



Bell Flavors & Fragrances
WHITE PAPER

THE NEW MEANING OF 'CLEAN LABEL' FLAVORS AND INGREDIENTS

Ingredients In This White Paper: Just Clean Data



**Strategies for Companies in the Food and
Beverage Industry to Meet Consumer Demand
for Clean Label Ingredients and Authentic
Product Claims**

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THE NEW MEANING OF 'CLEAN LABEL' FLAVORS AND INGREDIENTS



It's time for the food and beverage industry to come 'clean' about product ingredient labels. Over the past few years, consumers have shown strong demand for products that are made from natural and minimally processed ingredients without the use of artificial preservatives, colors, and flavors. In 2023, more than half of American consumers reported seeking out natural, less processed foods and beverages.¹

Manufacturers and consumer packaged goods (CPGs) brands cater to these demands by offering products featuring transparent label information and product claims in a growing market. According to analysts at Market Data Forecast, clean label ingredients such as natural colors and flavors, starches and sweeteners, fruit and vegetable ingredients, flours, and others will increase in sales from \$38.8 billion in 2021 to \$64.1 billion in 2026 at a compound annual growth rate of 6.8 percent.²

While these numbers indicate a clear economic trend behind clean label products, certain ambiguities remain. The main caveat: The term 'clean label' is, according to the Institute of Food Technology (IFT), "not a scientific term. Rather, it is a consumer term that has been broadly accepted by the food industry, consumers, academics, and even regulatory agencies."³ And although consumers are driving this trend, they often lack the necessary insights to identify clean label products. In fact, 47 percent of U.S. consumers find it confusing to know which ingredients are good or bad for their health.⁴

With that said, it will be paramount for manufacturers to adopt clear language and approachable claims around ingredients, processes, and technologies. This white paper identifies the changing definition of 'clean label' from a consumer perspective while charting best practice examples from leading manufacturers. Based on these insights, Bell provides strategies for auditing ingredient lists and replacing 'red flag' chemicals and flavors with clean alternatives that don't compromise delicious flavor and product quality as the clean label trend accelerates.

Consumers Are Taking Action

56% of global consumers actively look for healthy ingredients in foods and beverages.

43% of consumers closely read nutrition labels on food and beverages.⁵

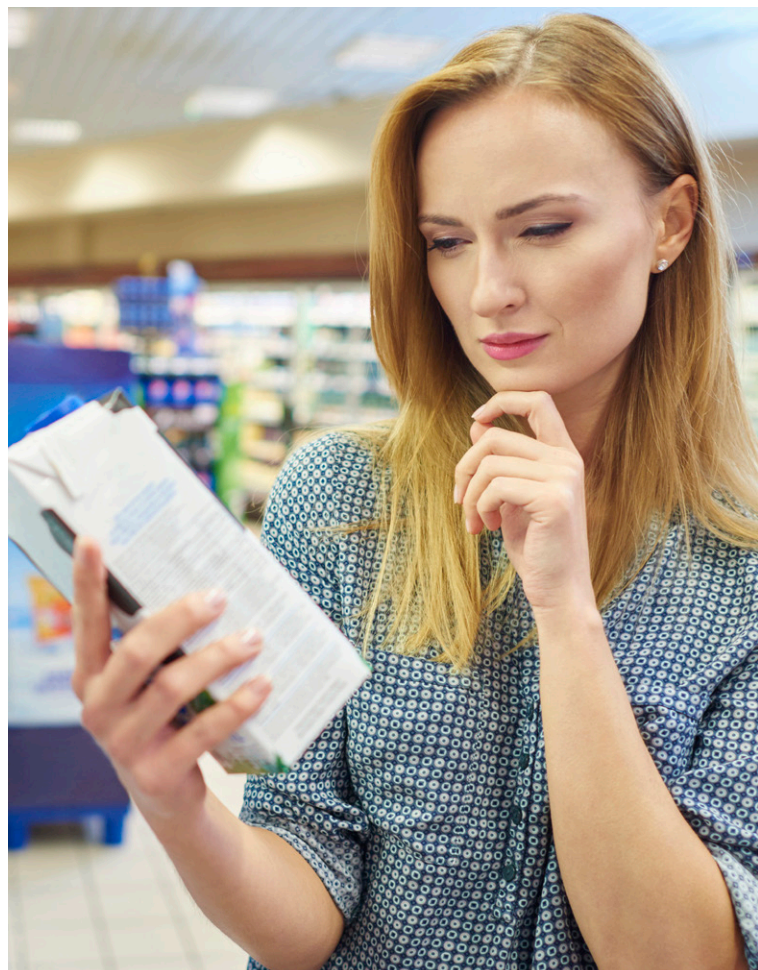
1: <https://www.futuremarketinsights.com/reports/clean-label-flavors-market> 2: Market Data Forecast, "Clean Label Ingredient Market - Growth, Trends, Covid-19 Impact, and Forecast (2021-2026)", 2021. 3: <https://www.ift.org/news-and-publications/blog/2018/november/what-is-clean-label> 4: Mintel, Kantar Profiles, October 2022. 5: Euromonitor International, Voice of the Consumer: Lifestyle Survey, 2022.

