

Innovazione di ingredienti  
per lo sviluppo di prodotti  
in linea con le attuali esigenze di consumo



# EXBERRY®: Innovation in Coloring Foods

AITA Webinar

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27 ottobre 2023

GROWING COLORS





GROWING COLORS **EXBERRY**<sup>®</sup>



# Key facts about GNT

GROWING COLORS

**EXBERRY**<sup>®</sup>

# GNT: market leader in coloring food with food

100% PLANT-BASED SINCE **1978**

**2<sup>ND</sup>**  
GENERATION  
FAMILY-OWNED  
COMPANY

CUSTOMERS IN  
MORE THAN **75**  
COUNTRIES

**EXBERRY**<sup>®</sup>  
IS THE KEY BRAND OF GNT

MORE THAN **460**  
EMPLOYEES  
WORKING IN **11**  
COUNTRIES

**3** STATE OF THE ART  
PRODUCTION FACILITIES

MIERLO  
NETHERLANDS

HEINSBERG  
GERMANY

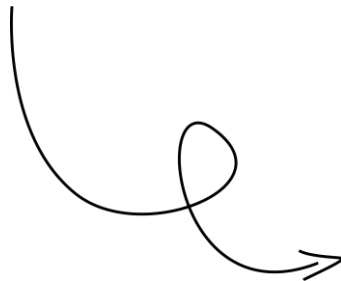
GASTONIA  
NORTH CAROLINA  
USA



# Coloring Foods – the natural color solution

**EXBERRY® is produced from fruits, vegetables and/or edible plants**

- Processed only with water and no use of organic solvents
- Processed without selective extraction of the pigments
- No added artificial emulsifiers, preservatives, etc.



# GNT: market leader in coloring food with food



Pumpkin



Orange carrot



Turmeric



Black carrot



Sweet purple potato



Spirulina



Safflower



Radish



Pepper



Beetroot





# EXBERRY® Shade Vivid Orange - OS

Bright orange shades with new vegan oil-based paprika product

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## Introducing EXBERRY® Shade Vivid Orange – OS

- Made from paprika and sunflower oil  
EXBERRY® Shade Vivid Orange - OS is manufactured using physical processes and no chemical solvents.
- It is the first purely oil soluble EXBERRY® Coloring Food on the market
- The new EXBERRY® delivers exceptional results while supporting clean and clear labels. As such, it is an ideal solution for a wide range of applications such as snacks, fat-based sauces or chocolate compound





