



## Replacing carmine in dairy

Deliver clean-label reds and pinks with EXBERRY® Coloring Foods

Carmine is commonly used to achieve reds and pinks in dairy products and fruit prep – but its use can significantly limit products' appeal.

### The challenge

Carmine is a natural additive colorant made from the inedible cochineal insect using chemical processes. This means it is incompatible with vegetarian, halal, and kosher diets and fails to match up to modern expectations on clean ingredient lists. Carmine is also notorious for its price volatility, can be subject to supply shortages, and poses an allergy risk.<sup>2</sup>

dairy consumers say they find 'free from additives' claims appealing<sup>1</sup>

62%

### The solution

EXBERRY® Coloring Foods are the ideal alternative to carmine for dairy products. 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, they are considered to be food ingredients rather than additives in the European Union and support completely clean and clear label declarations. For example, they might be listed as 'blackcurrant and carrot concentrates.'

## Plant-based colors

EXBERRY® colors are suitable for both vegetarian and vegan diets. As such, they can maximize traditional dairy products' appeal and are also perfectly suited to plant-based alternatives.

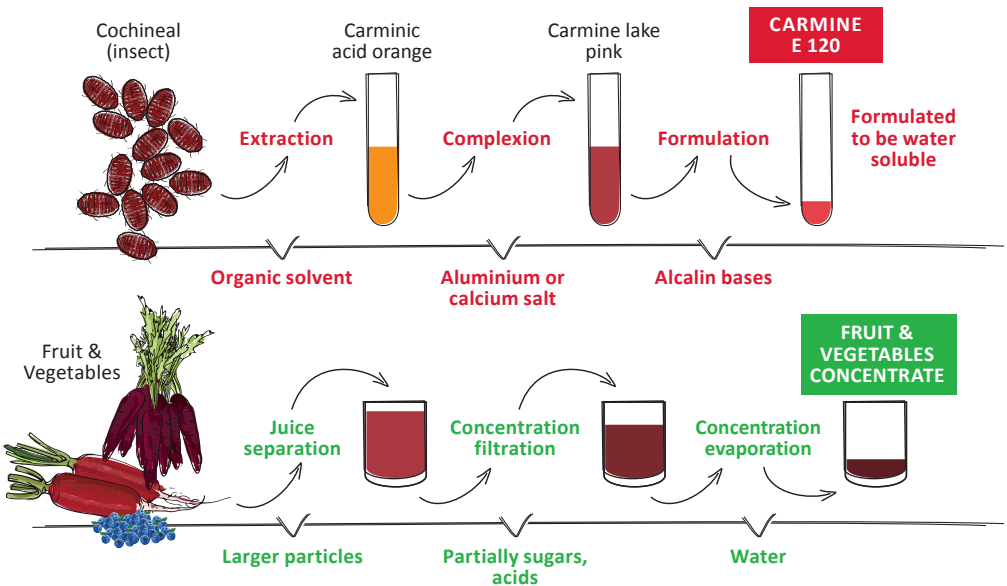
consumers worldwide  
now say they eat or drink dairy  
alternative products<sup>4</sup>

47%

## 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 stock holding, keeping an average of 18 months' supply of EXBERRY® stock at all times.

## Coloring Foods versus additive colorants



## 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

consumers worldwide  
seek out food and drink products  
that contain recognizable ingredients  
most or all of the time<sup>3</sup>

69%

## Performance

EXBERRY® Coloring Foods can be used to achieve exceptional results in dairy applications including yogurt, ice cream, water ice, and fruit prep. They are also ideal for plant-based dairy alternatives. Our proprietary technology can deliver solutions that have the exact color shade and intensity required for the application in question. EXBERRY® colors also offer excellent stability, as demonstrated in extensive heat and light tests.





## EXBERRY® Color match

### Yogurt



Carmine  
(E120)  
0.10%



EXBERRY®  
Shade Veggie  
Red 0.13%



EXBERRY®  
Shade Rubscent  
Red 0.20%

### Fruit preparation



Carmine  
(E120)  
0.10%



EXBERRY®  
Shade Veggie  
Red 0.13%



EXBERRY®  
Shade Rubscent  
Red 0.20%

### Ice Cream



Carmine  
(E120)  
0.19%



EXBERRY®  
Shade Fiesta  
Pink 0.55% +  
EXBERRY®  
Shade Mango  
Yellow 0.25%



EXBERRY®  
Shade Rubscent  
Red 0.20%

## 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

<sup>1</sup> FMCG Gurus 'The Revivification of the Dairy Sector' (2022) <sup>2</sup> Sadowska, B. et al. 'Carmine allergy in urticaria patients. Postepy Dermatol Alergol. (2022) <sup>3</sup> FMCG Gurus 'Custom Survey - Global and Regional Country Profiles - Q2 2021' <sup>4</sup> FMCG Gurus 'Meat & Plant-Based: Top Ten Trends for 2023' (2023).

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