

The Global Market for Carotenoids

<https://marketpublishers.com/r/G302A1CD7A1EN.html>

Date: April 2022

Pages: 164

Price: US\$ 5,500.00 (Single User License)

ID: G302A1CD7A1EN

Abstracts

Report Scope:

This report is an update of the BCC Research report FOD025F, The Global Market for Carotenoids, which was published in 2018. While no new types of carotenoids have come on the market in the last three years and no fundamentally new manufacturing technology has been introduced, the market for carotenoids has changed significantly for some product segments. Prices have dropped for a number of products while market value has risen for others.

Producers and users of carotenoids need an up-to-date analysis of the current situation and a well-documented forecast for future trends in the industry as the basis for their strategic and business planning. The report may also help players in other ingredient markets that are considering diversifying to determine whether carotenoids would be a good fit.

The report reviews the global markets for the following commercialized carotenoids -

Annatto.

Astaxanthin.

Beta-carotene.

Beta-apo-8-carotenal.

Beta-apo-8-carotenal-ester.

Canthaxanthin.

Capsanthin and paprika extract.

Lutein.

Lycopene.

Zeaxanthin.

Report Includes:

70 data tables and 35 additional tables

An overview of the global market for carotenoids

Estimation of the market size and analyses of global market trends, with data from 2021, estimates for 2022 with projections of compound annual growth rates (CAGRs) through 2027

A review of commercial carotenoids with the objective of providing detailed insight into production technologies, market developments and market dynamics

Details on Annatto, Astaxanthin, Beta-carotene, Beta-apo-8-carotenal, Beta-apo-8-carotenal-ester, Canthaxanthin, Capsanthin and paprika extract, Lutein, Lycopene and Zeaxanthin, and coverage of their production process, regulatory framework, and applications

Information concerning the relevance of different production systems, application segments and regional distribution

Market share analysis of the key companies of the industry and coverage of their proprietary technologies, strategic alliances and other key market strategies

Comprehensive company profiles of the leading players of the industry, including Algatechnologies Ltd., BASF SE, Cyanotech Corp., Kemistar Industries Inc. and Vidya Europe

Contents

CHAPTER 1 INTRODUCTION

Market Introduction
Market Definition and Overview
Scope of the Report
What's New in This Update?
Information Sources
Methodology
Analyst's Credentials
BCC Custom Research
Related BCC Research Reports

CHAPTER 2 SUMMARY AND HIGHLIGHTS

Recent Developments in the Global Market

CHAPTER 3 MARKET AND TECHNOLOGY BACKGROUND

Types of Commercial Carotenoids
Trends in Major Application Segments
Carotenoid Trends in Food
Carotenoid Trends in Feed
Carotenoid Trends in Cosmetics
Carotenoid Trends in Nutritional Supplements
Carotenoid Market
Competitiveness of Individual Carotenoids

CHAPTER 4 PRINCIPLES OF PRODUCTION

Chemical Synthesis Route
Fermentation Route
The Algae Route: Open Pond System
The Algae Route: Photo-Bioreactor System
Extraction from Botanical Material
Extraction from Crude Palm Oil
Extraction of Bixin and Norbixin from Annatto Seed

CHAPTER 5 INDUSTRY STRUCTURE AND MARKETS FOR ANNATTO

Product Characteristics

History

Government Regulations, Production Technologies and Formulations

Consumption Trends

Pricing

Market Shares

Current and Future Market

CHAPTER 6 INDUSTRY STRUCTURE AND MARKETS FOR ASTAXANTHIN

Product Characteristics

History

Government Regulations, Production Technologies and Formulations

Consumption Trends

Pricing

Market Shares

Current and Future Market

CHAPTER 7 INDUSTRY STRUCTURE AND MARKETS FOR BETA-CAROTENE

Product Characteristics

History

Government Regulations, Production Technologies and Formulations

Consumption Trends

Overview

Consumption by Application

Consumption by Type of Production Method

Consumption of Beta-carotene by Type of Formulation

Pricing

Market Shares

Current and Future Market

CHAPTER 8 INDUSTRY STRUCTURE AND MARKETS FOR APO-CAROTENAL

Product Characteristics

History

Government Regulations, Production Technologies and Formulations

Consumption Trends
Pricing
Market Shares
Current and Future Market

CHAPTER 9 INDUSTRY STRUCTURE AND MARKETS FOR APO-ESTER

Product Characteristics
History
Government Regulations, Production Technologies and Formulations
Consumption Trends
Pricing
Market Shares