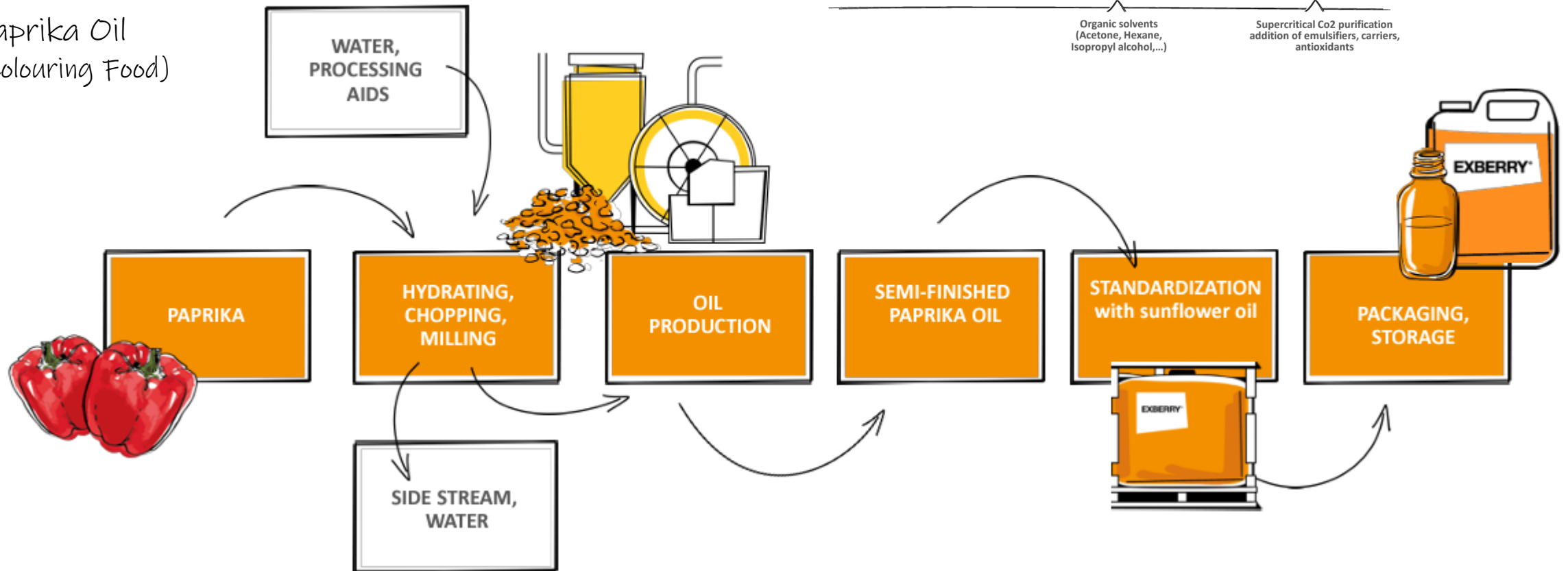
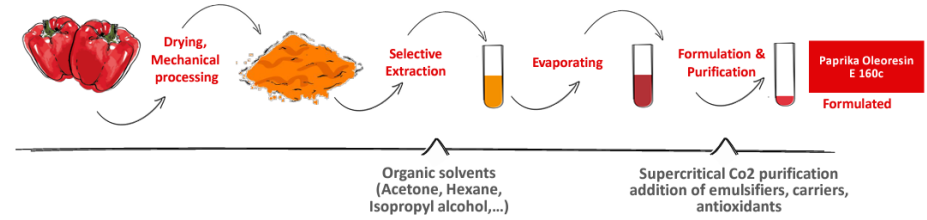
# Raw material to semi-finished concentrate

Paprika Oil  
(Colouring Food)

Paprika Oleoresin production (\$73.345/ E160c)

Approval required according to EU colors directive  
Artificial as well as selectively extracted 'natural' colorants (from natural sources) are food additives. They need approval and must be declared as additives according to EU Colors Directive.

Paprika Oleoresin  
E160c



# Comparing orange color products

Chocolate Compound

Oil slurry

Mayonnaise

EXBERRY® Shade Vivid Orange - OS



0.15% 11004401



0.60% 11004401



0.03% 11004401

Performance and stability comparable to oleoresins

Typical Oleoresin



0.10-0.25% Oleoresin



0.4-1.0% Oleoresin



0.02-0.04% Oleoresin

## Regulatory Status EU

- Considered as Coloring Food
- Raw material paprika (paprika pulp and paprika seeds) is a traditional food
- Only traditional physical processes used
- Labelling recommendation: 'Coloring Food (paprika oil)' or 'paprika oil'