1 CONSUMER TRENDS: EXPECTATIONS TOWARDS 'CLEAN LABEL' PRODUCTS

Consumer interest in clean label foods and beverages is at an all-time high. In the United States, 64 percent of adults are looking to choose foods made from clean ingredients,⁶ while 20 percent regularly purchase foods and beverages advertised on the label as having clean ingredients.⁷ In recent years, clean label concerns among consumers have been driven by two factors:

First, the experience of the Covid-19 pandemic has left consumers with stronger priorities around personal health, extending to dietary choices and grocery purchases. According to Innova Market Insights, a total of 32 percent of U.S. consumers now strongly associate their food choices with 'naturalness' and 'transparency'; a notable increase from only 21 percent in 2019.⁸

Second, consumer mindsets have been affected by negative reports on the health risks posed by ultra-processed foods (obesity, diabetes, cancer, etc.). Still, these highly processed foods continue to account for anywhere between 50 to 60 percent of energy in the diet of US, Canadian, and British consumers.⁹ As a result of this increased sensitivity – and growing concerns about 'forever chemicals' – more than 55 percent of consumers actively want to eat less processed foods and are paying more attention to label information.¹⁰



CLEAN LABEL

Noun

Clean label products are made with as few ingredients as possible, left in their natural state without chemical processing and the addition of artificial and synthetic agents such as colors, preservatives, or flavors. Ideally, 'clean' ingredient lists are verified by certifications such as 'non-GMO' and 'organic' as well as transparent disclosure of ethical sourcing and health benefits.

THE NEW DEFINITION OF CLEAN LABEL

In the process of these shifts, the definition of 'clean label' products has expanded. Whereas the definition used to denote the mere ingredients in products, the meaning now extends all the way into the realm of lifestyle and functional health. It's important to keep in mind that there is no single definition of this consumer-driven concept.¹¹ But when consumers seek out clean label products today, they expect a combination of the following three factors:



2. NATURAL, MINIMALLY PROCESSED INGREDIENTS

The concept of 'natural' ingredients reigns supreme in clean label purchase decisions. Today, 39 percent of global consumers regularly shop for foods and beverages labeled as 'natural'.¹² Looking deeper into ingredient lists, 48 percent of worldwide consumers seek products featuring natural flavors, 40 percent want natural preservatives, and 41 percent prefer natural sweeteners when making a purchase.¹³ The antithesis to these label claims: highly processed ingredients, marked by chemical and technical nomenclature on labels, have caused major backlash among consumers. This is especially true in the plant-based meat alternatives (PBMA) market, with 30 percent of flexitarian consumers no longer purchasing the category because of the perceived level of processing.¹⁴

1. FREE FROM CHEMICALS AND HARMFUL INGREDIENTS

When inspecting product ingredient labels, consumers look for problematic ingredient names that indicate the presence of chemicals and toxins. Over the past few years, 'chemicals' have emerged as the top food concern, identified by 48 percent of consumers in 2023, compared to only 15 percent in 2021. This number is significantly higher than the 22 percent worried about food-borne illness and bacteria.¹⁵ Consumers are also alarmed by the presence of flavor-enhancing substances such as hydrolyzed vegetable protein (HVP), autolyzed yeast extract (AYE) or monosodium glutamate (MSG). That's why product packaging now often calls out claims such as "made with only natural ingredients," and "free from artificial colors and flavors". From a health perspective, even 'natural' ingredients such as salt and sugar raise flags, with top concerns including total sugar content (35 percent of consumers), high sodium content (33 percent), and high calorie content (30 percent).¹⁶

3. CERTIFIED, FUNCTIONAL, AND ETHICAL

Today, the definition of clean label has evolved beyond mere lists of ingredients featured (and not featured) in products.¹⁷ Today's consumers demand transparency about a product's full impact, both socially and environmentally. Twenty-five percent of consumers expect products that are "better for the environment than other products" while 21 percent value products "made by an ethical/socially responsible brand."¹⁸ In response, a growing number of products prominently spotlight certification according to USDA Organic, Non-GMO Verified, Fair Trade Certified, and Certified B Corporation on packaging. Meanwhile, over half of U.S. shoppers (53 percent) demand health benefits from foods and beverages such as heart and immune support,¹⁹ and 30 percent equate required allergen information as well as transparent manufacturing practices.²⁰ In short, 'clean' products are expected to offer benefits not only for consumers but need to prove a positive impact on society and the environment. It's the full package, and all the info better be listed on the label.

