

PRODUCT TECHNICAL DOSSIER**BETA CAROTENE (NATURAL) 10%****Product Code:**

P03252

Raw Material Full Name:

Natural Beta-Carotene Beadlet 10% CWS-S

Raw Material Full Botanical/Chemical/Latin/Trade Name/Synonyms:

Natural Beta-Carotene Beadlet 10% CWS-S

This material is Food Grade:

Yes

Vegan / Vegetarian Status:

Suitable for both

Limit/Range/Specification:

Beta Carotene Min 10% (Tested by HPLC)

Natural Beta-Carotene Beadlet 10% CWS-S consists of red or reddish-brown beadlets, with white spots of food starch. The microencapsulated beadlets are manufactured with advanced spray and starch-catching drying technology. The individual parties containing Natural Beta-Carotene (obtained by fermentation from *Blakeslea trispora*) are finely dispersed in the matrix of modified food starch, coated with corn starch. dl-alpha-tocopherol are added as antioxidants.

CAS Number:

7235-40-7

EC/EINECS Number:

230-636-6

E No

E160a (iii)

Molecular Formula for the raw material: $C_{40}H_{56}$ **Average Molecular weight:**

536.85



Solubility in Water:

Soluble in water (20°C)

Solubility in Alcohol:

Not soluble

Particle Size/Percentage passed through:

Pass through sieve 20 Mesh	100%
Pass through sieve 40 Mesh	≥85%
Pass through sieve 100 Mesh	≤15%

Bulk Density:

Approximately 0.6 g/cm³

Loss on Drying:

Max 8%

Country of Origin:

China

Country of Origin of the Manufacture:

China

Origin of Product – Synthetic, Plant, Mineral, Animal, Fish or Fermented:

Natural Beta-Carotene	Fermented
Modified Food Starch	maize derivatives
Corn Starch	maize derivatives
DL-alpha-Tocopherol	Synthetic

Compound Ingredients Origin, Function and Percentages:

Natural Beta Carotene	10%
Modified Food Starch	69%
Corn Starch	19%
DL-alpha-Tocopherol	2%

Shelf Life from Date of Manufacture:

24 months

Storage Conditions:

It should be protected from light, heat, oxygen and moisture. Keep the container tightly closed. Once opened, use contents as soon as possible.



Appearance (Fine/Crystals/Crystalline/Hygroscopic):

Red or reddish-brown Beadlets with white spots of food starch

Flavour/Taste:

Characteristic

Odour:

Characteristic

Microbiological Test

Total Viable Count:

Max 1000 cfu/g

Yeast & Moulds:

Max 100 cfu/g

E. coli:

Absent

Salmonella:

Absent

Heavy Metals

Total Heavy Metals:

Max 10ppm

Arsenic:

Max 3ppm

Pharmacopeia Standard Used:

USP

There are no nuts in this recipe; however, we cannot guarantee that the raw materials entering the site are nut free.

Please note that surveillance testing may mean that not all the parameters stated on this specification are tested for every batch.