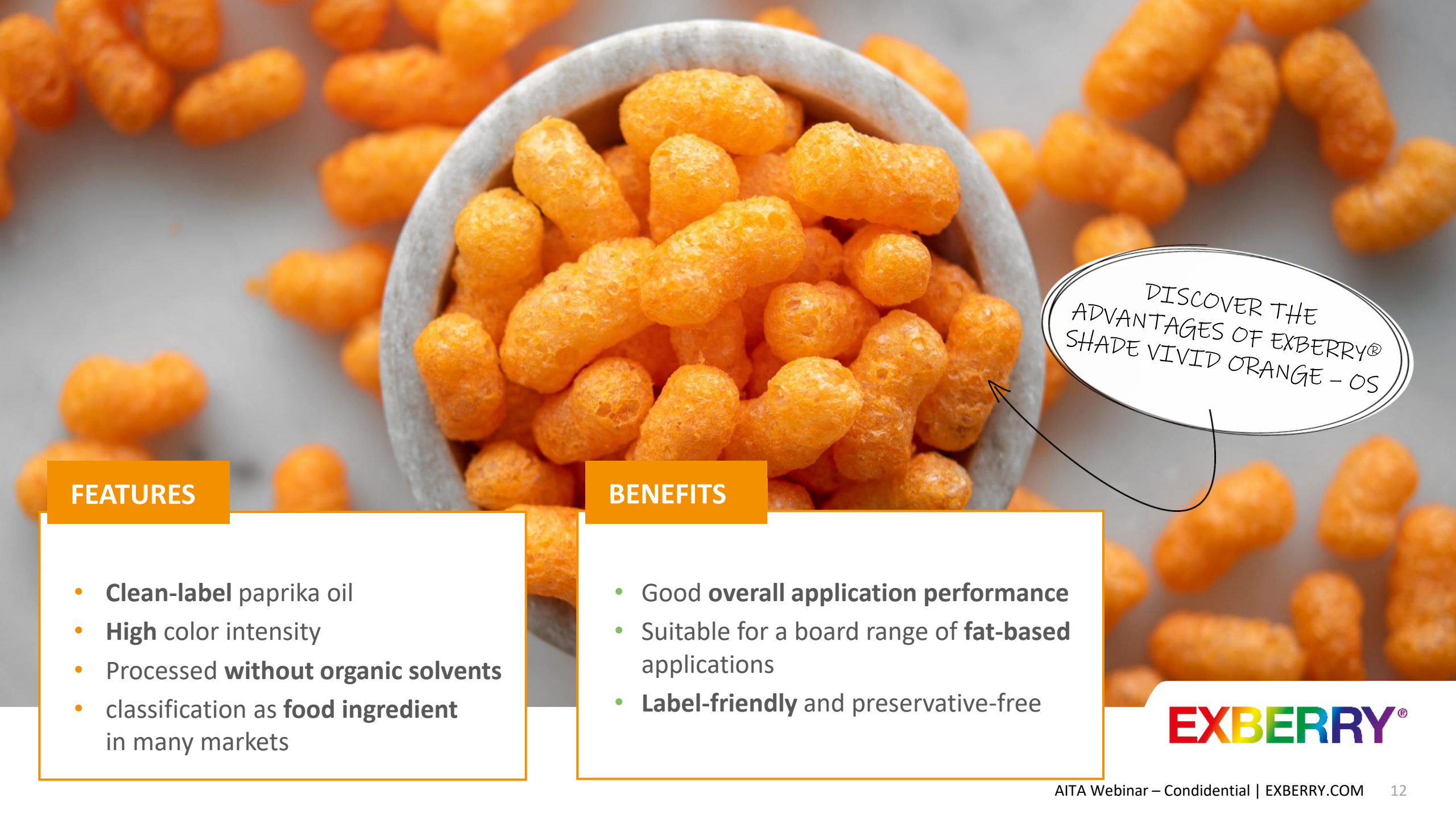
Bread  
0.05% Vivid Orange OS



High ratio Cake  
0.04% Vivid Orange OS



Buttercream Frosting  
0.03% Vivid Orange OS



DISCOVER THE  
ADVANTAGES OF EXBERRY®  
SHADE VIVID ORANGE - OS

## FEATURES

- **Clean-label** paprika oil
- **High** color intensity
- Processed **without organic solvents**
- classification as **food ingredient** in many markets

## BENEFITS

- Good **overall application performance**
- Suitable for a board range of **fat-based** applications
- **Label-friendly** and preservative-free





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# Labelling & Plant Based Foods

# 'Natural' is not always so natural

FOOD ADDITIVES\*/\*\*  
REQUIRE PERMISSION

FOODS  
NO PERMISSION REQUIRED

**ARTIFICIAL ADDITIVE COLORS**

- Chemical processes (synthesis)

**'NATURAL ARTIFICIAL' ADDITIVE COLORS**

- Natural source
- **Selective** extraction
- Mostly formulated with other food additives (emulsifiers etc.)