6: International Food Information Council (IFIC), 'From Chemical-sounding to Clean: Consumer Perspectives on Food Ingredients', June 2021. 7: <https://www.ift.org/news-and-publications/food-technology-magazine/issues/2021/september/columns/ingredients-clean-label> 8: <https://www.innovamarketinsights.com/trends/feeding-consumer-demand-for-holistic-health/> 9: Mintel/Kantar Profiles, October 2022. 10: Euromonitor International, Voice of the Consumer: Lifestyle Survey, 2022. 11: <https://www.bevsource.com/news/clean-label-movement-how-whole-foods-setting-tone> 12: International Food Information Council (IFIC), Food and Health Survey, 2022. <https://foodinsight.org/2022-food-and-health-survey/> 13: International Food Information Council, Clean Ingredient Purchase Drivers, 2022. 14: Mintel, 'Plant-based Proteins' Report (US), 2023. 15: <https://blogs.edf.org/health/2022/09/14/consumers-continue-to-rate-chemicals-in-food-as-top-food-safety-concern/> 16: Mintel/Kantar Profiles, July 2022. 17: <https://www.ift.org/news-and-publications/food-technology-magazine/issues/2021/september/columns/ingredients-clean-label> 18: Kantar Profiles/Mintel, July 2022. 19: Kantar Profiles/Mintel, August 2022. 20: <https://www.grocerydiver.com/news/72-of-shoppers-say-transparency-matters-heres-what-grocers-can-do/618016/>

CONSUMER MINDSET: RISKS & AMBIGUITIES

The consumer-driven shift towards clean label products – and lack of public education on food safety – leaves certain ambiguities for manufacturers to navigate. A 2022 IFIC survey confirmed that 70 percent of consumers are unaware that the federal government is responsible for ensuring the safety of food additives such as sweeteners and flavors.²¹ Therefore, when shopping for groceries, **21 percent of consumers seek out clean label products to “avoid possible harmful effects of consuming chemical-sounding ingredients”.**²² The operative term here is ‘chemical-sounding’ because the presence of chemical nomenclature on ingredient labels does not automatically indicate ‘unclean’ products.

Case in point: **Only 7 percent of consumers regard allulose – a naturally occurring sugar derived from fermented corn – as “natural” when it appears on a product label, whereas monk fruit ranks at 27 percent.**²³ In a similar vein, consumers may view vitamin E as benign and healthy, but would not purchase a product listing the vitamin’s chemical name, “tocopherol”. Plus, the commonly used ‘liquid smoke’ ingredient is made using natural processes but remains widely regarded as ‘processed’ by consumers. With that said, manufacturers need to adopt clear language on labels and packaging to ensure success of their products in the marketplace, as illustrated in the next chapter.



THE CRACKDOWN: GLOBAL GOVERNMENT INITIATIVES

Across the globe, governments are cracking down on highly processed foods by mandating warning labels on product labels while rewarding clean label products by attaching ‘healthy’ callouts:

United States

The US Food and Drug Administration (FDA) released a new definition of ‘healthy’ on food labels in 2022, emphasizing health benefits of certain ingredients while warning against high levels of processing. In 2023, the FDA also issued “final guidance with voluntary targets for reducing sodium in commercially processed, packaged and prepared food over the next 2.5 years.”²⁴

Americas

The ‘octagon’ warning label issued by the Pan American Health Organization (PAHO) signals foods made with a high degree of processing, salt, sugar, and fat. The label is accepted in more than 30 countries and counting.

United Kingdom (UK)

In 2022, the UK government removed products labeled “high in saturated fat, salt and sugar” (HFSS) from prominent shelf positions at big-box retailers.

European Union (EU)

The EU is developing a nutrition scoring system to rank the nutritional value of foods and beverages, already widely used in countries such as Spain and France (Nutri-Score system), Italy (NutriInform), and Scandinavia (KeyHole).

21: <https://blogs.edf.org/health/2022/09/14/consumers-continue-to-rate-chemicals-in-food-as-top-food-safety-concern> 22: International Food Information Council, Understanding Clean Label Purchases, 2022. 23: Mintel, Sugar and Alternative Sweeteners US, 2022. 24: <https://www.fda.gov/food/food-additives-petitions/sodium-reduction>

2

MARKET TRENDS: CHARACTERISTICS OF SUCCESSFUL 'CLEAN LABEL' PRODUCTS

Nowadays, consumers have a plethora of choices in the clean label products category. According to Spoonshot, the food industry has seen a 32 percent increase in 'clean label' products from April 2021 to April 2022, with an additional 27 percent one-year growth through April 2023.²⁵ Surveys in the United States revealed that **93 percent of consumers have already purchased clean label foods at a grocery store, while 70 percent have done so at a mass merchandiser.**²⁶ This is a clear indication of permanent purchasing habits developing on a mainstream scale.



