

Gemma



The Choice Of Natural Thinking...

LIST OF NATURAL COLORANTS

E CODE	PRODUCT	FORM	SOLUBILITY	HALAL	KOSHER
E100	TURMERIC 1% WS	LIQUID	WATER	✓	✓
	TURMERIC 3% WS	LIQUID	WATER	✓	✓
	TURMERIC 5% WS	LIQUID	WATER	✓	✓
	TURMERIC 8% WS	LIQUID	WATER	✓	✓
	TURMERIC 23% WS	LIQUID	WATER	✓	✓
	TURMERIC 1% OS	LIQUID	OIL	✓	✓
	TURMERIC 10% OS	LIQUID	OIL	✓	✓
	TURMERIC PWD	POWDER	WATER	✓	✓
CL	SAFFLOWER 10 WS	LIQUID	WATER	✗	✗
E161b	LUTEIN 0.5% WS	LIQUID	WATER	✗	✓
	LUTEIN 1.0% WS	LIQUID	WATER	✓	✓
	LUTEIN 0.5% OS	LIQUID	OIL	✓	✓
E160b	ANNATTO 2.5% WS	LIQUID	WATER	✗	✓
	ANNATTO 2.5% OS	LIQUID	OIL	✗	✓
	ANNATTO PWD	POWDER	WATER	✗	✗
E160a (iii)	BETA CAROTENE 1% WS	LIQUID	WATER	✓	✓
	BETA CAROTENE 5% WS	LIQUID	WATER	✓	✓
	BETA CAROTENE 5% WS (DARK)	LIQUID	WATER	✓	✓
	BETA CAROTENE 5% OS	LIQUID	OIL	✓	✓
	BETA CAROTENE 30% OS	LIQUID	OIL	✓	✓
	BETA CAROTENE PWD	POWDER	WATER	✓	✓
E160c	PAPRIKA 1% WS	LIQUID	WATER	✓	✓
	PAPRIKA 2% WS	LIQUID	WATER	✓	✓
	PAPRIKA 4% WS	LIQUID	WATER	✓	✓
	PAPRIKA 5% WS	LIQUID	WATER	✓	✓
	PAPRIKA 2% OS	LIQUID	OIL	✓	✓
	PAPRIKA 4% OS	LIQUID	OIL	✓	✓
	PAPRIKA 6% OS	LIQUID	OIL	✓	✓
	PAPRIKA 8% OS	LIQUID	OIL	✓	✓
	PAPRIKA 10% OS	LIQUID	OIL	✓	✓
	PAPRIKA PWD	POWDER	WATER	✓	✓
E163	BLACK CARROT 3% WS	LIQUID	WATER	✓	✓
	BLACK CARROT 10% WS	LIQUID	WATER	✓	✓
	BLACK CARROT 6% OS	LIQUID	OIL	✗	✗
	BLACK CARROT PWD	POWDER	WATER	✓	✓
E162	BEETROOT WS	LIQUID	WATER	✓	✓
	BEETROOT 4% WS	LIQUID	WATER	✗	✓
	RED BEET 2% OS	LIQUID	OIL	✗	✓
	RED BEET PWD	POWDER	WATER	✓	✓
E120	CARMINE 5% WS	LIQUID	WATER	✗	✗
	CARMINE 10% WS	LIQUID	WATER	✗	✗
	CARMINE 1% OS	LIQUID	OIL	✗	✗
	CARMINE 12% OS	LIQUID	OIL	✗	✗
	CARMINE PWD	POWDER	WATER	✗	✗
E141 (ii)	C. CHLOROPHYLLIN 1.6% WS	LIQUID	WATER	✓	✓
	C. CHLOROPHYLLIN 5% WS	LIQUID	WATER	✓	✓
	C. CHLOROPHYLLIN 10% WS	LIQUID	WATER	✓	✓
E141 (i)	C. CHLOROPHYLL 1% OS	LIQUID	OIL	✓	✓
	C. CHLOROPHYLL 8.5% OS	LIQUID	OIL	✓	✓
E141 (ii)	C. CHLOROPHYLLIN PWD	POWDER	WATER	✓	✓
E150D	AMONIUM SULPHIDE CAMEL	LIQUID	WATER	✗	✗
	CAMEL COLOR OS	LIQUID	OIL	✗	✗
E153	CARBON BLACK 10% WS	LIQUID	WATER	✗	✗
	CARBON BLACK 15% WS	LIQUID	WATER	✗	✗
	CARBON BLACK PWD	POWDER	WATER	✗	✗
CL	SPIRULINA BLUE WS	LIQUID	WATER	✗	✗
	SPIRULINA BLUE OS	LIQUID	OIL	✗	✗

Our R&D laboratories are working diligently on the target colours coming from our customers. New formulations are developed by R&D for every colour hue according to our customers want.



