

SOLUTIONS

Clean Label Solutions: Natural Flavors Designed for Sustainability & Market Appeal

Enhance product formulation and deliver desirable sensory consumer preferences without compromising your products' overall taste experience



WHITE PAPER

Introduction

While the term "clean label" has yet to be defined in a regulatory sense, consumer demand for clean label products is an increasingly significant market driver.

Our solution: natural flavor components with minimal ingredients and free of unnecessary additives that still yield superior taste, texture and an appealing aroma.

Table of Contents

Clean Label Movement: Background & Context	03
Social Media & Consumer Habits	04
Defining "Clean Label" in Food	05
Food Clean Label: Market Statistics	06
Clean Label Flavor: Jeneil Biotech's Approach	07
Current Market Comparisons	09
Partner With Jeneil	11
References	12



Clean Label Movement: Background & Context

The COVID-19 pandemic gave many consumers the opportunity to eat fresher and healthier food while cooking at home, accelerating the clean label trend^{1,2}:

- 50% of consumers prioritize healthy eating.
- 50% of consumers across age groups say healthy eating is a top priority for them.
- 63% of adults are influenced by ingredient lists on foods and beverages.
- 64% of adults try to choose foods with clean ingredients.
- 70% of consumers surveyed expressed their intention to be healthier.

Going forward, consumers are looking to support brands that align with their values, especially as more information (whether backed by scientific research or not) circulates about commonly used ingredients and production processes.





Social Media & Consumer Habits

To that end, social media 'clean label' trends are a key driver of the food clean label movement as well. 70% of Gen Z consumers say they follow a food-driven personality on social media, which is nearly twice the number of Millennials that say they follow one³.

This can be problematic because social media content doesn't always convey facts accurately, nor does it automatically follow official organizations and ingredients status and updates. Regardless, all signs point to consumers becoming more mindful about what they eat.



Sometimes, what's not listed on a food product label is what matters most. Consumers are increasingly checking product labels more carefully looking for:

- · Fewer ingredients and minimal processing
- · Ingredient names they can understand
- · Ingredients which do not pose any health risks

In a market lacking a legal and regulatory industry standard definition⁴, what counts as a clean label?



Defining "Clean Label" in Food

"Clean label" has many non-official definitions, depending on each consumer's point of view. It's generally described as a **consumer-based term** involving the development of a food product that is:

- Natural
- · Comprised of few ingredients
- · Free of unnecessary preservatives or additives

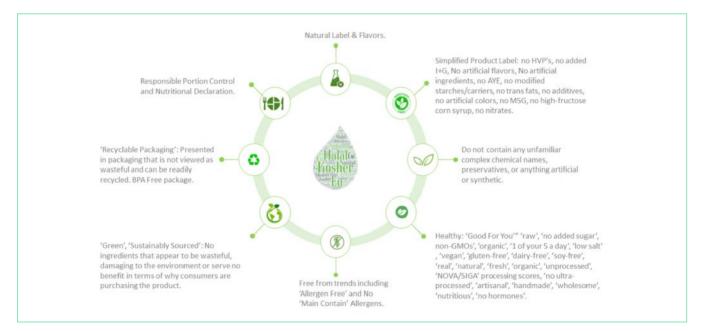


Fig. 1. Food 'Clean Label' diverse views by consumers

Food clean label expectations widen with each consumer perception of what a clean label food might be (Fig. 1). What consumers are looking for in clean label is a diverse approach to healthy, clean eating and beyond⁵⁻⁹:

56% of US consumers agree that 'natural' or organic foods are safer for the environment than conventional foods⁸.

 83% of consumers reported liking seeing "100% natural" on a label while 67% noted they prefer products that are minimally processed¹⁰.

With all these factors at play, brands may find themselves scrambling to meet the moving target of contemporary consumers' needs while outperforming their competitors in the race to provide natural, sustainable solutions.



Food Clean Label: Market Statistics

The global food clean label ingredients market size, valued at \$20.9 billion in 2021, is projected to reach nearly **\$44.5** billion by 2030 at a Compound Annual Growth Rate (CAGR) of 17.56% from 2022 to 2030².

The natural flavor segment in the clean label ingredients market is expected to reach **\$15.8 billion by 2026**, registering a CAGR of 8.3%¹¹.

Market Drivers

Increasing consumer awareness is driving the Clean Label market.

Consumers are becoming more likely to seek food and beverage products with "clean labels" whether they are purchasing products at the grocery store, gas station or dining in restaurants⁵.

- 48% of consumers seek out foods that contain Natural Flavors¹².
- 64% of consumers in the USA choose foods made from clean ingredients².
- 71% of consumers are willing to pay more for current brands that have been reformulated to make claims around the naturalness of their ingredients¹².

Much of the desire for a clean label market is associated with how consumers are willing to explore the dairy free and vegan market. Many consumers are trying to permanently incorporate more plant-based foods into their diets.