CHAPTER 10 INDUSTRY STRUCTURE AND MARKETS FOR CANTHAXANTHIN

Product Characteristics
History
Government Regulations, Production Technologies and Formulations
Consumption Trends
Coloring Egg Yolks
Fish Pigmentation
Food Coloring
Supplement, Pharmaceutical and Cosmetic Applications
Pricing
Market Shares
Current and Future Market

CHAPTER 11 INDUSTRY STRUCTURE AND MARKETS FOR CAPSANTHIN AND PAPRIKA EXTRACTS

Product Characteristics
History
Government Regulations, Production Technologies and Formulations
Consumption Trends
Pricing
Market Shares
Current and Future Market

CHAPTER 12 INDUSTRY STRUCTURE AND MARKETS FOR LUTEIN

Product Characteristics

History

Government Regulations, Production Technologies and Formulations

Consumption Trends

Lutein for Feed Applications

Lutein for Supplements

Lutein for Food and Other Applications

Pricing

Lutein for Feed

Lutein for Supplements

Market Shares

Lutein for Feed Applications

Lutein for Supplements

Current and Future Market

CHAPTER 13 INDUSTRY STRUCTURE AND MARKETS FOR LYCOPENE

Product Characteristics

History

Government Regulations, Production Technologies and Formulations

Consumption Trends

Pricing

Market Shares

Current and Future Market

CHAPTER 14 INDUSTRY STRUCTURE AND MARKETS FOR ZEAXANTHIN

Product Characteristics

History

Government Regulations, Production Technologies and Formulations

Consumption Trends

Pricing

Market Shares

Current and Future Market

CHAPTER 15 COMPANY PROFILES

ALGATECHNOLOGIES LTD.
ALLIED BIOTECH CORP.
BASF
CAROTECH BERHAD
CHR. HANSEN
CYANOTECH CORP.
DOHLER GROUP
DEINOVE SAS
DIVIS LABORATORIES LTD.
E.I.D. PARRY
HANGZHOU PHARMCHEMICAL CO. LTD.
KEMIN INDUSTRIES INC.
KONINKLIJKE DSM
NOVUS INTERNATIONAL
SYNTAKE CHEMICAL
VIDYA EUROPE SAS
WUHAN HEZHONG BIO-CHEMICAL MANUFACTURE CO. LTD.
WUHAN ZIPONT CHEM TECH CO. LTD.
ZHEJIANG NHU CO. LTD.

List Of Tables

LIST OF TABLES

- Summary Table: Global Carotenoid Market, by Product Type, Through 2027
- Table 1: Global Carotenoid Market, by Product Type, Through 2027
- Table 2: Classification Scheme for Rating the Competitiveness of Individual Carotenoids
- Table 3: Classification of Individual Carotenoids, by Competitiveness, 2021-2027
- Table 4: Physical--Chemical Parameters of Bixin and Norbixin
- Table 5: Data Sheet of Bixin and Norbixin Products
- Table 6: Global Bixin and Norbixin Consumption, by Region, Through 2020
- Table 7: Global Market for Bixin and Norbixin, by Region, Through 2027
- Table 8: Physical and Chemical Properties of Astaxanthin
- Table 9: Data Sheet of a 10% Astaxanthin Product from Chemical Synthesis
- Table 10: Data Sheet of a 0.5% Astaxanthin Product from *Phaffia Rhodozyma*
- Table 11: Data Sheet of a 2.5% Astaxanthin Oleoresin Product from *Haematococcus pluvialis*
- Table 12: Data Sheet of a *Paracoccus carotinifaciens* Product with 2% Astaxanthin
- Table 13: Global Production of Rainbow Trout, 2006-2020
- Table 14: Global Market Volume of Rainbow Trout Production, by Country, 2020
- Table 15: Global Atlantic Salmon Production, 2006-2020
- Table 16: Global Production of Atlantic Salmon, by Country, 2020
- Table 17: Global Production of Shrimp, 2006-2020
- Table 18: Global Production of Shrimp, by Country, 2020
- Table 19: Global Consumption of Astaxanthin in Feed Applications, Through 2020
- Table 20: Regional Shares of Global Consumption of Astaxanthin in Feed Applications, 2020
- Table 21: Global Consumption of Astaxanthin in Feed and Supplement Applications, by Production Method, 1995-2020
- Table 22: Typical Market Prices for Astaxanthin Products, by Production Method, 2020
- Table 23: Global Astaxanthin Market Share, by Producer, 2020
- Table 24: Global Consumption of Astaxanthin, by Region, Through 2027
- Table 25: Global Consumption of Astaxanthin, by Application, Through 2027
- Table 26: Global Consumption of Astaxanthin, by Production Method, Through 2027
- Table 27: Global Astaxanthin Market, by Region, Through 2027
- Table 28: Physical and Chemical Properties of Beta-carotene
- Table 29: Typical Carotenoid Profile of Beta-carotene Products
- Table 30: Major Formulations Offered as a Function of the Type of Beta-carotene
- Table 31: Global Consumption of Beta-carotene in Food, 1984-2020