The great news from a manufacturer's perspective: Products with a clean label hold a higher value perception among consumers. Accordingly, 78 percent of consumers are willing to pay higher prices for foods with clean label information while 75 percent would pay a premium for products that offer functional health benefits.²⁷

But here's the bad news: The audience is increasingly critical towards label information and brands must actively earn consumer trust and loyalty. In the latest survey from the Food Industry Association (FMI), **55 percent of U.S. shoppers said they would buy a different product if the label was confusing, and 64 percent are willing to switch brands if a competitor offers more detailed product information.**²⁸ What's more, only 10 percent of consumers "completely trust" health claims on packaging while 30 percent "somewhat trust" these claims.²⁹



25: Spoonshot, Clean Label Will Be the Next Area of Focus For Plant-Based Food, 2023 26: <https://www.forbes.com/sites/forbesagencycouncil/2020/10/30/marketing-food-as-clean-should-end/> 27: <https://www.foodnavigator-usa.com/Article/2023/07/12/IFT-Preview-Consumers-will-pay-more-for-cleaner-and-natural-ingredient-labels> 28: <https://www.grocery-dive.com/news/72-of-shoppers-say-transparency-matters-heres-what-grocers-can-do/618016/> 29: Purdue University, Center for Food Demand Analysis and Sustainability, Which food labels do Americans Trust Most?, 2023. <https://www.purdue.edu/newsroom/releases/2023/Q2/food-survey-consumers-trust-and-value-product-labels.html>

WIN TRUST WITH 3 PRODUCT CHARACTERISTICS

With these concerns and trust issues in mind, products need to check a few crucial boxes. Here are the three main success factors gleaned from best-selling products on the market:



1. CONCISE LISTS OF UNDERSTANDABLE INGREDIENTS

The first rule of successful ingredient labels: the shorter, the better. According to Mintel, 56 percent consumers equate long ingredient lists with unhealthy products.³⁰ At the same time, food and beverage product label information must meet guidelines established by the Food and Drug Administration (FDA). The criteria tend to evolve over the years but show significant impact. After 'trans fat' was required to be declared on Nutrition Facts labels in 2006, trans fat was reduced by almost 80 percent in the food supply.³¹

Companies need to mind consumers' aversity to 'sciency' ingredient names: 49 percent of shoppers prioritized "plain English ingredient descriptions,"³² and 52 percent of health-conscious consumers say they "look for food with recognizable ingredients."³³



2. 'FREE FROM' CLAIMS AROUND ADDITIVES AND CHEMICALS



Companies are seeing success by calling out 'free from' claims on packaging. Current tastewise data suggests that the strongest growth categories of consumer interest are 'no artificial flavors' (up 253 percent year-over-year),

'chemical-free' (up 202 percent), and 'no additives' (up 142 percent).³⁴ Surveyed about foods listing artificial flavors, colors, and sweeteners, a strong 50 percent of consumers said they avoid such products most of the time.³⁵ The market has already shifted: Research published by the USDA also signals a more than three-fold increase in chicken products labeled "raised without antibiotics (RWA)" since 2012.³⁶

Consumers are also triggered by a growing list of 'unclean' chemical contaminants and additives, with 53 percent avoiding high fructose corn syrup alongside aspartame (50 percent), stevia (30 percent), and Bisphenol A (29 percent).³⁷ In 2022, the European Union altogether banned the use of pigment titanium dioxide (E171) as a food additive and the ingredient has been called out as a carcinogen by the United Nations International Agency for Research on Cancer.



3. PRODUCT CLAIMS AROUND NATURAL, ORGANIC, AND ETHICAL INGREDIENTS

The writing is on the package: Today, 62 percent of consumers pay more attention to food ingredient lists while 48 percent specifically shop for products listing 'natural' flavors.³⁸

CPG have been adding packaging language and icons for USDA Organic,



GMO-free, cruelty-free, climate-neutral and halal or kosher manufacturing processes. Attaining certification for these labels is worth the expenditure: 46 percent of UK consumers agreed that independent ethical certification programs are more trustworthy than those run by individual brands.³⁹ Providing this type of environmental, social, and governance (ESG) information makes the manufacturer appear more trustworthy: 37 percent view a manufacturer more transparent if the label has certifications and claims, and 26 percent welcome product sourcing details and callouts such as 'Fair Trade'.⁴⁰

Again, these claims can help justify higher price points. In the United States, consumers are already accustomed to paying more for 'natural' food claims, directly equated with 'healthier' foodstuffs.⁴¹ Plus, 28 percent of shoppers find sustainably sourced ingredients more appealing.⁴² Data from tastewise tracks food from 'clean sources' experiencing 164 percent year-over-year growth in summer of 2023.⁴³ Circling back on the backlash against sugar and artificial sweeteners, 57 percent of global consumers avoid sugar as part of weight management efforts,⁴⁴ while demand for natural sweeteners has grown by 48 percent since 2022.⁴⁵

