



Commercial Sources for Carotenoids and Compositional Breakdown

Characteristic	EVTene™ Palm Carotenoid Complex	Algae Beta-Carotene	Fermentative Beta-Carotene	Synthetic Beta-Carotene
<p>○ Source</p>	<p>Crude palm oil (<i>Elaeis guineensis</i>)</p>	<p>Open pond, cultivated single-cell algae (<i>Dunaliella salina</i>)</p>	<p>Fermentation of a fungus (<i>Blakeslea trispora</i>)</p>	<p>Petroleum-Based</p>
<p>○ GMO Status</p>	<p>NON-GMO</p>	<p>GMO-Free</p>	<p>?</p>	<p>Not Applicable</p>
<p>○ Process</p>	<p>Mild molecular distillation without the use of organic solvents</p>	<p>Chilling and extraction with oil or solvents</p>	<p>Extraction from fungal biomass with solvents</p>	<p>Chemical synthesis</p>
<p>○ Composition</p>	<p>33% alpha-carotene 62% beta-carotene 5% other carotenoids - gamma carotene, lycopene, etc (A true mixed-carotene complex)</p>	<p>> 96% beta-carotene (predominantly a single beta-carotene source, not a 'true' mixed carotene)</p>	<p>> 98% beta-carotene (predominantly a single beta-carotene source, not a 'true' mixed carotene)</p>	<p>100% beta-carotene (single beta-carotene source, without any other carotenoids)</p>
<p>○ Alpha-Carotene</p>	<p>Highest level of alpha-carotene (30-35%) in the market. Alpha-carotene has been shown to be a more potent antioxidant compared to beta-carotene as well as with other unique properties not associated with beta-carotene</p>	<p>Negligible level of alpha-carotene and other carotenoids</p>	<p>Negligible level of alpha-carotene and other carotenoids</p>	<p>No alpha-carotene</p>
<p>○ Carrot Carotenoids</p>	<p>Ratio and composition of carotenoids similar to carrot</p>	<p>Ratio and composition of carotenoids different from carrot</p>	<p>Composition of carotenoids different from carrot</p>	<p>Composition of carotenoids different from carrot</p>
<p>○ Cis and Trans Isomers</p>	<p>Occurs in cis & trans isomers. Cis form is an indication of its natural origin</p>	<p>Occurs in cis & trans isomers</p>	<p>Almost 100% in trans form</p>	<p>100% in trans form</p>