NATCOL Code of Practice\*\*\*

**COLORING FOODS**

- Edible raw materials
- No selective extraction
- Standardised color shade and intensity

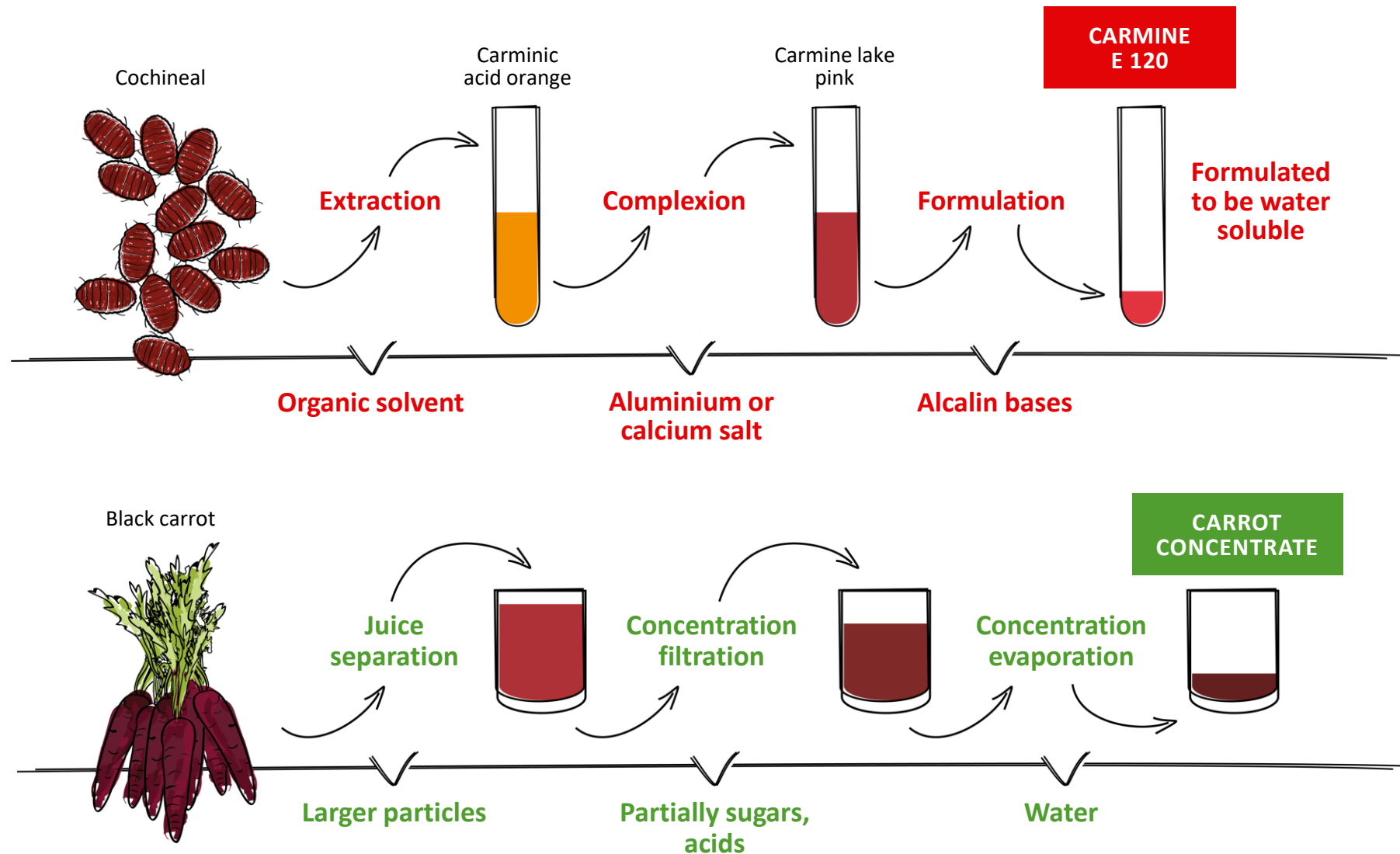


\* REGULATION (EC) No 1333/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on food additives