TURMERIC



Turmeric is a spice, an extract pigment from *Curcuma Longa L.* There are 3 curcuminoids compounds in Turmeric. Curcumin is a primary compound between them. It is a very strong antioxidant. Also, the curcumin has an antiviral and antifungus influence. It is not toxic.

Curcumin which is that natural pigment is used in industrial areas for instance, food, pharmaceutical, cosmetics vs. There is no known side effect of the curcumin in the concentrations used in food.

The most common uses in the food sector which are that the confectionery, ice-cream, and seasonings.






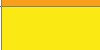

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TECHNICAL INFORMATION

E CODE	E100				
COLOUR	Yellow to reddish yellow				
PH RANGE	2-14				
HEAT STABILITY	✓	✓	✓	✓	
LIGHT STABILITY	✓	✓			
ACID STABILITY	✓	✓	✓	✓	



PRODUCTS

TURMERIC 1% WS	
TURMERIC 3% WS	
TURMERIC 5% WS	
TURMERIC 8% WS	
TURMERIC 23% WS	
TURMERIC 1% OS	
TURMERIC 10% OS	



SAFFLOWER

The safflower is obtained by extracted of *Carthamus tinctoris*. It gives yellow color due to pigment of carthamidin. Safflower is used in industrial areas for instance, food, pharmaceutical, cosmetics vs. There is no known side effect of the safflower in the concentrations used in food.

The most common uses in the food sector which are that non-alcoholic beverage, milk products, confectionery and, bakery products.

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TECHNICAL INFORMATIONS

E CODE	Clean label				
COLOUR	Dark yellow to yellow				
PH RANGE	2-7				
HEAT STABILITY	✓	✓	✓	✓	✓
LIGHT STABILITY	✓	✓	✓	✓	
ACID STABILITY	✓	✓	✓	✓	



PRODUCTS

SAFFLOWER 10% WS



LUTEIN



Lutein is one of the carotenoid groups. The carotenoids are natural pigments occurred with isoprenoid. Plants and animals won attractive colors by the carotenoids.

It is obtained from extracted of marigold flower. The lutein consists of conjugate long carbon chain, and this chain provide yellow color to lutein due to absorbs the light.

The lutein has properties of a strong antioxidant so that it has positive effects on human healths.

It is used in industrial areas for instance food, pharmaceutical, cosmetics etc. There is no known side effect of the lutein in the concentrations used in food.

The most common uses in the food sector which are that non-alcoholic flavoured beverage, confectionery and fine bakery products.




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TECHNICAL INFORMATION

E CODE	E161b				
COLOUR	Dark reddish orange to orange				
PH RANGE	2-14				
HEAT STABILITY	✓	✓	✓	✓	✓
LIGHT STABILITY	✓	✓	✓	✓	
ACID STABILITY	✓	✓	✓	✓	



PRODUCTS

LUTEIN 0.5% WS	
LUTEIN 1%WS	
LUTEIN 0.5% OS	



ANNATTO



Annatto is an one of the carotenoid groups like lutein. The carotenoids are natural pigments ocured with isoprenoit. Plants and animals won attractive colors by the carotenoids.

It is a natural red extract which that obtained from a tree (*Bixa orellana l.*). It is important colorant due to low toxicity, high tinting capacity, several color pigments which are that yellow, red, orange.

The water soluble (Norbixin) and oil soluble (Bixin) forms of annatto can be produced from same raw material. So that, it is one of the natural pigments used in worlwide.

Natural pigments of norbixin and bixin are used in industrial areas for instance food, pharmaceutical, cosmetics etc. There is no known side effect of the annatto in the concentrations used in food.

The most common uses in the food sector which are that some cheese types, extrude products and, fine bakery products.



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TECHNICIAL INFORMATIONS

E CODE	E160b			
COLOUR	Dark reddish orange			
PH RANGE	2-14			
HEAT STABILITY	✓	✓	✓	
LIGHT STABILITY	✓	✓	✓	✓
ACID STABILITY	✓	✓	✓	✓



PRODUCTS

ANNATTO %2.5 WS	
ANNATTO %2.5 OS	



BETA CAROTENE



Beta Carotene is an one of carotenoid groups. The carotenoids are natural pigments occurred with isoprenoit. Plants and animals won attractive colors by the carotenoids. Also, they have biological functions as vitamin A. The beta carotene is produced with chemical and biotechnological methods as industrial. To the biotechnological production of beta carotene, a mushroom is used which mean that *Blakeslea Trispora*. The activity of provitamin A is higher than others carotenoids. The natural pigment of Beta Carotene is used in industrial areas for instance food, pharmaceutical, cosmetics etc. There is no known side effect of the beta carotene in the concentrations used in food. The most common uses in the food sector which are that confectionery, milk products, ice-cream and sauces.