- Table 32: Global Consumption of Beta-carotene in Food, by Type, 2006-2020
- Table 33: Global Consumption of Beta-carotene in Supplements, 1984-2020
- Table 34: Global Consumption of Beta-carotene in Supplements, by Preparation Type, 2002-2020
- Table 35: Global Consumption of Beta-carotene in Supplements, by Region, 2004-2020
- Table 36: Global Consumption of Beta-carotene in Feed, 1984-2020
- Table 37: Global Consumption of Beta-carotene in Feed, by Region, 2007-2020
- Table 38: Global Consumption of Beta-carotene in Cosmetics, 1984-2020
- Table 39: Global Consumption of Beta-carotene, by Application, 1984-2020
- Table 40: Global Consumption of Beta-carotene, by Region, 1984-2020
- Table 41: Global Consumption of Beta-carotene, by Production Method, Through 2020
- Table 42: Product Characteristics of Typical 30% Beta-carotene Oil Suspension
- Table 43: Characteristics of a 10% Beta-carotene CWD* Product
- Table 44: Characteristics of a 10% Beta-carotene Tablet-Grade Formulation Product
- Table 45: Characteristics of a 20% Beta-carotene Tablet-Grade Formulation Product
- Table 46: Global Consumption of Beta-carotene, by Type of Formulation, 2006-2020
- Table 47: Typical Prices of Major Beta-carotene Product Types, 2007-2020
- Table 48: Global Beta-carotene Market Share, by Producer, 2020
- Table 49: Global Market Volume of Beta-carotene Consumption, by Production Method, Through 2027
- Table 50: Global Market Volume of Beta-carotene Consumption, by Application, Through 2027
- Table 51: Global Market Volume of Beta-carotene Consumption, by Region, Through 2027
- Table 52: Global Price Trends for Beta-carotene Products, 2007-2022
- Table 53: North American Beta-carotene Market, Through 2027
- Table 54: Physical and Chemical Properties of Apo-carotenal
- Table 55: Data Sheet for a Typical Apo-carotenal Product
- Table 56: Global Apo-carotenal Consumption, by Region, Through 2020
- Table 57: Global Market Volume of Apo-carotenal Consumption, by Region, Through 2027
- Table 58: Global Apo-carotenal Market, Through 2027
- Table 59: Physical and Chemical Properties of Crystalline Apo-ester
- Table 60: Data Sheet for an Apo-ester 10% Powder Product
- Table 61: Global Market Volume of Apo-ester Consumption, by Region, Through 2020
- Table 62: Physical and Chemical Properties of Crystalline Canthaxanthin
- Table 63: Data Sheet for a Commercial 10% CWD Feed-Grade Canthaxanthin Product
- Table 64: Global Consumption of Canthaxanthin, by Application, Through 2027
- Table 65: Global Consumption of Canthaxanthin, by Region, Through 2027

