



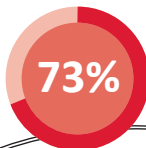
Replacing carmine and carminic acid in beverages

Our plant-based EXBERRY® Coloring Foods can deliver spectacular shades in soft drinks and alcoholic beverages typically below 9% ABV.

Carmine and carminic acid are used to achieve red, orange, and pink shades in a wide variety of beverages including carbonated soft drinks, protein shakes, and alcoholic drinks ranging from ciders and hard seltzers to aperitifs and bitters. However, its use can significantly limit product appeal.

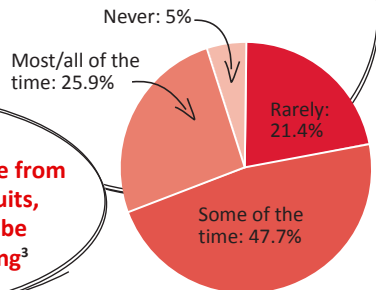
The challenge

Carmine and carminic acid are natural additive colorants made from the cochineal insect using chemical extraction processes. This means it is incompatible with vegetarian, and in most cases, halal, and kosher diets and fails to match up to modern expectations on clean ingredient lists. It is also notorious for its price volatility, can be subject to supply shortages, and poses an allergy risk.¹



European consumers say they consider **colors made from concentrated juice from fruits, vegetables, and plants to be appealing or very appealing**³

How often do European shoppers **check ingredients lists** on food and drinks?²



49%

European consumers say traceable ingredients influence their purchase decisions⁴

Key benefits

- ✓ Strong visual appeal
- ✓ Year-round availability
- ✓ Clean and clear label declarations
- ✓ Excellent heat and light stability
- ✓ Plant-based and vegan-friendly
- ✓ Halal and kosher certified