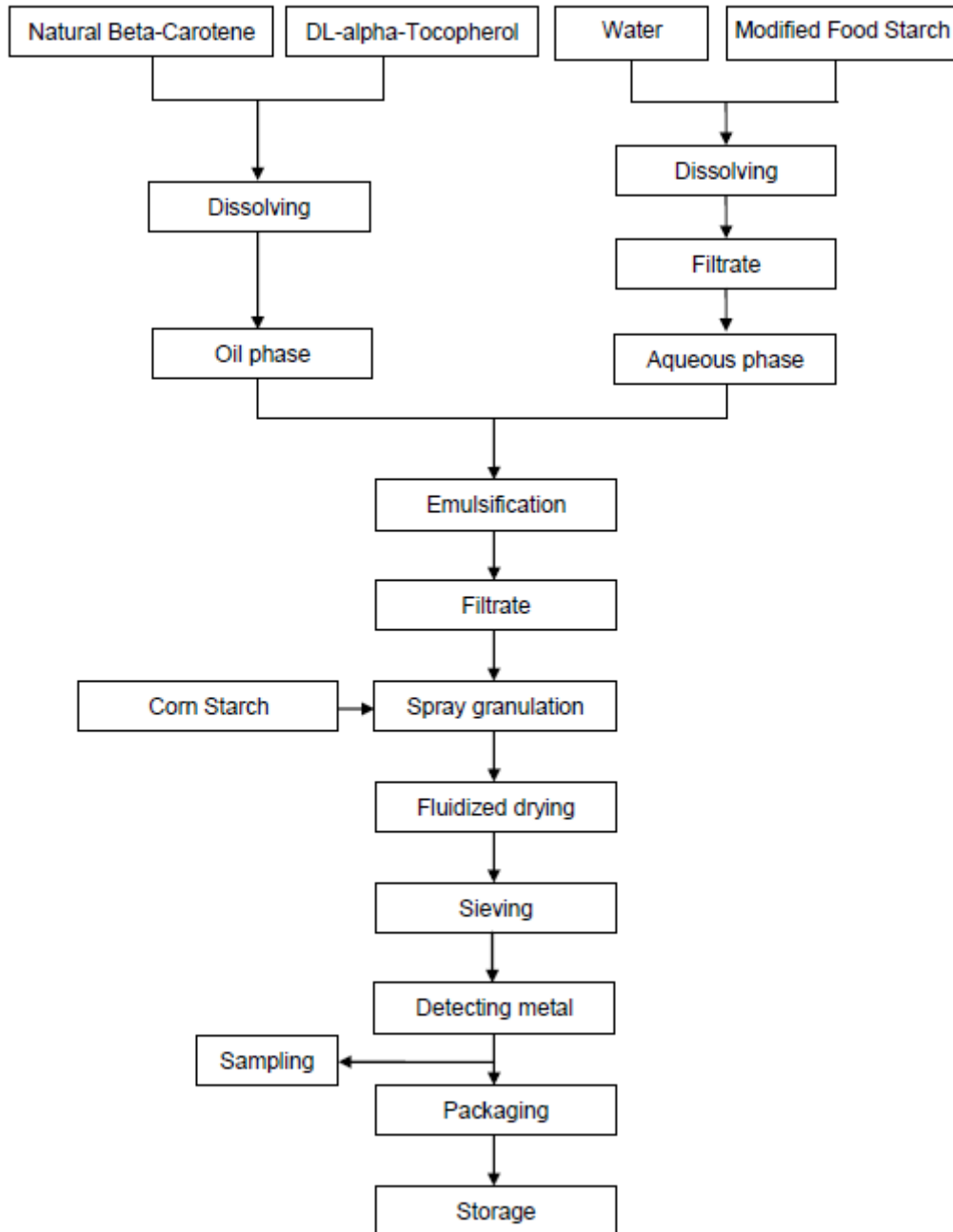
ALLERGENS	Product Contains YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Peanuts and Peanut Derivatives (including possible cross contamination)	NO	NO	
Other Nut and Nut Derivatives <i>Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (Anacardium occidentale), Pecan nut (Carya illinoensis (Wangenh.) K. Koch), Brazil nut (Bertholletia excelsa), Pistachio nut (Pistacia vera), Macadamia nut and Queensland nut (Macadamia ternifolia)</i>	NO	NO	
Sesame Seeds and Sesame Seed Derivatives	NO	NO	
Other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds)	NO	NO	
Milk and Milk Derivatives (including lactose)	NO	NO	
Egg and Egg Derivatives	NO	NO	
Cereals and Derivatives containing OR POTENTIALLY CONTAMINATED WITH Gluten <i>(wheat, wheatgrass, faro, freekeh, spelt, kamut, rye, oats, barley, barley grass)</i>	NO	NO	
Soya and Soya Derivatives	NO	NO	
Lupin and Lupin Derivatives	NO	NO	
Mustard and Mustard Derivatives	NO	NO	
Celery or Celery Derivatives (including Celeriac)	NO	NO	
Fish and Fish Derivatives	NO	NO	
Molluscs and their Derivatives	NO	NO	
Crustaceans and their Derivatives	NO	NO	
Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre	NO	NO	