30: Mintel, Condiments: Competitive Strategies and Market Opportunities US, 2022. 31: <https://www.fda.gov/food/food-labeling-nutrition/fdas-nutrition-initiatives> 32: <https://www.grocerydive.com/news/72-of-shoppers-say-transparency-matters-heres-what-grocers-can-do/618016/> 33: Kantar Profiles/Mintel, July 2022. 34: tastewise, Clean Label 35: International Food Information Council (IFIC), 'From Chemical-sounding to Clean: Consumer Perspectives on Food Ingredients', June 2021. 36: <https://www.ers.usda.gov/amber-waves/2022/march/consumers-interpretation-of-food-labels-with-production-claims-can-influence-purchases/> 37: Kantar Profiles/Mintel, October 2022. 38: International Food Information Council (IFIC), 'From Chemical-sounding to Clean: Consumer Perspectives on Food Ingredients', June 2021. 39: Kantar Profiles/Mintel, June 2021. 40: <https://www.grocerydive.com/news/72-of-shoppers-say-transparency-matters-heres-what-grocers-can-do/618016/> 41: Kuchler, F., Sweitzer, M., & Chelius, C. (2023). The prevalence of the "natural" claim on food product packaging (Report No. EB-35). U.S. Department of Agriculture, Economic Research Service. <https://doi.org/10.32747/2023.8023700.ers> 42: Kantar Profiles/Mintel, March 2022. 43: Tastewise, Clean Label Consumer Needs for Ethics, August 2023. 44: Euromonitor International, Voice of the Consumer: Health and Nutrition Survey, 2022. 45: Tastewise, Going Natural: The Health-Conscious Choice for Sweeteners, July 2023.

253% year-over-year consumer interest in products without artificial flavors

BUT IS IT NATURAL?

Latest research published by the USDA's Economic Research Service (ERS) found that claims such as "all natural," "100% natural," and "made with natural ingredients" are not specifically defined by USDA and FDA Industry Systems (FIS) regulations.⁴⁶ While these claims do require approval from the USDA and FIS, oversight is limited to ensuring the use of natural flavoring and minimal processing as well as the absence of artificial ingredients or colors. In the same vein, the label does not consider how the animal was raised. It also makes no provisions to prohibit the use of synthetic pesticides, genetically modified organisms, hormones or antibiotics in crop and livestock production.⁴⁷ The FDA has not established a regulatory definition or standards for the natural claim. With this in mind, it may be relatively easy for manufacturers to gain approval for 'natural' claims, thus putting their high value perception in question. Today, 89 percent of U.S. consumers believe that the natural label indicates better-than-standard animal welfare and 78 percent pay more for such products believing that the label represents better environmental stewardship in manufacturing.⁴⁸ A gray area to say the least.



46-48: Kuchler, F., Sweitzer, M., & Chelius, C. (2023). The prevalence of the "natural" claim on food product packaging (Report No. EB-35). U.S. Department of Agriculture, Economic Research Service. <https://doi.org/10.32747/2023.8023700.ers> 49: Tastewise, Clean Label Consumer Needs for Nutrition, August 2023.



SHOWCASE: MARKET PRODUCTS THAT GET 'CLEAN LABEL' RIGHT

RX BAR

Clean label pioneers The Chicago Bar company shook up the protein bars segment with their clean label product made with minimal ingredients. They attracted maximum attention and were purchased by cereal giants for \$600 million in 2017.

Clean Label Properties:

- Clean-label protein bars with a base of egg whites, fruit and nuts; containing no added sugar; and are dairy-, soy- and gluten-free
- Recognizable ingredients not just on small label but featured prominently on packaging, accompanied by 'No B.S.' claim



MY BACON

Cleaning up the plant-based meat alternative (PBMA) space, MyBacon addresses consumer distrust in long ingredient lists and the image of 'over-processed' foods on the market. Only six ingredients!

Clean Label Properties:

- 'Mushroom mycelium' labels as a single ingredient, alongside salt and 'natural flavors' for a short and concise ingredient list
- Features 'minimal ingredients' as package claim



MONIN

Flavored syrup specialists Monin market a line of 'Clean Label' products that deliver premium and authentic flavors, made with the highest-quality natural ingredients.

Clean Label Properties:

- Growing library of all natural flavors with more than 170 products



THE FROOT THIEF REAL FRUIT WHIPS

Available in a variety of flavors, The Fruit Thief delivers nine feet of real fruit snacks per package

Clean Label Properties:

- Made from list of short, recognizable ingredients plus claim of 'no added nasties'



LEVANA MEAL REPLACEMENT

Levana Nourishments market a new clean-label, plant-based meal replacement milkshake available in vanilla bean, mixed fruit, and cocoa-coffee.

