



SHAPING SUSTAINABILITY

SUSTAINABLE DOWN TO THE MOLECULAR LEVEL



Younger generations continue to prioritize sustainability, as addressed in Bedoukian's [Sustainability](#) newsletter. A YouGov survey of 1,032 U.S. adults between 18 to 27 years old, on behalf of Whole Foods Market, revealed that 70% of Gen Z support climate-

smart agricultural practices. Additionally, 55% are willing to pay more for an environmentally sustainable product. The report shows increased support for food sourcing, the environment, and product ingredients compared to five years ago, with nearly 50% to 60% of respondents more likely to engage in these behaviors now.

According to a First Insight survey of 1,000 consumers, **62% of Generation Z prefer to buy from sustainable brands**, on par with Millennials.

The younger generations' interest in sustainability goes beyond being a consumer. It spills into their work ethic and expectations of businesses. For example, Deloitte's 2024 Gen Z and Millennial Survey of 22,800 respondents in 44 countries found that the majority of respondents agree that their employers are working to address climate change (59% of Gen Zs and 58% of Millennials).

Gen Z's spending power is projected to grow to \$12 trillion by 2030, according to NIQ. The younger generations' influence is reshaping the supply chain; they expect sustainability to be part of day-to-day business. Consumer demand for sustainable products and services continues to grow, significantly influencing shopping habits and purchase decisions. Manufacturers and brands must increase their sustainability initiatives to meet the demand of Generation Z, the largest current generation, and the emerging Generation Alpha.



SUSTAINABLE FRAGRANCE ON THE RISE

Brands are leaning on fragrance and flavor suppliers to develop sustainable products to meet consumer demand.

According to Free Yourself, green chemistry is becoming central to fragrance development, with brands focusing on renewable carbon sources and low-impact synthesis. Coherent

Market Insights echoes this sentiment, highlighting that brands are creating fragrance notes using renewable materials or lab-made alternatives for natural ingredients that are scarce or difficult to source.

Companies will continue to prioritize environmental stewardship as consumers increasingly call for sustainable products and practices.

Bedoukian's high-impact and sustainable aroma and flavor molecules enhance the palettes of perfumers and flavorists, aligning with consumers' desire for eco-friendly products.

[Browse Sustainable Ingredients](#)

RENEWABLE CARBON – WHAT IT IS & WHY IT MATTERS?

One aspect of sustainability on the supplier and ingredient side is how products are made. Renewable carbon is derived from biological, non-fossil sources like plants, biomass, or captured CO₂. Unlike carbon derived from petroleum or natural gas, renewable carbon is part of the natural carbon cycle. While the chemistry of renewable and fossil-based carbon is the same, the source of carbon significantly affects the environmental impact of the material.



There are several reasons why renewable carbon matters.

1. Climate Responsibility

Using renewable raw materials reduces dependence on fossil resources and lowers the overall carbon footprint of a product. It helps separate

product development from the extraction and consumption of oil and gas, which are major contributors to climate change.

2. Circularity and Sustainability

Renewable carbon supports the transition to a circular economy by using carbon that continually cycles through renewable systems instead of being permanently removed from the earth. This approach fosters long-term sustainability within the chemical industry.

3. Consumer and Brand Alignment

Global brands and manufacturers are increasingly focused on sourcing ingredients that align with their sustainability goals. Offering ingredients with high renewable carbon content helps these companies achieve measurable progress toward carbon reduction and environmental commitments.

4. Regulatory and Market Advantage

Many fragrance and flavor houses are tracking renewable content across their portfolios to report on sustainability initiatives. Providing ingredients with a high percentage of renewable carbon gives clients a competitive edge and supports compliance with corporate environmental reporting standards.



COMMITTED TO SUSTAINABILITY

Bedoukian is committed to sustainability. On our website, you can find a "[Sustainable Ingredients](#)" page highlighting the molecules that use renewable carbons. This makes it easier for our customers to locate more

sustainable molecules for their formulations.

Bedoukian is continually reducing our carbon footprint by reformulating key ingredients. This fall, we are excited to re-release 11 of our iconic molecules as designated "SUS" ingredients using renewable carbons. In this newsletter we are highlighting two of those sustainable ingredients:

LACTONE OF CIS JASMONE™ (BRI 411-SUS) and **e,z-2,6-NONADIENAL FCC (BRI 332-SUS)**. Click the link below to see our full list of sustainable ingredients.

[Browse Sustainable Ingredients](#)

**LACTONE OF CIS JASMONE™
(BRI #411-SUS)**

The original **LACTONE OF CIS JASMONE™ (BRI 411)** is one of Bedoukian's first molecules launched and continues to be very popular today. It was used in the famous Charlie by Revlon fragrance, which launched in 1973.



LACTONE OF CIS JASMONE™ (BRI 411-SUS) is a versatile and sustainable 86% renewable carbon fragrance and flavor ingredient. For perfumers, this ingredient highlights a soft yet sophisticated, jasmine absolute note with a white floral aroma and creamy lactonic notes. It also offers coconut and tropical accords. On the flavor side, **LACTONE OF CIS JASMONE™ (BRI 411-SUS)** features creamy, jasmine, and peach notes. It is useful in cream flavors and is great for peach and coconut applications. Additionally, **LACTONE OF CIS JASMONE™ (BRI 411-SUS)** adds rich jasmine notes to jasmine tea flavors.

[Learn More about BRI #411-SUS](#)

e,z-2,6-NONADIENAL FCC (BRI #332-SUS)

Bedoukian's original **e,z-2,6-NONADIENAL FCC (BRI #332)** is an iconic product widely used in fragrance and flavor formulas. **e,z-2,6-NONADIENAL FCC (BRI #332-SUS)** is 50% renewable carbon and a sustainable ingredient for fragrance and flavor formulas. On the fragrance side, **BRI #332-SUS** is powerful and diffusive, featuring a violet-leaf and cucumber aroma with a hint of melon. It is ideal for adding green, leafy, watery, and floral notes to various fragrance profiles. On the flavor side, **e,z-2,6-NONADIENAL FCC (BRI #332-SUS)** pushes natural green, cucumber, melon, and fatty notes. **e,z-2,6-NONADIENAL FCC (BRI #332-SUS)** works well in melon and strawberry flavors as well as other fruits. It can also be used in cucumber, savory, and seafood flavors such as oysters.

Our sustainable high-impact aroma and flavor molecules maintain the same performance and olfactory quality as their fossil-based counterparts, while offering a more sustainable sourcing profile. Integrating renewable carbon-based materials into formulations helps our customers reduce Scope 3 greenhouse gas emissions, improve sustainability claims and corporate responsibility reports, and enhance brand narratives focused on responsible sourcing and innovation. Consumers enjoy the same quality, scent, and performance they expect while knowing their products reduce environmental impact.

[Learn More about BRI #332-SUS](#)

COMMITTED TO SUSTAINABILITY

Bedoukian Research, Inc. is committed to replacing fossil-based carbon with renewable sources, while maintaining product performance and creativity. This shift enables the flavor and fragrance industry to move toward a more sustainable and circular carbon economy.

FUN FACT

In 2023, Gucci's Where My Heart Beats became the first globally distributed fine fragrance made with alcohol from 100% captured carbon emissions, using Coty's partnership with LanzaTech to turn industrial emissions into ethanol—renewable carbon in action.



For any questions about [Bedoukian's products](#) or to request samples, please contact us at 203-830-4000 or send us an [email](#). We look forward to hearing from you!



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