\*\* COMMISSION REGULATION (EU) No 231/2012 of 9 March 2012 laying down specifications for food additives listed in Annexes II and III to Regulation (EC) No 1333/2008 of the European Parliament and of the Council

\*\*\* NATCOL Code Of Practice For The Classification, Manufacturing, Use And Labelling Of Coloring Foods (EU) 2021

# Coloring Foods versus additive colors



# Objective

## The objective of the Code of Practice

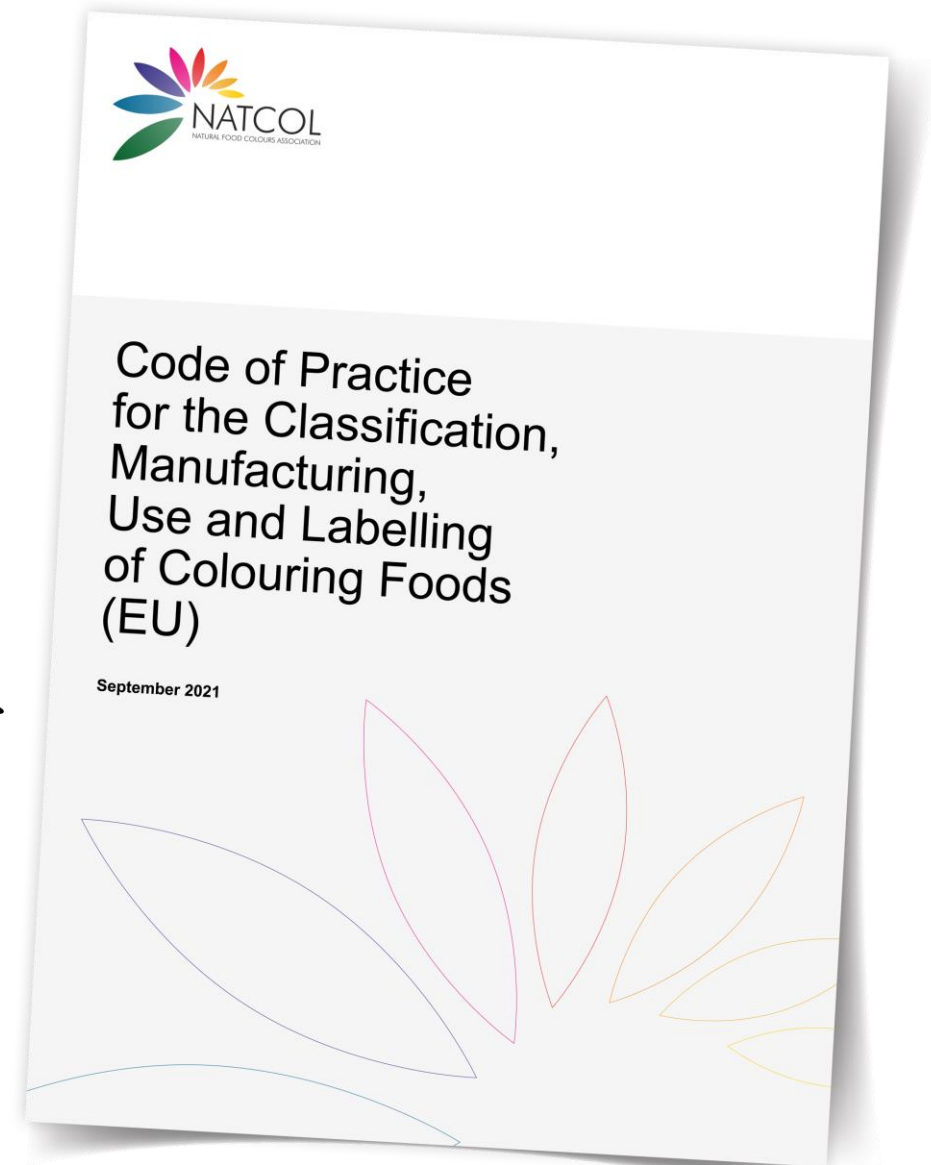
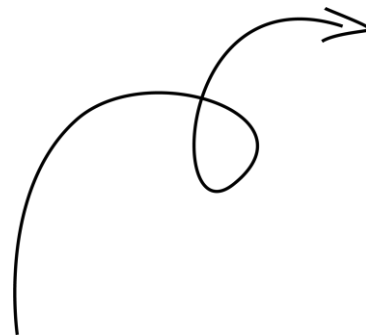
- Describe current industry practice