Clean Label Properties:

- No sugar, gluten, nuts, and soy
- Labeled as non-GMO, NFC-certified, natural, and kosher



LUKER CHOCOLATE CHOCO OAT MILK 43%

The Columbia-based company offers a plant-based formula for chocolate made entirely without added sugar.

Clean Label Properties:

- No added sugar thanks to the use of erythritol and stevia
- Dairy-free formula



OPPORTUNITIES AND PITFALLS

Manufacturers have a lot to gain from offering clean label products, and risk losing sales and market share upon failing to meet audience expectations.

78%
of U.S. shoppers will pay higher prices for clean label products

55%
of U.S. shoppers would buy a different product if the label is confusing

64%
of U.S. shoppers are willing to switch brands if a competitor offers more detailed product information⁵⁰

50: <https://www.foodnavigator-usa.com/Article/2023/07/12/IFT-Preview-Consumers-will-pay-more-for-cleaner-and-natural-ingredient-labels>

FEELING INSPIRED?

Based on these best practice examples, the next chapters highlights actionable strategies to audit product labels and arrive at a 'clean' slate for your market success.

3

STRATEGY: FLAVORS AND TECHNOLOGIES FOR CLEAN LABEL PRODUCTS

The clean label movement has caused brands and manufacturers to reformulate existing products and prioritize 'clean' criteria in new R&D efforts. It's important to keep in mind that the concept of clean label is entirely consumer driven. Brands must remember that consumers prefer plain English ingredient names and try to avoid chemical or Latin names whenever legal mandates allow.⁵¹

With that said, certain chemicals and ingredients actually do present scientifically proven health risks – including long-time offenders such as Red 3 food coloring or relatively new culprits such as titanium dioxide. These are red flags for consumers, with 70 percent of shoppers across the globe welcoming more warning labels on foods and drinks to signal unhealthy ingredients.⁵²

In the process of defining a list of 'non-clean' ingredients, companies may find guidance in policies enforced by retail chains such as Whole Foods, stipulating a list of more than 70 ingredients not allowed for sale at stores (including MSG, bleached flour, and sorbates). As research has revealed, the policy enforced by Whole Foods nationwide renders more than 97 percent of beverages sold at Walmart 'unacceptable' for sale in their stores.⁵³ Other stores and franchises enforce different criteria – including the Go Clean Label™ initiative supported by Aldi, Kroger, Panera, and Trader Joes – eliminating their own set of ingredients.



THE NO NO LIST

The following list represents ingredients generally not considered 'clean label' across the food industry. *Feel free to build and verify your own list, using this as a starter:*

- | | |
|--|------------------------------------|
| 1. Azodicarbonamide (ADA) | 7. Caramel Color |
| 2. Artificial Colors | 8. High Fructose Corn Syrup (HFCS) |
| 3. Artificial Flavors | 9. Hydrogenated Oils |
| 4. Artificial Sweeteners | 10. L-Cysteine |
| 5. BHA (butylated hydroxyanisole) & BHT (butylated hydroxytoluene) | 11. Monosodium glutamate (MSG) |
| 6. Bromate | 12. Partially Hydrogenated Oils |
| | 13. Titanium Dioxide |

51: <https://www.grocerydive.com/news/72-of-shoppers-say-transparency-matters-heres-what-grocers-can-do/618016/>
53: <https://www.bevsource.com/news/clean-label-movement-how-whole-foods-setting-tone>

52: Mintel, Global Consumer Food and Drink, 2022.

4

BELL'S 5 STEPS TO CLEAN LABEL SOLUTIONS:



1. PERFORM YOUR PRODUCT LABEL AUDIT

Start with existing product labels and screen for ingredient names that are complicated, chemical-sounding, and generally associated with processed foods. Examples include artificial flavors, artificial colors, hydrogenated oils, sweeteners, and high fructose corn syrup. Perhaps it's time to get clean if 'sugar' is the first word on the list, as 35 percent of consumers name sugar content as a main concern; regardless of natural and added sugars.⁵⁴ Monitor current FDA recalls, health alerts, and credible news items around harmful chemicals. Set up news alerts around specific keywords and follow trade association guidelines around ingredients and claims. Most of all, make these evaluations regular fixtures in your workflow. For starters, refer to the "No No List" on the previous page for a 'banned' ingredient list for your label audit.

