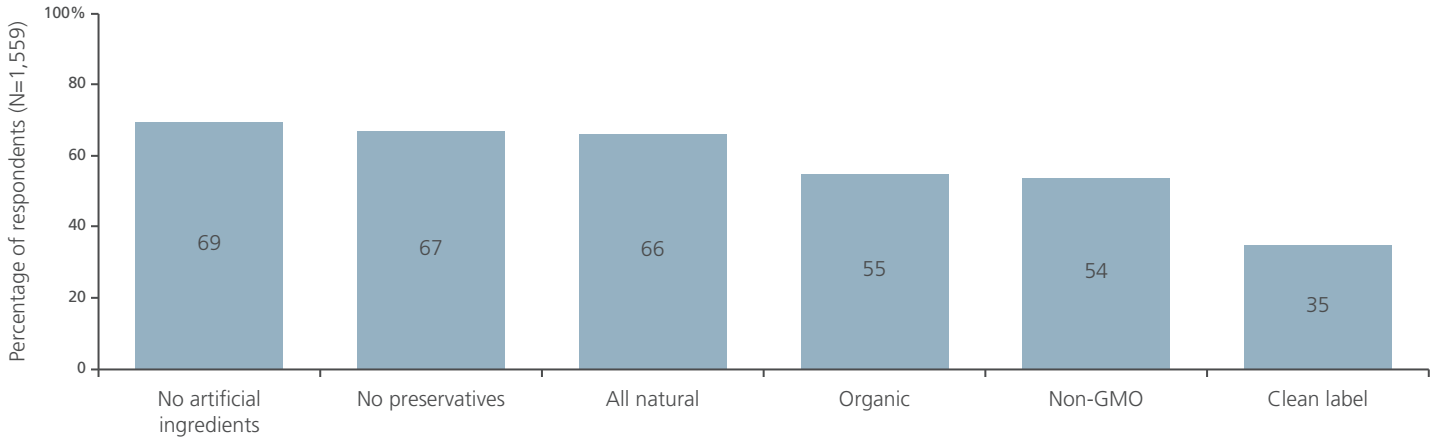
4. Food enzymes

As you read this, enzymes are at work managing every biochemical reaction in your body. And thanks to science, enzymes play a vital role in our food, from bread to dairy products to fruit juices, in order to improve texture, visual appeal, shelf life and healthiness.

One example of enzymes at work is lactose-free milk. During this process, the manufacturer adds small amounts of the enzyme

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Figure 2
Percentage of US consumers purchasing 'frequently or always' based on food claim (2018)



Note: Question: How frequently has your household purchased food with the following attributes or claims over the past 12 months when they were available?
Source: L.E.K. Consumer Survey and analysis

lactase to the milk, which converts the lactose to galactose and glucose. As a result, the lactose-intolerant consumer does not need to produce the lactase enzyme to digest the milk. Instead, the intestinal tract is able to absorb the smaller sugars — galactose and glucose — directly into the bloodstream. Furthermore, because enzymes are not present in the end product, it contributes to the clean label of the product.

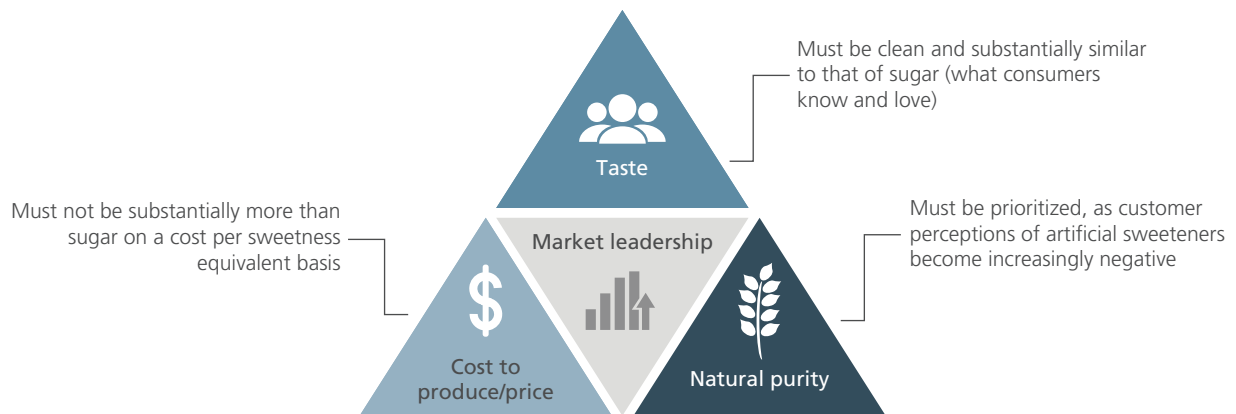
Just as with gums, food enzyme use has received a tremendous boost from the clean-label trend. The food enzymes market is

expected to grow at around 7-8% per year, fueled not only by cleaner eating but by demand for premium and healthy foods such as gluten-free bread and increasing penetration of enzymes in food processing.

5. Fruit and vegetable pieces and powders

Eating the federally recommended amounts of fruits and vegetables may become easier for consumers due to food technology that's aligned with the clean-label trend. Processed fruit and vegetable pieces and powders give food and beverages

Figure 3
Success factors for sugar alternatives



Source: L.E.K. research and analysis

Figure 4
Fruits and vegetable pieces and powders



Source: L.E.K. research and analysis

the taste and feel of fruits and vegetables as well as provide attributes such as sweetness and color. They come in myriad forms (e.g., crisps, granules, flakes) and undergo a wide range of manufacturing techniques (see Figure 4) depending on the product, cost and desired outcome.

So why are dried fruit and veggie pieces and powders expected to increase in popularity? Depending on the manufacturing method, the addition of processed fruits and vegetables does not alter the clean label of the food to which they are being added. They also have many health benefits, as they fortify food and beverages with vitamins, minerals and antioxidants. Overall, they contribute to a “health and wellness” lifestyle. Moreover, regulation changes, particularly in the U.S., are expected to add to growth as some ingredients will have to be substituted with fruits when manufacturers will be required to call out added sugars.

What’s next?

Whether freeze-drying fruit or creating clean bakery items, the food ingredient industry is experiencing an exciting period of growth and transformation thanks to the clean-label megatrend. This evolving space offers big opportunity for ingredient companies and investors that can capitalize on a trend that shows no signs of slowing down.

For food ingredient companies, being aware of the latest clean-label developments — and evolving as a result — is key to success and, ultimately, survival. And for investors, deals are abundant. Those in private equity with the best grasp of where to position themselves to play in the ingredients space will stand to profit the most. In a category where valuations have increased as interest in the space has picked up dramatically over the past few years, the time to join the clean-label ingredients trend is now.

About the Authors



Rob Wilson is a Managing Director and Partner in L.E.K. Consulting's Chicago office. He specializes in the Consumer Products and Retail practices, with a specific focus on the food and beverage sector. Rob advises clients on a range of critical strategic business issues, including growth strategy, price pack architecture strategy, trade spend optimization, M&A support, profitability enhancement and organizational transformation.



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