## The Code

- Must be read in conjunction with the appropriate EU legislation
  - Is intended to serve as a Business-to-Business support tool
  - Includes the principles of the guidance notes
- + more information



**Website:** [NATCOL\\_CodeOfPractice\\_FullDocument\\_23\\_09\\_2021.pdf](#)





# EU REGULATIONS – EXBERRY® HAS GOT IT COVERED

**In the European Union, EXBERRY® concentrates are classified as food ingredients with coloring properties – ‘Coloring Foods’**

They are in full compliance with the requirements of a food ingredient with coloring properties as follows:

- ✓ The source material is a food, which is normally consumed as such within the EU
- ✓ The concentrates contain the characteristic nutritive and aromatic constituents of the source material
- ✓ The concentrates are not selectively extracted\*

Independent inspection company SGS Institut Fresenius has verified that GNT’s EXBERRY® Coloring Foods are not selectively extracted and therefore considered outside the scope of the food additive (color) definition as regulated in Regulation (EC) No 1333/2008.

\* According to Regulation (EC) No 1333/2008 and NATCOL Code of Practice for the Classification, Manufacturing, Use and Labelling of Coloring Foods (EU).

# General Labelling of Coloring Foods

The labelling must be clear and should not mislead the consumer



**Ingredienti**

Olio di semi di girasole\*, Acqua, Aceto di mele\*, Sciroppo di agave\*, Amido di mais, Sale, Proteine di soia\*, Succo di acerola concentrato\*, Senape\*, Succo di limone concentrato\*, Concentrati di frutta e verdura\* (carota\*, zucca\*, mela\*), Addensante: gomma di xanthano, Antiossidante: estratto di rosmarino\*, \*Biologico, SENZA GLUTINE

**'Coloring Food (carrot concentrate)' or 'carrot concentrate'**





67%

Of global consumers who do not eat meat substitutes state that the **products lack taste**

## Trend drivers

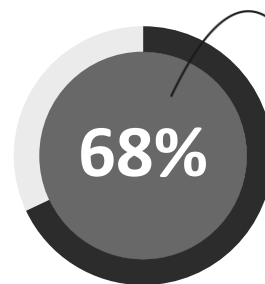
- People are putting importance in health, animal welfare and environment
- The sensory enjoyment of plant-based food plays a crucial role
- Sensory & taste are still crucial: product variety is growing with open-minded consumers. Nevertheless, they do not compromise on taste and indulgence

**Color is the initial characteristic of a product giving a feeling of indulgence and flavor indications**

Sources: Yumda, Innova Market Insights; FMCG Gurus

# Authentic Ingredients

- Non-GMO claims, artificial ingredients and protein content are the most checked details
- Consumers want reassurance that products are free from artificial and chemical ingredients
- They do not make simple assumptions based on appearance alone – they need a reliable proof
- ✓ Coloring Foods are the ideal solution to make plant-based products shine



of European consumers check the ingredient list when buying plant-based products





## Sensory is essential

- Within plant-based food consumers are looking for textures, such as juiciness, tenderness, hardness and chewiness, that are similar to their animal-based counterparts
- An appropriate selection of ingredients and a texturizing process that will lead to the sensory properties is essential
- Regardless if a plant-based food is mimicking an animal-based counterpart or standing for its own, the appearance, taste and texture needs to please the consumer
  - **Color is at the very heart of it**

**Super Sensory**  
is predicted as a top trend for 2023-24





# EXBERRY® Compound Autumn Red & Fall Forest Red

This new EXBERRY® Compound range enables plant-based red meat to change color during cooking – from blood red to greyish well done

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# Introducing EXBERRY® Compound Red Range