- 65% of Americans have consumed plant-based meat alternatives in 2020, with two in 5 eating them daily or weekly2.
- Google Trends Mentions on dairy free, vegan cheese, gluten-free and plant based on 2004 to December 2022 (Fig. 2) show a steady increase in dairy-free, both worldwide and within the USA.

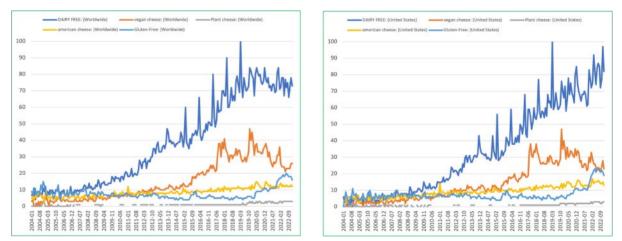


Fig. 2. Google Trends - Worldwide (left) - USA (Right) Web Search Interest Over Time (2004-2022).



Clean Label Flavor: Jeneil Biotech's Approach

The development of a clean label product is a highly complex process.

It requires tedious operations like the removal of certain high-functionality ingredients and replacing them with a clean label ingredient–without compromising the product's overall taste or quality.

Clean Label also presents a high-potential opportunity for innovation and new product development. It takes a changing culture to accept the clean label movement and a firm pledge to turn labels clean.

Demand is steadily increasing: ScienceDirect's website has 1,175 results for 'Clean Label in Foods' in 2004, with a sharp increase to 8,688 results in 2022.

Flavor is a key driver for consumer preference and purchase intent. Clean label flavors are no longer a "nice-to-have" but a "must-have" to meet consumer's growing demand for healthy natural products.

In general, clean label flavors are perceived as flavors without complex chemical names, preservatives, or anything artificial⁷. The growth in value sales for ingredients is attributable to the surge in demand for clean label ingredients that facilitate better taste.



From taste enhancers and modulators to vegan dairy flavors and more, Jeneil offers natural clean label flavors for clean label product formulation without compromise.





Jeneil's R&D, regulatory, and processing expertise drives pioneering approaches to natural clean label flavors for:

- Dairy
- Nutritional Bars
- Condiments/Sauces
- Soups
- Frozen Desserts
- Topical Seasonings
- Meat Products
- · Oils & Fats
- Bakery & Confectionery
- Beverages
- Snacks & Cereals
- Plant-based Products

Jeneil's natural clean label flavors are ready to ship worldwide, available anywhere from dry to liquid form.

We are currently working with valuable clients, cleaning product labels in key market segments.

From taste enhancers and modulators to vegan dairy flavors and more, Jeneil offers natural clean label flavors for clean label product formulation without compromise.



Current Market Comparisons

Let's examine what's currently available on the market-and how Jeneil's offerings can improve on what's being sold today.

Example 1

Take a look at these two brands of nacho cheese snack products: here, labeled A and B.

	SNACK A	SNACK B
Name	Brand Name® Nacho Cheese Flavored Tortilla Chips	Brand Name® Nacho Bean & Rice Chips
Ingredients	Corn, Vegetable Oil (Corn, Canola, And/or Sunflower Oil), Maltodextrin (Made From Corn), Salt, Cheddar Cheese (Milk, Cheese Cultures, Salt, Enzymes), Whey, Monosodium Glutamate , Buttermilk, Romano Cheese (Part-skim Cow's Milk, Cheese Cultures, Salt, Enzymes), Whey Protein Concentrate, Onion Powder, Corn Flour, Natural And Artificial Flavor, Dextrose, Tomato Powder, Lactose, Spices, Artificial Color (Yellow 6, Yellow 5, And Red 40), Lactic Acid, Citric Acid, Sugar, Garlic Powder, Skim Milk, Red And Green Bell Pepper Powder, Disodium Inosinate, And Disodium Guanylate.	Black beans, navy beans, brown rice, safflower or sunflower oil, seasoning blend (tapioca maltodextrin, salt, tomato powder, sugar, onion powder, yeast extract, dehydrated green and red bell pepper, paprika, natural flavors, extractives of annatto, lactic acid, grill flavor (from sunflower oil)).
Facts	Contains Milk Ingredients	Gluten Free, Non-GMO





Example 2

Now, let's compare nacho snack brands A and C.

	SNACK A	SNACK C
Name	Brand Name® Nacho Cheese Flavored Tortilla Chips	Brand Name® Nacho Grain Free Tortilla Chips
Ingredients	Corn, Vegetable Oil (Corn, Canola, And/or Sunflower Oil), Maltodextrin (Made From Corn), Salt, Cheddar Cheese (Milk, Cheese Cultures, Salt, Enzymes), Whey, Monosodium Glutamate , Buttermilk, Romano Cheese (Part-skim Cow's Milk, Cheese Cultures, Salt, Enzymes), Whey Protein Concentrate, Onion Powder, Corn Flour, Natural And Artificial Flavor, Dextrose, Tomato Powder, Lactose, Spices, Artificial Color (Yellow 6, Yellow 5, And Red 40) , Lactic Acid, Citric Acid, Sugar, Garlic Powder, Skim Milk, Red And Green Bell Pepper Powder, Disodium Inosinate, And Disodium Guanylate.	Cassava flour, avocado oil, coconut flour, nutritional yeast, tomato powder, chia seed, sea salt, citric acid, garlic powder, jalapeno powder, onion powder, serrano powder.
Facts	Contains Milk Ingredients	Certified Gluten Free, Gluten-Free, Soy Free, Dairy Free, Grain Free, Paleo, Vegetarian, Vegan, Non-GMO Project Verified. Contains coconut

