

JYB Animal Nutritional Products

Data Sheet

ApoEplus[®]10S

Product identification

Product code: 10803

Category: Sensory additives

Functional group: Colourants

Identification number: 2a, 160f

Chemical name: Ethyl 8'-apo-β-caroten-8'-oate

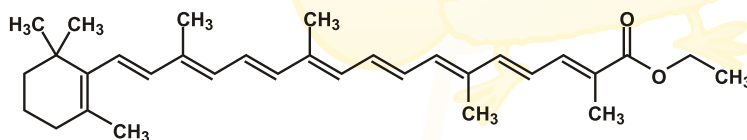
Synonyms: Ethyl ester of β-apo-8'-carotenoic acid, apocarotenoic acid ethyl ester, apocarotenoic ester, β-apo-8-ester, apoester

CAS number: 1109-11-1

EINECS: 214-173-7

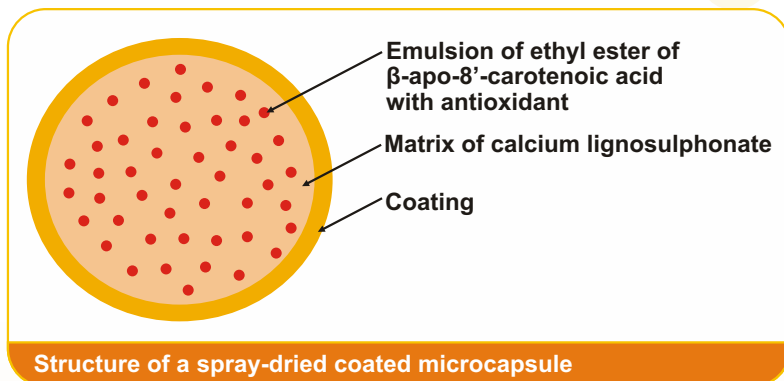
Molecular formula: C₃₂H₄₄O₂

Molecular weight: 460.7



Description

ApoEplus[®]10S consists of orange-red, free-flowing beadlets. Each individual beadlet contains ethyl ester of β-apo-8'-carotenoic acid in a starch coated organic matrix of calcium lignosulphonate. Butylhydroxytoluene is added as antioxidant.



The product is manufactured by the spray-dried coating technology and the use of antioxidant protects the conjugated double bond structure of the ethyl ester of β-apo-8'-carotenoic acid 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.

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. 100 mg ethyl ester of β-apo-8'-carotenoic acid per g of the product
Physical and chemical properties	
Appearance	orange to red, free-flowing particles
Particle size (US standard sieve)	100% through no. 20 (Ø 850 µm) min. 95% through no. 30 (Ø 600 µm) max. 15% through no. 120 (Ø 125 µm)
Loss on drying	max. 8%

Uses

As a colourant used in feedingstuffs for laying hens and chickens for fattening.

Dosage

Chickens for fattening

Maximum 15 mg of ethyl ester of β -apo-8'-carotenoic acid per kg of complete feedingstuffs.

Laying poultry

Maximum 8 mg of ethyl ester of β -apo-8'-carotenoic acid per kg of complete feedingstuffs. The required dosage of canthaxanthin and ethyl ester of β -apo-8'-carotenoic acid for layer feeds should be adjusted in according to the natural yellow xanthophylls content in feedingstuffs and the desired colouration effect.

Natural yellow xanthophylls from feedstuffs (ppm)	Recommendation of canthaxanthin and ethyl ester of β -apo-8'-carotenoic acid (mg per kg of feed) for a desired value of the colour scale of :									
	6	7	8	9	10	11	12	13	14	15
0 - 2	■ -- ● 2.0	■ -- ● 2.5	■ 0.5 ● 2.5	■ 1.0 ● 2.5	■ 1.0 ● 2.5	■ 2.5 ● 3.0	■ 3.5 ● 3.0	■ 5.0 ● 3.0	■ 6.0 ● 3.5	■ 7.0 ● 3.5
2 - 4	■ -- ● 1.5	■ -- ● 2.0	■ 0.5 ● 2.0	■ 1.0 ● 2.0	■ 1.5 ● 2.0	■ 2.5 ● 2.0	■ 3.5 ● 2.5	■ 5.0 ● 2.5	■ 6.0 ● 3.0	■ 7.0 ● 3.0
4 - 6	■ -- ● 1.0	■ -- ● 1.5	■ 0.5 ● 1.5	■ 1.0 ● 1.5	■ 1.5 ● 2.0	■ 2.5 ● 2.0	■ 3.5 ● 2.0	■ 5.0 ● 2.0	■ 6.0 ● 2.5	■ 7.0 ● 3.0
6 - 8	■ -- ● 0.5	■ -- ● 1.0	■ 0.5 ● 1.0	■ 1.0 ● 1.0	■ 1.5 ● 1.5	■ 2.5 ● 1.5	■ 3.5 ● 1.5	■ 5.0 ● 2.0	■ 6.0 ● 2.0	■ 7.0 ● 2.5
8 - 10	--	--	■ 0.5 ● --	■ 1.0 ● --	■ 1.5 ● --	■ 2.5 ● --	■ 3.5 ● --	■ 5.0 ● 1.0	■ 6.0 ● 1.5	■ 7.0 ● 1.5
10 - 12	--	--	■ 0.5 ● --	■ 1.0 ● --	■ 1.5 ● --	■ 2.5 ● --	■ 3.5 ● --	■ 5.0 ● --	■ 6.0 ● 1.0	■ 7.0 ● 1.0
12 - 16	--	--	--	■ 0.5	■ 1.5	■ 2.5	■ 3.5	■ 5.0	■ 6.0	■ 7.0
16 +	--	--	--	■ 0.5	■ 1.0	■ 2.5	■ 3.5	■ 5.0	■ 6.0	■ 7.0

■ supplement of canthaxanthin (mg per kg of feed)

● supplement of ethyl ester of β -apo-8'-carotenoic acid (mg per kg of feed)

Stability and storage

The product is sensitive to air, heat, humidity and light. The product may be stored for 18 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

4 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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