2. SWITCH TO CLEAN LABEL ALTERNATIVES

Now that you've identified 'problematic' ingredients, evaluate how clean label replacements can streamline your ingredient list. The possibilities keep growing: Instead of artificial preservatives such as EDTA and TBHQ, consider botanical extracts or Vitamin E. Texturizing agents like hydrocolloids can be replaced by native starch blends, while emulsifiers (polysorbate 80, lactylate) can be substituted by proteins extracted from legumes. Companies have also been implementing natural mold inhibitors like stevia, food enzymes, and sorbic acid. **See page 14 for clean alternatives from Bell Flavors & Fragrances.**

3. BOOST YOUR MESSAGE BY ADDING CLAIMS

Once you have formulated a concise and clean ingredient list, make a stronger case by adding health and nutrition claims to product packaging. In terms of consumer priorities, 'all natural' is the leading claim (34 percent), followed by 'no additives or preservatives' and 'meets daily nutritional recommendation' (28 percent).⁵⁵ For bonus points, brands can call out functional benefits and nutritional claims – including 'Gluten-free' and 'Ketogenic Friendly' – that are key purchase factors among 42 percent of health-conscious consumers.⁵⁶ Brands are also seeing success with 'soft' claims such as 'Excellent Source of Antioxidant Vitamin E' or 'Supports Immune Health'.

4. WALK THE WALK

Clean label will never work as a marketing gimmick or 'trendy' initiative. Today's consumers are inherently distrustful about what's really in their food: A mere **28 percent of U.S. consumers trust the nutrition claim information that brands disclose about their products.**⁵⁷ Consequently, every brand is on its own when it comes to earning consumer trust – and maintaining credibility – with authentic and fact-based information. Consider participating in certification programs and membership in environmental and food industry associations, then communicating these efforts in PR and marketing initiatives.

5. NEVER COMPROMISE ON TASTE AND QUALITY

At the end of the day, taste will always reign supreme as a whopping 83 percent of consumers rate flavor as the main factor when choosing food and beverage products.⁵⁸ As a result, companies can expand market share by providing healthy foods with clean labels that deliver on flavor as well as texture (prioritized by 54 percent), and color (53 percent).⁶⁰ **This is why the Applications and R&D Teams at Bell Flavors & Fragrances provide extensive support in 'cleaning up' customers' product formulations with big picture perspective on product quality and flavor integrity.**

54: Kantar Profiles/Mintel, July 2022 55-56: Kantar Profiles/Mintel, July 2022. 57: Mintel, Food and Drink Nutrition Claims – US, 2022. 58: <https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/consumers-care-about-sustainability-and-back-it-up-with-their-wallets> 59: <https://fmcggurus.com/blog/food-color-and-texture-innovative-flavors-are-sparking-consumer-interest-in-2022/> 60: <https://fmcggurus.com/blog/food-color-and-texture-innovative-flavors-are-sparking-consumer-interest-in-2022/>

5

SUPPORTING A CLEANER LABEL: *Technologies From Bell Flavors & Fragrances*



BellTech®

USDA Kettle Cooked Meat Flavors

Developed at Bell's Technology & Innovation Center, our line of USDA Kettle Crafted Meat Flavors enhance a product's natural meaty flavor profile while maintaining a cleaner label.

Our USDA Kettle Crafted Meat Flavors are cooked "low and slow" for an authentic flavor experience.

Clean Label Benefits:

- Appears on label as 'broth' instead of natural flavor
- Crafted from high-grade ingredients with minimal processing
- In a consumer taste panel, adding USDA Kettle Crafted Chicken Flavor to Commercial Chicken Broth enhanced overall flavor intensity, saltiness, as well as chicken, brothy, roasted, and fatty flavors.



Key Advantages of Bell's USDA Kettle Crafted Meat Flavors:

- Made from Organic Ingredients
- Crafted in Small Batches
- Clean Label
- Minimally Processed Flavor and Color (No HVP, MSG, I&G)
- Non-GMO
- Customizable Solutions to Match Application Needs
- Shelf Life up to 12 Months
- Vertically Integrated Process



BellTech® Taste Modulation & Enhancement

Umami, Kokumi, & Mouthfeel

Umami is the fifth sense as it enhances sweet, sour, salty and bitter notes in food. Bell developed a range of natural umami flavors that is especially designed for the use in clean label food products to work as a natural alternative to MSG or other taste enhancers.

Known as the 'sixth sense', Kokumi helps magnify and lengthen sweet, sour, salty, bitter and umami senses. It's considered more of a textural element because it provides a fatty mouthfeel to foods.

Clean Label Benefits:

- Labels as 'natural flavor'
- Provides mouthfeel enhancement

BellTech® Reduction & Boost

Sugar, Salt, & Fat

SweetTech™ comprises a range of flavors that deliver a full, rounded sweetness profile similar to sucrose while also masking undesirable flavors and off-notes.

Addressing consumer demand for less sodium, our reduction technology reduces salt content by up to 30 percent in different applications with no significant change in taste.

Clean Label Benefits:

- Enhances existing sweeteners in applications (Stevia, monk fruit, etc.)
- Compliant with Natural, Organic, Kosher, Halal, non-GMO, FDA and USDA regulations

BellTech® Masking

This clean label technology decrease unwanted taste attributes such as alcohol flavor and burn, as well as off-notes from alternative proteins. They also increase 'wanted' attributes such as overall flavor, fruity flavor, and mouthcoating.