Snack A has ingredients that are not considered clean label:

- Monosodium Glutamate
- Artificial Flavor
- Artificial Color (Yellow 6, Yellow 5, and Red 40)

Snack C claims to be gluten free, soy free, dairy free, grain free, paleo, vegan and Non-GMO project verified. Its ingredients are exactly what contemporary customers are looking for: few and familiar.

Jeneil offers natural and clean label flavor solutions that are Non-GMO, Kosher, Halal, EU-compliant, and rBST Free. These flavors will complement your formulations and help you achieve better solutions for clean label propositions.



Partner With Jeneil

A Family Legacy 50+ Years of Expertise

Our pioneering innovation in microbial fermentation technologies and natural flavors yields breakthrough ingredient solutions. As a family-owned and operated solution provider, our quality proposition is trusted - second to none! We serve the specialized natural ingredient needs of our valued global partnerships throughout Food & Beverage, Flavors & Fragrances, Human & Animal Health, and Agricultural industries.

Your limit is where our innovation begins. Discover our natural Solutions:



Contact Jeneil Biotech

Fill out our simple contact form to request a sample, phone call or visit. Contact Us > Tel: (262) 268-6815 info@jeneilbiotech.com



References

1 Grimmelt, A., Moulton, J., Pandya, C., & Snezhkova, N. (2022, October 5). Hungry and confused: The winding road to conscious eating. McKinsev & Company.

https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/hungry-and-confused-the-winding-road-to-conscious-eating

2 Phillips, J. (2021, June 17). IFIC survey: From "chemical-sounding" to "clean": Consumer Perspectives on Food Ingredients. International Food Information Council.

https://ific.org/ific-survey-from-chemical-sounding-to-clean-consumer-perspectives-on-food-ingredients/

3 Datassential Research. (2022). Future Food: The Restaurant & Supermarket of the Future, Long-Term COVID Impacts, the Metaverse, Limitless Plant-Based Innovation & More. FoodBytes 2022. https://fs.hubspotusercontent00.net/hubfs/5485402/Email%20Files/FoodBytes/Datassential%20-%20FoodBytes%20-%202022%20Trends. pdf

4 Shapiro, S. (2017, August). A Legal Look at the Definition of 'Clean Label.' Rivkin Radler. https://www.rivkinradler.com/wp-content/uploads/2017/09/Shapiro-Natural-Products-Insider-A-Legal-Look-at-the-Definition-of-Clean-Label-9-17.pdf

5 Label-Friendly Ingredient Solutions. Cargill. (2023). https://www.cargill.com/food-beverage/na/label-friendly-sweeteners-and-texturizing-solutions

6 Jacobsen, J. (2022, June 24). Consumer awareness of clean label drives demand for ingredient solutions. Beverage Industry RSS. http://www.bevindustry.com/articles/95110-consumer-awareness-of-clean-label-drives-demand-for-ingredient-solutions

7 https://www.futuremarketinsights.com/reports/clean-label-flavors-market. Future Market Insights. (2022, July). https://www.futuremarketinsights.com/reports/clean-label-flavors-market

8 Southey, F. (2022, August 4). How is clean label evolving? Mintel talks regulation, processing, and linking "clean with green." Food Navigator Europe. https://www.foodnavigator.com/Article/2022/08/04/How-is-the-clean-label-trend-evolving-Mintel

9 Galanakis, C. M. (2022). The Age of Clean Label Foods. SpringerLink. https://link.springer.com/book/10.1007/978-3-030-96698-0

10 FMCG Gurus Report, (2021, August), FMCG Gurus - Clean & Clear Label in 2021 - Global Report, FMCG Gurus, https://fmcggurus.com/reports/fmcg-gurus-clean-clear-label-in-2021-global-report/

11 Kadam, A. (2019, December). Global clean label ingredients market expected to reach \$64.1 billion by 2026. Allied Market Research. https://www.alliedmarketresearch.com/press-release/clean-label-ingredients-market.html

12 Clean label flavors: Expert insights into clean labeling trends and examples of clean label flavor solutions. PreScouter. (2022, June 2). https://www.prescouter.com/inquiry/clean-label-flavors/

13 Askew, K. (2022, July 20). Clean label claims boost sales, but what categories benefit most?. Food Navigator. http://www.foodnavigator.com/Article/2022/07/20/clean-label-claims-boost-sales-but-what-categories-benefit-most