Table 66: Global Canthaxanthin Market, by Application, Through 2027

Table 67: Global Canthaxanthin Market, by Region, Through 2027

Table 68: Physical-Chemical Properties of Typical Capsanthin Products for Food Use

Table 69: Physical-Chemical Properties of a Typical Capsanthin Product for Feed Use

Table 70: Global Consumption of Paprika Capsanthin, by Oleoresin Grade, Through 2027

Table 71: Global Consumption of Paprika Capsanthin, by Powder Grade, Through 2027

Table 72: Global Paprika Capsanthin Market, by Oleoresin Grade, Through 2027

Table 73: Global Paprika Capsanthin Market, by Powder Grade, Through 2027

Table 74: Global Paprika Capsanthin Market, by Region, Through 2027

Table 75: Physical-Chemical Parameters of Crystalline Lutein

Table 76: Data Sheet of a Feed-Grade Lutein Powder Product

Table 77: Data Sheet of a Lutein Oil Suspension Product

Table 78: Global Consumption of Lutein in Feed Applications, by Region, Through 2027

Table 79: Global Market Volume of Consumption of Lutein in Supplements, by Region, Through 2027

Table 80: Average World Price of Lutein Used in Feed Applications, Through 2020

Table 81: Average World Price of Lutein Used in Supplement Applications, Through 2020

Table 82: Global Market Volume of Lutein Consumption, by Application, Through 2027

Table 83: Global Lutein Market, by Application, Through 2027

Table 84: Global Lutein Market, by Region, Through 2027

Table 85: Physical-Chemical Properties of Lycopene

Table 86: List of Foods to Which Lycopene from Different Origins May Be Added in the EU

Table 87: Specification of Lycopene from Fermentation Allowed for Use Under the Novel Food Act

Table 88: Specification of Lycopene from Tomato Allowed for Use in the EU for Food Coloring

Table 89: Data Sheet of a Lycopene 15% Oil Suspension, Natural Extract Product

Table 90: Data Sheet of a Lycopene 5% Powder, Synthetic Origin Product

Table 91: Data Sheet of Lycopene from *Blakeslea trispora* as a 20% Oil Suspension Product

Table 92: Global Market Volume of Lycopene Consumption, by Region, Through 2020

Table 93: Global Market Volume of Lycopene Consumption, by Type of Production Process, Through 2020

Table 94: Trends in Average Prices of Lycopene by Source, 2004-2020

Table 95: Global Market Volume of Lycopene Consumption, by Region, Through 2027

Table 96: Global Market Volume of Lycopene Consumption, by Application, Through

2027

Table 97: Global Market Volume of Lycopene Consumption, by Type of Production Process, Through 2027

Table 98: Global Lycopene Market, by Region, Through 2027

Table 99: Physical-Chemical Properties of Zeaxanthin

Table 100: Data Sheet for a Natural Zeaxanthin-Lutein Product

Table 101: Data Sheet for a Synthetic and Isolated Natural Zeaxanthin Product

Table 102: Global Market Volume of Zeaxanthin Consumption, by Region, Through 2020

Table 103: Global Consumption of Zeaxanthin, Through 2027

Table 104: Global Zeaxanthin Market, by Region, Through 2027

List Of Figures

LIST OF FIGURES

Summary Figure: Global Carotenoid Market, by Product Type, 2021-2027

Figure 1: Physical, Chemical and Biological Properties of Carotenoids

Figure 2: Commercially Used Carotenoids by Method of Production

Figure 3: Commercially Used Carotenoids by Application

Figure 4: Flowchart of the Preparation of Beta-Ionone

Figure 5: Flowchart of the Reaction of Beta-Ionone to Glycide Ester

Figure 6: Flowchart of the Reaction of Glycide Ester to C14-Aldehyde

Figure 7: Flowchart of the Reaction from Beta-C14-Aldehyde to C19-Diol

Figure 8: Flowchart of the Reaction from Beta-C19-Diol-Ether to C19-Aldehyde

Figure 9: Flowchart of the Reaction of Beta-C19-Aldehyde to Cis-Beta-carotene

Figure 10: Flowchart of the Reaction from Cis-Beta-carotene to Trans-Beta-carotene

