



Rooted in Red

The Revolutionary Role of
Black Carrots in Naturally Derived
Color Solutions



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Cultivating Excellence from Field to Factory

In the evolving landscape of ingredient sourcing and food production, the role of black carrots as a natural source of color has become increasingly significant. ADM's commitment to excellence is embodied in our complete vertical integration approach, which ensures clear traceability and exceptional control over every phase of the black carrot life cycle, from the careful selection of seeds to planting, harvesting, and processing. This careful oversight is the cornerstone of our promise to meet and surpass the highest quality standards, yielding color ingredients that are not only naturally derived but also highly effective, versatile, and efficiently produced. It also allows us to offer cost-effective color solutions tailored to our consumers' precise needs, all while ensuring supply reliability and scalability.



Redefining the Rainbow with Technology

Today, innovation has never looked better. With a dedication to research and technology, ADM has redefined the process of creating color. We understand that naturally derived colors that deliver maximum color impact and stability in various systems are paramount for food and beverage manufacturers. In order to achieve optimal performance in our black carrot solutions, ADM's team of color experts deploy various approaches. From careful seed selection and cultivation methods to cutting edge extraction techniques, we offer solutions with varying color units to meet the specific needs of our customers.

In addition, our customized blends utilize an assortment of naturally sourced raw materials, helping achieve stability, vibrancy and the clean label consumers prefer. ADM's patented micronization technology is another option to achieve stunning red and purple shades in a wide range of applications including dry blends for beverage, pressed tablets, seasonings, dietary supplements and fat-based intermediates.



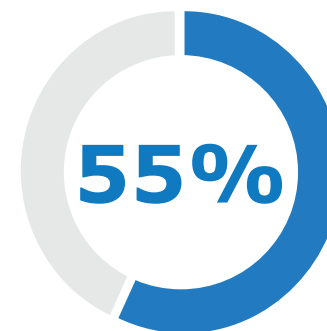


The Rising Demand for Reds

As modern consumers increasingly seek natural alternatives to artificial colorants, black carrot has become a pivotal coloring ingredient in the food and beverage industry. Predominately utilized for its ability to provide a range of red and purple hues, this naturally derived colorant is preferred due to its vibrancy and clean label appeal. According to Mintel GNPD, over the last 3 years nearly 25% of all new beverage launches have included a red color shade. This statistic underscores the significant impact of color on consumer preferences and choices, particularly in foods and beverages.

10x

in the last 10 years, the frequency of black carrot as ingredient in beverages has increased by a factor of >10³.



of European consumers say red would influence their product choice of fizzy drinks, juice & juice drinks, sports & energy drinks².

1/3

of all color solutions applied in F&B new product launches come with red color solutions¹.

According to Mintel GNDP, for naturally derived colors, Black Carrot is a commonly used raw material in beverage products across the EU and North America.

¹Brandwatch, social listening, 2021

²ADM Outside Voice, Dec. 2020

³ADM Outside Voice, Dec. 2021

Top Food & Beverage Categories using Red Color Ingredients

	USA	UK	Germany
Food	17% Confectionery	11% Cakes, Pastries & Sweet Goods	17% Non-Chocolate Confectionery
	9% Baking Ingredients	10.7% Confectionery	6% Chocolate Confectionery
	6% Cookies	7% Seasonal Chocolate	5.9% Yogurt
	5.6% Seasonal Chocolate	6.1% Prepared Meals	5.5% Ice Cream & Frozen Yogurt
	5.2% Cakes, Pastries & Sweet Goods	4.6% Baking Ingredients & Mixes	
Beverage	USA	UK	Germany
	19% Carbonated Soft Drinks	46% Nutritional & Meal Replacement	49% Nutritional & Meal Replacement
	16% Beverage Mixes	15% Carbonated Soft Drinks	10% Carbonated Soft Drinks
	14% Nutritional & Meal Replacement	7% Beverage Concentrates	7% Sports Drinks
	8.5% Beverage Concentrates	5.4% Energy Drinks	5.3% Juice
	8% Energy Drinks	5.2% Malt & Hot Beverages	

A Spectrum of Red for Diverse Applications

High-quality black carrot-based color solutions provide a wide array of stunning shades, catering to the diverse preferences and requirements of customers, consumers, and global regulations. Combined with other natural sources, the spectrum of red shades and derivatives that can be achieved is virtually infinite. These solutions offer unparalleled versatility, ensuring the ideal hue in a variety of applications, all while maintaining a clean label.

ADM's extensive expertise across a wide range of applications, combined with our cutting-edge color technologies and robust global resources, plays a crucial role in providing superior solutions for our customers with speed to market.



ALCOHOLIC BEVERAGES



DAIRY



SAVORY SAUCES,
DIPS & MARINADES



CONFECTIONERY
& BAKED GOODS



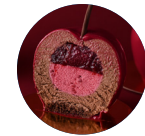
BEVERAGES



JAMS & JELLIES



FROZEN DESSERTS



FRUIT FILLINGS



Black Carrot-Based Solutions Features:

- Clean Label
- Kosher & Halal Certified
- US and European Based Production
- Vertically Integrated
- Controlled Global Supply Chain Network
- Complete Portfolio
- Customized Blends

ADM delivers for you.

ADM unlocks the beauty of nature. The Colors from Nature™ portfolio covers the full rainbow of colors, including radiant reds, bold blues, cleaner label whites and caramel-free browns - just to name a few. Our diverse portfolio of raw materials, dedication to vertical integration and technological innovation and know-how can help you achieve high-quality, stable and stunning color solutions for any type of food or beverage application.

Count on us to meet any formulation challenge head on and to deliver for you and your consumer every time.





Partner with a global leader who gives you an edge.

ADM is a global leader in coloring foods and beverages, with the technical knowledge to deliver the vibrant colors that consumers demand in all types of products. When it comes to reflecting the beauty of nature with the full rainbow of colors—even in the most difficult application spaces—your edge is our expertise.