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TECHNICAL INFORMATIONS

E CODE	E160a (iii)				
COLOUR	Yellow to orange				
PH RANGE	2-14				
HEAT STABILITY	✓	✓	✓	✓	
LIGHT STABILITY	✓	✓			
ACID STABILITY	✓	✓	✓	✓	



PRODUCTS

BETA CAROTENE 1% WS	
BETA CAROTENE 5% WS	
BETA CAROTENE 5% WS (DARK)	
BETA CAROTENE 1% OS	
BETA CAROTENE 5% OS	
BETA CAROTENE 30% OS	
BETA CAROTENE 1% POWDER	
BETA CAROTENE 5% POWDER	



PAPRIKA



Paprika is an one of carotenoid groups. It is obtained from suitable fruits of peppers as *Capsicum Annum Linn.*

The paprika oleoresin contain 3 natural pigments which are that capsanthin, capsorubin ve carotene. The paprika is red-orange from bright orange because of the pigments.

There is no known side effect of the paprika in the concentrations used in food.

The most common uses in the food sector which are that confectionery, seasonings , ice-cream, processed meat products and fine bakery products.

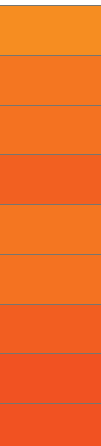
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TECHNICAL INFORMATIONS

E CODE	E160c				
COLOUR	Dark orange to reddish orange				
PH RANGE	2-14				
HEAT STABILITY	✓	✓	✓	✓	
LIGHT STABILITY	✓	✓			
ACID STABILITY	✓	✓	✓	✓	



PRODUCTS

PAPRIKA 1% WS	
PAPRIKA 2% WS	
PAPRIKA 4% WS	
PAPRIKA 5% WS	
PAPRIKA 2% OS	
PAPRIKA 4% OS	
PAPRIKA 6% OS	
PAPRIKA 10% OS	
PAPRIKA POWDER CWD	



COPPER CHLOROPHYLLIN



Copper chlorophyllin is a hydrophilic molecules which produced from chlorophyllin. It is obtained result change with copper of magnesium ions.

Copper chlorophyllins are used in industrial areas as food, pharmaceutical, cosmetics. There is no known a side effect of copper chlorophyllin used in foods

The most common uses in the food sector which are that confectionery, ice-creams, and also beverages powders.


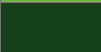
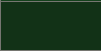
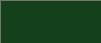
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TECHNICAL INFORMATIONS

E CODE	E141 (ii)				
COLOUR	Dark green to green				
PH RANGE	4-14				
HEAT STABILITY	✓	✓	✓	✓	✓
LIGHT STABILITY	✓	✓	✓	✓	
ACID STABILITY	✓	✓			



PRODUCTS

COP. CHLOROPHYLLIN 1.6% WS	
COP. CHLOROPHYLLIN 5% WS	
COP. CHLOROPHYLLIN 10% WS	
COP. CHLOROPHYLLIN POWDER	



COPPER CHLOROPHYLL



Copper Chlorophyll is a pigment found on leaves, vegetables, grass, photosynthesis plants. It is obtained by extracted with a solvent of mulberry leaf. Copper Chlorophyll is obtained by added of copper salts to natural copper. It is obtained by amendment with copper of magnesium in Chlorophyll.

Copper chlorophylls are used in industrial areas as food, pharmaceutical, cosmetics. There is no known a side effect of c.chlorophyllin used in foods.

The most common uses in the food sector which are that confectionery and cream.



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TECHNICAL INFORMATIONS

E CODE	E141 (i)				
COLOUR	Dark green to green				
PH RANGE	4-14				
HEAT STABILITY	✓	✓	✓	✓	✓
LIGHT STABILITY	✓	✓	✓		
ACID STABILITY	✓	✓	✓		



PRODUCTS

COP. CHLOROPHYLL 1% OS	
COP. CHLOROPHYLL 8.5% OS	



BLACK CARROT



Black carrot is a colorant in the group of anthocyanins. Anthocyanins are the most significant group of flavonoid pigments. Anthocyanins can have red, purple and blue colors as a natural colorant. Black carrot(*Daucus corata*) preferred because of its high stability compared to other sources. It colors red and pink at low pH ranges, as the pH range increase they become blue and purple.

Black carrots are used in industrial areas as food, pharmaceutical, cosmetics. There is no known a side effect of black carrot used in foods.

The most common uses in the food sector which are that confectioneries, dairy products and non-alcoholic beverages.