Figure 11: Flowchart of the Process of Manufacturing Beta-carotene by Fermentation

Figure 12: Flowchart of the Process of Manufacturing Mixed Carotenoids from Algae Open Pond Systems

Figure 13: Flowchart of the Process of Manufacturing Mixed Carotenoids from Algae Photo-Bioreactor System

Figure 14: Flowchart of the Process of the Extraction of Carotenoids from Crude Palm Oil

Figure 15: Flowchart of the Process of the Extraction of Bixin from Annatto Seed

Figure 16: Flowchart of the Process of the Extraction of Norbixin from Annatto Seed

Figure 17: Flowchart of the Process of the Production of Oleoresins and Crystals from Botanical Material

Figure 18: Global Market Volume of Commercial Annatto Seed Production, by Application, 2000-2020

Figure 19: Global Bixin and Norbixin Consumption, 2000-2020

Figure 20: Global Volume Shares of Bixin and Norbixin Consumption, by Region, 2020

Figure 21: Global Volume Shares of Bixin and Norbixin Consumption, by Application, 2020

Figure 22: Annatto Seed Prices, 2000-2020

Figure 23: Bixin and Norbixin Prices, 2000-2020

Figure 24: Global Market Shares of Companies Active in the Preparation and Trading of Bixin and Norbixin, 2020

Figure 25: Global Market Volume Shares of Rainbow Trout Production, by Country, 2020

Figure 26: Global Consumption of Astaxanthin in Feed and Supplement Applications,

2000-2020

Figure 27: Global Consumption of Astaxanthin in Feed and Supplement Applications, by Production Method, 2020

Figure 28: Synthetic Astaxanthin Price Trends, 2000-2020

Figure 29: Global Astaxanthin Market Share, by Producer, 2020

Figure 30: Global Astaxanthin Market, by Region, 2020-2027

Figure 31: Global Consumption of Beta-carotene, 2000-2020

Figure 32: Global Market Volume Shares of Beta-carotene Consumption, by Food Type, 2020

Figure 33: Global Market Volume Shares of Consumption of Beta-carotene in Food, by Region, 2020

Figure 34: Global Consumption of Beta-carotene in Supplements, by Region, 2020

Figure 35: Global Market Volume Shares of Consumption of Beta-carotene in Feed, by Region, 2020

Figure 36: Global Market Volume Shares of Beta-carotene Consumption, by Type of Formulation, 2020

Figure 37: Global Market Shares of Beta-carotene Producers, 2020

Figure 38: Global Apo-carotenal Consumption, 2000-2020

Figure 39: Global Market Volume Shares of Apo-carotenal Consumption, by Region, 2020

Figure 40: Global Apo-carotenal Price Trends, 2000-2020

Figure 41: Global Apo-ester Consumption, by Application, 2000-2020

Figure 42: Global Market Volume Shares of Apo-ester Consumption, by Region, 2020

Figure 43: Global Pricing Trends of Apo-ester, 2000-2020

Figure 44: Global Market Volume Shares of Canthaxanthin Consumption, by Region, 2020

Figure 45: Global Canthaxanthin Pricing Trends, 2000-2020

Figure 46: Global Market Shares of Canthaxanthin Producers, 2020

Figure 47: Global Consumption of Paprika Capsanthin Used as a Colorant, 2000-2020

Figure 48: Global Market Volume Shares of Paprika Capsanthin Consumption, by Region, 2020

Figure 49: Global Consumption of Lutein in Feed Applications, 2000-2020

Figure 50: Global Market Volume of Consumption of Lutein in Supplements, 2000-2020

Figure 51: Global Market Shares of Companies Offering/Manufacturing Supplement-Grade Lutein, 2020

Figure 52: Global Market Volume Shares of Lycopene Consumption, by Region, 2020

Figure 53: Global Market Shares of Lycopene Producers, 2020

Figure 54: Global Market Volume Shares of Zeaxanthin Consumption, by Region, 2020

I would like to order

Product name: The Global Market for Carotenoids

Product link: <https://marketpublishers.com/r/G302A1CD7A1EN.html>

Price: US\$ 5,500.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G302A1CD7A1EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970