

JYB Animal Nutritional Products

Data Sheet

Caroplus[®]10%

Product identification

Product code: 10502

Chemical name: β,β -carotene

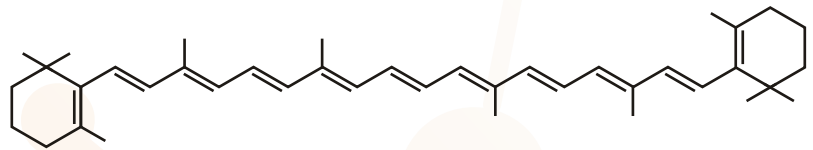
Synonyms: β -carotene

CAS number: 7235-40-7

EINECS: 230-636-6

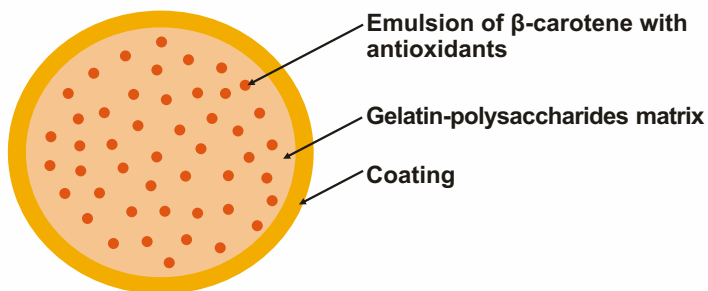
Molecular formula: $C_{40}H_{56}$

Molecular weight: 536.85



Description

The product contains β -carotene dispersed finely in polysaccharides-porcine gelatin protective matrix. Ethoxyquin and ascorbyl palmitate are added as antioxidants.



The product is manufactured by the spray-dried coating technology and the use of antioxidants protects the conjugated double bond structure of the β -carotene molecule from the very sensitive oxidative decomposition when exposed to air, heat and humidity. The protective matrix provides full protection against physical constrains occurring with high-speed mixer or during pelleting or extruding of feed.

Structure of a spray-dried coated microcapsule

Main benefits of the stabilized matrix during feed production

The new active matrix confers unique physical properties to carotenoids with the following advantages during the feed manufacturing process:

1. Handling of a free-flowing, fine micro-granular and dust free powder form.
2. Mixing of a matrix with stronger hardness which is less subject to abrasive mechanical forces that is responsible for the loss of active substances.
3. During conditioning and pelleting, the matrix is less subject to shear forces and injection of steam during pelleting or extruding processes.
4. Distribution of a homogeneous fine granular powder for even product potency in the feed.
5. Stability of the carotenoids with improved integrity characteristics for a sustained release and absorption in the digestive tract.

Specifications

Content	min. 10% β -carotene
Physical and chemical properties	
Appearance	red to reddish brown, free-flowing particles
Particle size (US standard sieve)	100% through no. 20 (\varnothing 0.85 mm) min. 95% through no. 30 (\varnothing 0.60 mm) max. 15% through no. 120 (\varnothing 0.13 mm)
Loss on drying	max. 8%
Solubility	disperse in warm water



Uses

As a supplement for animal nutrition.

Benefit

- Improves fertility rate
- Improves follicle quality
- Reduces service interval
- Protects the mucosa

β -Carotene deficiency symptoms

If the animals are keeping indoors and feeding low β -carotene feeds. The following symptoms may occur:

- Retarded ovulation
- Lack of fertility
- Early abortion
- Silent oestrus
- Embryonic death
- Lower resistance against infectious diseases

Dosage

Animal	β -Carotene (mg/animal/day)	Period of application from	to
Breeding sows	400 200	1 week before weaning after mating	mating new pregnancy
Breeding mares	500	4 weeks before foaling	10 weeks after foaling
Dairy cows	300 – 500	3 – 4 weeks before calving	new pregnancy
Calves (milk replacer)	100 mg/animal/day for the first 3 weeks of milk feeding		
Breeding rabbits	10 – 20 mg/kg of complete feed		
Dogs and cats	30 – 50 mg/kg of complete feed		

Conversion factors

International Units

1 RE = 3.33 IU vitamin A activity from retinol

1 RE = 10 IU vitamin A activity from β -carotene

Retinol Equivalents (REs)

1 RE = 1 μ g retinol

1 RE = 6 μ g β -carotene

Stability and storage

The product is sensitive to air, heat, humidity and light. The product may be stored for 24 months from the date of manufacture in the unopened original packaging and stored in cool, dry place. Keep the packaging tightly closed. Once opened, use the contents quickly.

Packing

2 x 5 kg aluminium foil bag in paper box

20 kg aluminium foil bag in paper box

Safety

The product is safe for the intended purpose. Avoid ingestion, inhalation of dust or direct contact. Operators should use protective clothing, gloves, goggles and approved mask. For full safety information, please refer to the safety data sheet.

The information of this data sheet is based on our current knowledge and experience. The product is not to be used for any purposes other than those specified in this publication. It is always the responsibility of the user to take all necessary measures to comply with the local regulations. It does not relieve the users from carrying out their own studies and tests. The information describes the properties of the product only, it is not a guarantee of the product's properties.

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