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TECHNICAL INFORMATIONS

E CODE	E163				
COLOUR	Dark reddish purple				
PH RANGE	2-4.5				
HEAT STABILITY	✓	✓	✓		
LIGHT STABILITY	✓	✓	✓	✓	
ACID STABILITY	✓	✓	✓	✓	✓



PRODUCTS

	pH=2-3	pH=5-6	pH=10-12
BLACK CARROT 3% WS			
BLACK CARROT 10% WS			
BLACK CARROT 6%OS			
BLACK CARROT POWDER			



RED BEET



The main pigment of Red Beet Root is betanin. Betanin is a water-soluble pigment that uses as a colorant in food. Red Beets are used in industrial areas as food, pharmaceutical, cosmetics. There is no known a side effect of red beet used in foods.

The most common uses in the food sector which are that milk products, confectionary, ice cream and light bakery products.

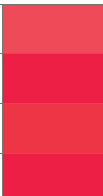
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TECHNICAL INFORMATIONS

E CODE	E162				
COLOUR	Reddish pink to dark pink				
PH RANGE	4.5-10				
HEAT STABILITY	✓	✓			
LIGHT STABILITY	✓	✓	✓		
ACID STABILITY	✓	✓	✓		



PRODUCTS

BEETROOT WS	
RED BEET %4 WS	
RED BEET OS	
RED BEET POWDER	



CARMINE

Carmine or carminisitic acid is a kind of color pigment obtained from *Dactylopius coccus beetle*. This kind of insect lives on the Opuntia genus cactus plant. They prevent other insects to live in the cactus plant and so they produce pigments. Pigments are prepared from the eggs and body of *Dactylopius coccus*.

Carmine is the most resistant one to heat and oxidation in all natural pigments. Also, it is more stable than some of the synthetic food coloring.

Carmines are used in industrial areas as food, pharmaceutical, cosmetics. There is no known a side effect of carmine used in foods.

The most common uses in the food sector which are that processed meat products, beverages, fine bakery products and confectionary.





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TECHNICAL INFORMATIONS

E CODE	E120				
COLOUR	Dark red to red				
PH RANGE	3.5-10				
HEAT STABILITY	✓	✓	✓	✓	✓
LIGHT STABILITY	✓	✓	✓	✓	✓
ACID STABILITY	✓	✓	✓	✓	



PRODUCTS

CARMINE 5% WS	
CARMINE 10% WS	
CARMINE 1% OS	
CARMINE 12% OS	



SPIRULINA BLUE

Spirulina *Arthrospira platensis* accepted as a natural blue color source and it is obtained from cyanobacteria. Spirulina blue contains chlorophyll and phycobilins which is used for photosynthesis.

Phycobilins are phycocyanins. They provide characteristic green blue color with chlorophyll. As a coloring agent, it is advantageous to obtain many different color tones.

It is used in industrial areas as food, pharmaceutical, cosmetics. There is no known a side effect of spirulina used in foods. The most common uses in the food sector which are that confectionary, ice cream and dry beverage powders.

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TECHNICAL INFORMATIONS

E CODE	Clean label				
COLOUR	Greeny blue				
PH RANGE	5-14				
HEAT STABILITY	✓	✓	✓	✓	
LIGHT STABILITY	✓	✓	✓	✓	
ACID STABILITY	✓	✓			



PRODUCTS

SPIRULINA BLUE WS	
SPIRULINA BLUE OS	



CARBON BLACK

Vegetable Carbon or Carbon Black, is a very fine-grained elementary carbon obtained by the combustion reaction of hydrocarbons. It is obtained by burning bamboo wood in industry.

Carbon Black is used in industrial areas as food, pharmaceutical, cosmetics. There is no known a side effect of carbon black used in foods.

The most common uses in the food sector which are that confectionary, ice cream and fine bakery products.


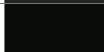
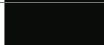
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TECHNICAL INFORMATIONS

E CODE	E153				
COLOUR	Black				
PH RANGE	2-14				
HEAT STABILITY	✓	✓	✓	✓	✓
LIGHT STABILITY	✓	✓	✓	✓	
ACID STABILITY	✓	✓	✓	✓	



PRODUCTS

CARBON BLACK %10 WS	
CARBON BLACK %15 WS	
CARBON BLACK POWDER	



CARAMEL COLOR

The caramel colorant is produced by controlled heat treatment of carbohydrates (sugar).

E150a: Caramel (Plain)

E150c: Amonium Caramel

E150d: Amonium Sulphide Caramel

Caramel colorants are used in industrial areas as food, pharmaceutical, cosmetics

The most common uses in the food sector which are that beverages, seasonings and fine bakery products.

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TECHNICAL INFORMATIONS

E CODE	E150a / E150c / E150d				
COLOUR	Dark brown to brown				
PH RANGE	2-14				
HEAT STABILITY	✓	✓	✓	✓	✓
LIGHT STABILITY	✓	✓	✓	✓	
ACID STABILITY	✓	✓	✓	✓	✓



ÜRÜNLER

E150a LIQUID CARAMEL	
E150c LIQUID CARAMEL	
E150d LIQUID CARAMEL	
CARAMEL OS (E150d)	