ADDITIVES / CONTAMINANTS / DIETARY REQUIREMENTS	Product Contains YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Additives	NO	NO	
Antioxidants	YES	YES	DI -alpha-Tocopherol
Ethylene Oxide	NO	NO	
Gelatine	NO	NO	
Flavourings (Artificial / Nature Identical / Natural / Smoked)	NO	NO	
Maize / Corn and any Derivatives	YES	YES	Modified Food Starch and Corn Starch
Legumes / Pulses	NO	NO	
Rice and Rice Derivatives	NO	NO	
Added Salt	NO	NO	
Added Sugar / artificial or natural sweeteners	NO	NO	
Aspartame	NO	NO	
BHA / BHT (E320 / E321)	NO	NO	
Caffeine	NO	NO	
Colours (Artificial / Nature Identical / Natural / Smoked)	NO	NO	
Dextrose	NO	NO	
Dioxins	NO	NO	
MSG (Added and Naturally Occurring E621) or Glutamates (E620 to E625)	NO	NO	
Nucleotides (E627, E630, E631, E635)	NO	NO	
Polyols (sugar alcohols)	NO	NO	
Benzoates (E210 / E219)	NO	NO	
Sorbic Acid (E200, E203)	NO	NO	
Any other Preservatives	NO	NO	
Ethanol	NO	NO	
Honey	NO	NO	
Lactose	NO	NO	
Yeast and Yeast Derivatives	NO	NO	
All Animal Products (Beef, Pork, Poultry or other) and Derivatives (which may include growth/yield hormones, antibiotics etc.)	NO	NO	
Bovine Products or Derivatives (which may include growth/yield hormones, antibiotics etc.)	NO	NO	



PRODUCTION FLOW CHART



CONFIRMATION OF BSE/TSE STATUS

This is to certify that this product complies with all relevant current UK and EU Legislative requirements in regard to Transmissible Spongiform Encephalopathies (TSE) and Bovine Spongiform Encephalopathy (BSE) for human food, and so is free of TSE/BSE.

This is also to certify that, during the course of their manufacture, the above-mentioned product did not come into contact with any materials, which could be derived from TSE/BSE risk materials.

CONFIRMATION OF GM STATUS

This is to certify that this product is not manufactured from GM raw materials and is therefore not subject to labelling under regulations 1829/2003/EC and 1830/2003/EC.

CONFIRMATION OF NON IRRADIATION STATUS

This is to certify that this product, whole or in part, has not been subjected to Ionising Radiation as per European Directives 1999/3/EC.

CONFIRMATION OF NANDROLONE STATUS

This is to certify that this product, whole or in part, has not come into contact with Nandrolone or any of its precursors in any way.

CONFIRMATION OF IOC PRODUCT STATUS

This is to certify that this product, whole or in part, has not come into contact with any product/s, which is banned by the IOC (International Olympics Committee) and or WADA.

CONFIRMATION OF ANIMAL TESTING STATUS

This is to certify that all the products sold by Cambridge Commodities have not been tested on animals in any part of its manufacture in accordance with regulation 86/609/EEC.

CONFIRMATION OF PESTICIDES STATUS

This is to certify that the above-mentioned product complies with the regulation (EC) No.396/2005 of 23rd February 2005 and commission Regulation (EU) No. 559/2011 of 7th June 2011 amending annexes II and III of the above Regulation.

CONFIRMATION OF NANOPARTICLE STATUS

This is to certify that unless otherwise stated, the above-mentioned product is free of nanoparticles. Commission Recommendation 2011/696/EU, defines as follows: "'Nanomaterial' means a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm".