Clean Label Benefits:

- Introduce nutritional ingredients that bolster labels without negative effects on taste

BellTech® Extenders & Replacers

Addressing manufacturer needs around more sustainable use of rare and endangered ingredients, our Citrus, Orange Oil, Egg, Garlic, Honey, Maple, Cocoa, Vanilla, Onion, Soy Sauce, and Black Pepper extenders and replaces can support product sourcing without sacrificing flavor and product quality.

Clean Label Benefits:

- Labels as 'natural flavor'
- Replacement up to 100%
- 7-10 times stronger than original ingredients

BellTech® Smokeless Smoke

Smokeless smoke flavors are natural alternatives to traditional liquid smoke and can be labeled along with "natural flavors." With varieties ranging from mesquite to cherrywood, these smokeless smoke flavors will help elevate their individual flavor nuances.

Clean Label Benefits:

- Labels as 'natural flavor'

Belltanicals® & Organic Flavors

Belltanicals® have become a key component in modern formulations for natural and nature-inspired products. Extracts from flowers, leaves, roots, and other plant materials represent nature in its purest form.

With a full range of organic certified natural source flavors and beverage compounds, Bell enables manufacturers to meet a wide range of official standards (including EU organic regulations), while delivering authentic taste properties such as orange, lemon, apple, lime or cola, among others.⁶¹

Clean Label Benefits:

- Belltanicals® label as natural and unmodified ingredients

61: <https://bellff.com/emea/essentially-organic-organic-certified-taste-solutions/>

6

THE ROAD AHEAD FOR CLEAN LABEL PRODUCTS



Products with a 'clean' label used to be considered cutting edge but are now becoming the status quo. Entire generations of consumers expect full transparency on what goes into the products they consume and demand comprehensive information on the environmental and health impact of their choices. At the same time, new government guidelines and mandatory warning labels against high-processed foods – including the FDA's 'healthy' convention – further increase customer sensitivity around accurate ingredient information. Meanwhile, the FDA is conducting consumer research to develop a "healthy" symbol that could appear on food packages in the United States as soon as late 2023.⁶²

**Products with _____
'CLEAN LABEL' used to be considered cutting
_____ edge but are now becoming status quo.**

From a manufacturer's perspective, switching to clean label alternatives may present considerable investments and strategic changes in the supply chain in the short term. But in the long run, the payoff lies with long-term loyalty from a dedicated consumer audience: According to current research, 79 percent of shoppers in the U.S. indicated that clear and complete ingredient definitions generate more trust, while the same percentage is more likely to be loyal to a brand that has more detailed information on physical labels. What's more, consumers are empowered with digital tools to find missing information and make their own decisions on the products they choose to purchase moving forward.

With detailed information in such high demand, the key to winning with a clean product label lies in authenticity. Only companies that 'walk the walk' will be able to withstand the level of scrutiny put forth by today's consumers. Manufacturers and CPG brands can rely on Bell Flavors & Fragrances to provide trusted, certified flavors and technologies to support their clean label products as part of an ongoing commitment to innovation with a growing portfolio of solutions.

The key to winning with clean label information lies in authenticity. Only companies that 'walk the walk' will be able to withstand the level of scrutiny put forth by today's consumers.

62: <https://www.fda.gov/food/food-labeling-nutrition/fdas-nutrition-initiatives> Bell Flavors & Fragrances Sensory & Consumer Sciences Research Panel, 2022.

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BUILDING THE FUTURE: Bell Flavors & Fragrance's Technology & Innovation Center

Opened in 2023, the **Bell Technology and Innovation Center (BTIC)** is a state-of-the-art facility at the intersection of innovation, engineering, technology, research product development, and applied sciences. Located at Bell's Northbrook headquarters, BTIC has expanded Bell's ability to rapidly produce customized flavors with a clean label. As a milestone product release, the fully USDA-certified facility manufactures our new USDA Kettle Cooked Meat Flavors as well as certified USDA Organic flavors and proprietary **BellTech™** flavor technologies, such as sweetness modulation, masking, and mouthfeel improvements.



“ Bell’s Technology and Innovation Center is a landmark facility to serve as a strategic cornerstone, positioning Bell with exciting new innovation. At BTIC, we seamlessly integrate the latest consumer trends and needs into our flavor research and development process. From ideation to manufacturing, BTIC ensures a streamlined approach, allowing Bell to respond swiftly to emerging trends and provide clean label flavors with unparalleled precision. This commitment to staying ahead of market dynamics allows us to not only meet but exceed consumer expectations in an ever-evolving landscape.

*-Joan Harvey,
Senior Vice President & Commercial General Manager, Flavors*

**SCAN THE QR CODE to learn more about
Clean Label Flavor Solutions
from Bell Flavors & Fragrances**



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