- Made from carrot and vegetable oil, EXBERRY® Compound Autumn Red and EXBERRY® Compound Fall Forest Red are manufactured using physical processes and no chemical solvents
- It is the first Compound based on Coloring Foods on the market to transform the color of plant-based meat during cooking
- The Compound Red Range delivers exceptional results while supporting clean and clear labels. As such, it is an ideal solution for a wide range of red meat alternatives

EXBERRY®  
IS PLANT-BASED  
VEGAN, HALAL AND  
KOSHER

TECHNICAL DATA	
Color shade	From blood red to greyish well done
pH	Dependent
Solubility	Not water soluble
Light stability	Very good
Shelf life	Shelf life 6 months at <10°C (50° F) 12 months at -18°C (0° F)

**EXBERRY® Compound Autumn Red**



Made from carrot and palm oil

**EXBERRY® Compound Fall Forest Red**

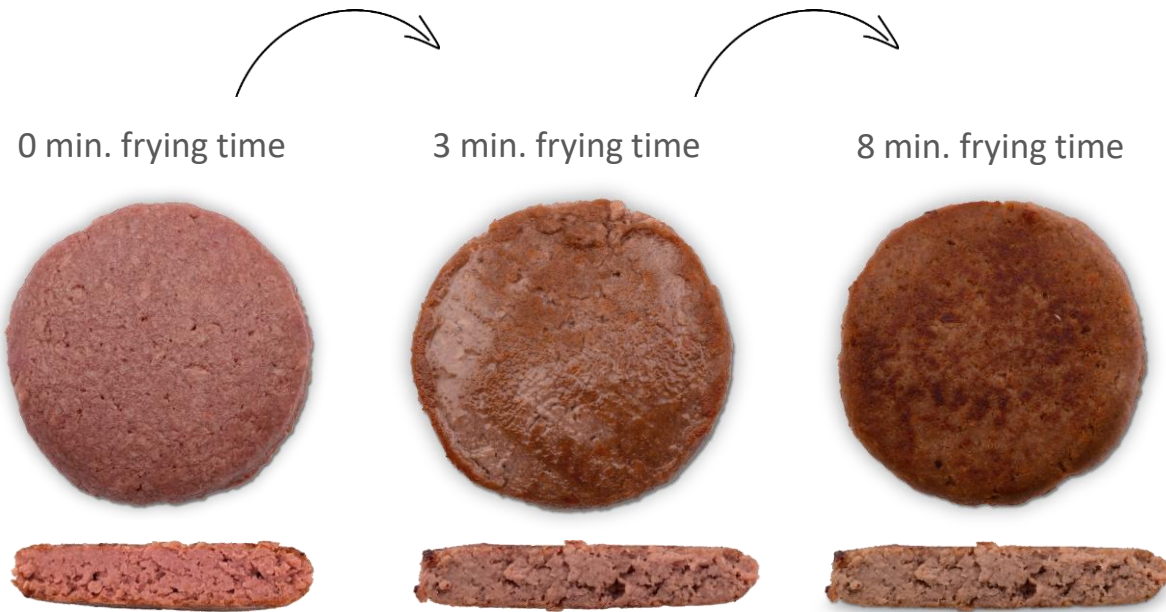


Made from carrot, coconut oil and rapeseed oil



# Color appearance at different heating stages

Plant-based soy burger:



The color shades of single raw materials used in the dough can influence the overall color shade!



The dosage levels of the plant-based burgers are the same



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# We are working on...

Dairy & Fruit\_prep



Frankfurt, Germany  
28-30 November 2023

Spirulina-carrageenan stabilisation



Beverage

Create red and pink dairy  
with clean and clear labels



EXBERRY®

Plant-based



Discover  
plant-based  
brilliant browns



GROWING COLORS EXBERRY®

Confectionary

GNT PLANT-BASED

## Carrot-based EXBERRY®

enables red meat alternatives  
to change shade during cooking

[Read more >](#)

EXBERRY®



TOP TRENDS 2023/2024

Color trends in plant-based foods

EXBERRY®

Trendy TREAT BOX

EXBERRY®