MATERIAL SAFETY DATA SHEET**Section 1 Identification of the Substance/Mixture and of the Company/Undertaking**

Product name: Natural Beta-Carotene Beadlet 10%
Chemical formula: C₄₀H₅₆
Use: Used as a nutrient and colorant
Company: Cambridge Commodities Limited
Lancaster Way, Ely, Cambridgeshire, CB6 3NX
Tel: 01353 667258. Email: qa@c-c-l.com

Section 2 Hazards Identification

No particular hazards known

Section 3 Composition/Information on Ingredients

Chemical Name:	CAS No.
Natural Beta-Carotene	7235-40-7
Modified Food Starch	66829-29-6
Corn Starch	9005-25-8
DL-alpha-Tocopherol	10191-41-0

Section 4 Emergency and First Aid Measures

Inhalation: Remove from exposure site to fresh air and seek medical attention.
Skin contact: Remove contaminated clothes. Wash thoroughly with soap & water, flush with plenty of water.
Eye contact: Wash affected eyes for at least 15 minutes under running water with eyelids held open.
Ingestion: Rinse mouth and then drink plenty of water.

Section 5 Fire-fighting measures

Suitable extinguishing media: Water spray, carbon dioxide, foam, dry extinguishing media.
Special hazards: No particular hazards known.
Special protective equipment: Wear a self-contained breathing apparatus.



Section 6 Accidental Release Measures

Personal precautions:	No special precautions necessary
Environment precautions:	Do not discharge into drains/surface water/groundwater.
Methods for cleaning up:	Collect solids (avoid dust formation) and hand over to waste removal.

Section 7 Handling and Storage

Handling:	Apply good manufacturing practice & industrial hygiene practices, ensuring proper ventilation. Observe good personal hygiene, and do not eat, drink or smoke whilst handling.
Storage:	Store in tightly closed original container, in a cool, dry & ventilated area away from heat sources & protected from light.

Section 8 Exposure Controls/Personal Protection

Respiratory protection	Avoid breathing product vapor. Apply local ventilation where possible.
Hand protection	Avoid all skin contact and use chemically resistant gloves if required.
Eye protection	Use safety glasses
Body protection	Body protection must be chosen based on level of activity and exposure.

Section 9 Physical and Chemical Properties

Appearance:	Red or reddish-brown beadlets
Colour:	Red or reddish-brown
Odour:	None to faint
Bulk Density:	~0.6 g/cm ³
Water solubility:	Soluble in water (20°C)

Section 10 Stability and Reactivity

Conditions to avoid:	Heat and light
Material to avoid:	Alkali, strong acids, metal salts, oxidizing agents.
Hazard reaction:	No hazardous reaction if handled and stored as indicated.
Hazardous decomposition products:	No hazardous decomposition products if handled and stored as indicated.



Section 11 Toxicological Information

Acute toxicity:	LD50 > 20,000 mg/kg (oral, rat)	*1
Skin irritation:	Non-irritant	*1
Eye irritation:	Non-irritant	*1
Sensitisation:	Non-Sensitizing	*1
Carcinogenicity:	Not carcinogenic	*1
Mutagenicity:	Not mutagenic	*1
Reproduction toxicity:	Not teratogenic	*1

*1 referring to: Natural Beta-Carotene

Section 12 Ecological Information

Ecotoxicity:	Quantitative data on the ecologic effect of this product are not available.
Persistence and degradability:	Inherently biodegradable.
Precautions:	Prevent surface contamination of soil, ground & surface water.

Section 13 Disposal Considerations

Observe national and local legal requirements.

Section 14 Transport Information

Not classified as hazardous under transport regulations.

Section 15 Regulatory Information

The product does not require a hazard warning label in accordance with local regulations.

Section 16 Other Information

This advice is given by Cambridge Commodities Ltd who accepts no legal liability for it. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

Individuals working with chemicals should consider all chemicals to be potentially hazardous even if their individual hazards may be uncharacterised or unknown.



This Information provided in this document is subject to change and the batch specific Certificate of Analysis should always be referenced.

To be used as per local legislation.

Change History

Version	Change	Customer Notification required Yes / No
1	First Issue	N/A

Document Approval

Originator Job Title	QC Technician	Approver Job Title	Quality Specialist
 Julia Otto (Jun 21, 2017)		 Casey White (Jun 21, 2017)	

