



azienda chimica e farmaceutica

TECHNICAL DATA SHEET

Product: **BETACAROTENE SOSP.30% E 160**

INCI NAME Beta-Carotene, Tocopherol, Zea mays oil
INCI NAME USA Beta-Carotene, Tocopherol, Zea Mays (Corn) Oil
CAS 7235-40-7 // 10191-41-0 // 8001-30-7
EINECS / ELINCS 230-636-6 // 233-466-0 // 232-281-2

TEST	METHOD	min - max	u.m.
Aspetto		olio viscoso	
Colore		rosso bruno	
* Identificazione IR		conforme alla specifica	
Assorbanza in cicloesano			
- Assorbanza massima		453 - 457	nm
- Assorbanza relativa a 340 nm		$\leq 0,080$	
Titolo Betacarotene (A (1/1) 455 nm=2500 in Cicloesano)		$\geq 30,00$	%
Rev.		1	
Approval Date		22/02/2013	

* saggi non obbligatori



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Beta-carotene, provitamin A

CAS No. 7235-40-7
EINECS No. 230-636-6

Colorant code numbers EC: E 160 a
Color Index: 40 800 food orange 5 DFG: L-orange 3
Class name
Colorant; vegetable oil

Description

Brick-red, oily dispersions with a neutral flavor containing beta-carotene in microcrystalline form in vegetable oils.

Stabilization/Stability

The Lucarotin dispersions do not contain a stabilizer. Stored in the unopened original packaging at room temperature (max. 25°C), the products are stable for at least 36 months. As beta-carotene may sink to the bottom of the container, the dispersions should always be stirred prior to use.

Storage

The products are sensitive to atmospheric oxygen, light, heat and moisture. Lucarotin dispersions should therefore be stored under nitrogen in the tightly sealed, lightproof packaging in a cool place. Once opened, it is recommended to use the remaining contents as quickly as possible.

Heat

Beta-carotene starts to isomerize at 60°C, which may result in a slight loss of color.

Heavy metals Declaration:

Heavy Metals total ≤ 10 ppm
Arsenic ≤ 1.0 ppm
Lead ≤ 1.0 ppm
Mercury ≤ 0.1 ppm
Cadmium ≤ 0.5 ppm

Food regulations

Beta-carotene is approved for use as a food colorant in most countries. However, the regulations in the respective countries should be observed.

Applications

Dietary supplements:

The Lucarotin dispersions are used in soft capsules as provitamin A, as an active ingredient and as a colorant.

Food products:

Used as both yellow-orange colorant and provitamin A. Even at low concentrations, betacarotene dispersions have a high tinctorial strength. They are suitable for coloring as well as for standardizing the color of oils, fats, margarine, butter, processed cheese, cheese spreads, milk replacement products, ice cream, soups, sauces, fillings of baked goods and egg products. They are added to the oily phase.



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Important: Beta-carotene dispersions should be stirred briefly prior to use.
The Lucarotin dispersions are usually processed as stock solution in a suitable quantity of oil, prepared by careful heating to 40°C. This stock solution is then added to the food product.

The table below provides approximate of 100% beta-carotene, which are added to 1 kg of various food products. The quantity is dependent on the desired shade and should be determined in small scale tests.

- Butter 14-16 mg/kg
- Cream fillings 1-10 mg/kg
- Egg products 2-5 mg/kg
- Fats, oils 7-10 mg/kg
- Replacement products based on vegetable oils 2-5 mg/kg
- Cheese preparations 1-2 mg/kg
- Margarine 6-12 mg/kg
- Salad dressings 3-9 mg/kg
- Processed cheese 10-25 mg/kg
- Sauces 4-20 mg/kg
- Ice cream 2-6 mg/kg
- Soups 0,2-1 mg/kg

- butter: the stock solution is heated to 45°C and added to the cream
- pasta products containing egg: a stock solution containing about 0.5% beta-carotene in oil is evenly mixed with a defined quantity of flour; the colored premix is added to the flour prior to production
- imitation cheese: the beta-carotene stock solution in vegetable oil is heated to 50-60°C and added during production
- margarine: the beta-carotene dispersion is completely dissolved in the oily phase prior to emulsification
- salad dressings: the vegetable oil is heated to 45-50°C before adding the beta-carotene dispersion
- processed cheese: a beta-carotene stock solution is prepared in melted butter and added to the cheese mixture prior to the melting process
- ice cream: the required quantity of beta-carotene is stirred into fat or oil until it is completely dissolved; the temperature of the oil should be at least 20°C, preferably 37-50°C
- soups: the oil for the soup is heated and the betacarotene dispersion dissolved in it

Composition: 1g contains

Tocopherol: 7 mg
Zea mays oil: 693 mg
β-Carotene: 300 mg