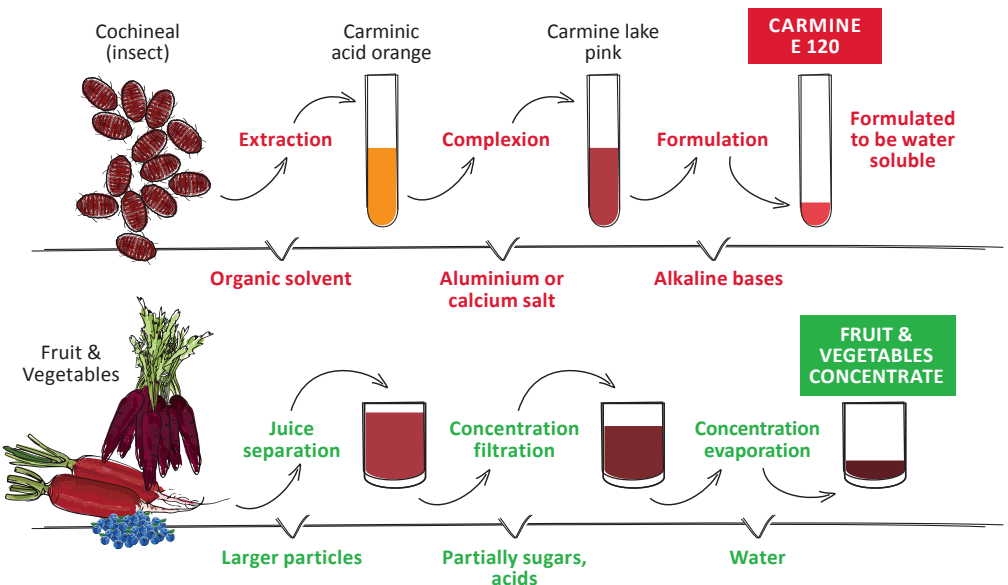
The solution

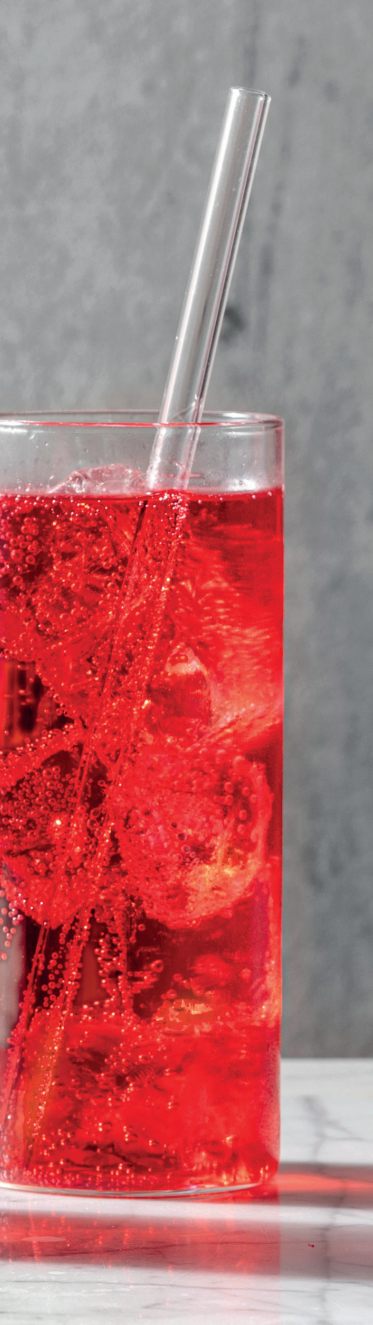
EXBERRY® Coloring Foods are the ideal alternative to carmine for beverages. Based on the concept of coloring food with food, they are created from non-GMO fruit, vegetables, and plants using physical processing methods. Due to the way they are made, these plant-based concentrates are considered to be food ingredients rather than additives in the European Union and support completely clean and clear label declarations.

Performance

EXBERRY® can be used to achieve exceptional results in almost any beverage application, from carbonated soft drinks to beverage syrups to alcoholic beverages. Our proprietary technology can deliver solutions that have the exact color shade and intensity required for the application in question. EXBERRY® colors also offer great stability, as tested in extensive heat and light evaluations.

Coloring Foods versus additive colorants





EXBERRY® Color match



EXBERRY®
Shade
Brilliant
Pink



EXBERRY®
Shade
Rubescent
Red



Red
Carmine
Acid

Raw materials

We utilize a wide variety of raw materials to create the EXBERRY® range, which provides us with a comprehensive portfolio of coloring solutions to suit different project requirements. For example, our new EXBERRY® Shade Rubescent Red is made from red sweet potato and carrot. It delivers an intense yellowish-red color with minimal impact on taste, excellent thermal and light stability, optimal solubility, and low viscosity.

Stable supplies

GNT manages all steps of the supply chain – from the selection of seeds to the cultivation and harvesting of the raw materials and all the way through to the finished products. This ensures full traceability and the year-round availability of our supplies. We also invest in long-term stockholding, striving in many cases to have sufficient stocks to cover one crop cycle.

The EXBERRY® advantage

EXBERRY® colors can be used to achieve a full spectrum of shades in almost any food and drink application. They are valued globally for their ease of use, brilliance, performance, and the vertical integration of the supply chain. With vast experience working with plant-based colors, GNT's team of specialists is on hand to offer support throughout the entire product development process. Get in touch now to find out how EXBERRY® can add value to your products.

EXBERRY.COM

- ¹ Sadowska, B. et al. 'Carmine allergy in urticaria patients' Postepy Dermatol Alergol. (2022)
- ² FMCG Gurus 'Custom Survey- Global and Regional- Clean Label & Naturalness' (April 2023)
- ³ FMCG Gurus 'Custom Survey- Global and Regional- Clean Label & Naturalness' (April 2023)
- ⁴ FMCG Gurus 'Custom Survey- Global and Regional- Clean Label & Naturalness' (April 2023)

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230531-V1 | EXBERRY® COLORING FOODS