GLOBAL NATURAL COLORS AND FLAVORS MARKET

BY TYPES, APPLICATIONS & GEOGRAPHY: FORECASTS UP TO 2017

MARKETSANDMARKETS

It's all about markets

MarketsandMarkets

sales@marketsandmarkets.com

www.marketsandmarkets.com

MarketsandMarkets is a global market research and consulting company based in the U.S. We publish strategically analyzed market research reports and serve as a business intelligence partner to Fortune 500 companies across the world. MarketsandMarkets also provides multi-client reports, company profiles, databases, and custom research services.

MarketsandMarkets covers thirteen industry verticals, including advanced materials, automotives and transportation, banking and financial services, biotechnology, chemicals, consumer goods, energy and power, food and beverages, industrial automation, medical devices, pharmaceuticals, semiconductor and electronics, and telecommunications and IT.

1 INTRODUCTION

1.1 REPORT DESCRIPTION

Natural colors and flavors are type of food additives that are added to food and beverages to make products more appealing and tastier. The use of natural colors and flavors in food and beverage industry is increasing since last decade. Rising demand for natural foods and consumer avoidance has led to strong progress for natural colors and flavors market. Hyperactivity and behavioral problems in children due to artificial colors and flavors are other driving factors for this market. Colors and flavors derived for natural products are having exempted from certification. Color and flavor degradation with change in pH, light, temperature, and oxidation with other ingredient is major restraint for global natural colors and flavors market. The global natural colors and flavors market has a tremendous growth potential. Europe is the largest market for natural flavors, while North America accounting the largest market for natural colors.

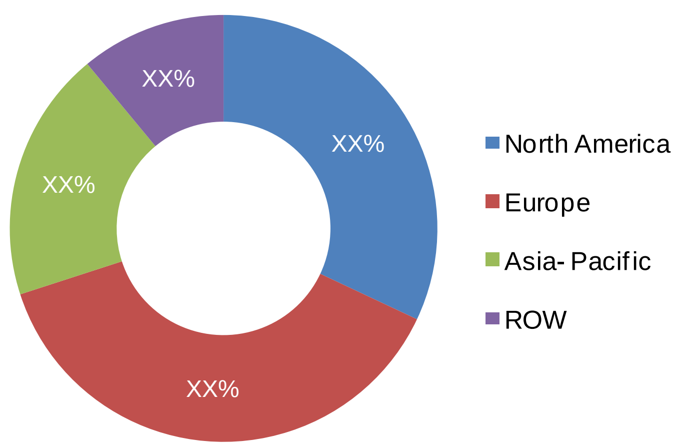
The report provides full analysis of the world's leading players in the natural colors and flavors industry, the key ingredients occupying the major shares, with a clear insight and commentary on the developments and trends. With the huge market potential and growth, market is likely to witness a shift in the colors and flavors market. The market is anticipated to flourish in the developed as well as the developing regions. The growth is also attributed to the growing demands and penetration of the organic and natural products. The global increase in health consciousness has demanded natural colors and flavors in food products. The segments like beverage is largely utilizing natural flavors, while confectionary items such as candies and chewing gums uses natural colors at a larger rate. Beverage and confectionary segment is making the natural color and flavor market very lucrative for the key industry players. The switch to natural colors and flavors across the globe is still at low pace, but companies are exercising usage of natural colors and flavors. The artificial colors in the U.S. are labeled as FD&C colors and natural flavors as natural flavorings.

2 EXECUTIVE SUMMARY

Till 19th century, food industry was largely using synthetic colors but after knowing the disastrous output of synthetic colors, consumers switched to natural colors in the food products. 'Natural colors and flavors' is the current trend moving over the globe, and is gaining momentum in the food and beverage industry, reason behind this situation is the growing demand for natural ingredients in food and beverages. Natural flavors and natural colors are more preferable through 'clean label' declarations. Across the globe this trend is observed, and leading region for natural color usage is North America, while for natural flavor is Europe.

FIGURE 1

NATURAL COLORS MARKET SHARE, BY GEOGRAPHY, 2011



Source: MarketsandMarkets Analysis

The natural colors which are in great demand are caramel, carotenoids, and anthocyanins. These colors are hugely imparted in food and beverages. Caramel is the largely used natural color. Sensient Technologies (U.S.), DD. Williamsons (U.S.), and Chr. Hansen (Denmark) are the leading companies manufacturing natural colors. The natural flavors which are widely used in food and beverage industry is essential oil, aroma chemicals, and natural extracts. Essential oil is mostly used in food and beverage industry. Across the globe beverage segment is highly using natural flavors. Few of the companies which are ruling natural flavors market are Givuadan SA (Switzerland), IFF Inc. (U.S.), Firmenich SA (Switzerland), Frutarom Ltd (Israel), Takasago International Corporation (Japan), T. Hasegawa Co. Ltd (Japan), Sensient Technologies (U.S.), and Robertet SA (Germany).

3 MARKET OVERVIEW

3.1 MARKET DYNAMICS

3.1.1 DRIVERS

FIGURE 2

IMPACT ANALYSIS OF MAJOR DRIVERS ON NATURAL COLORS & FLAVORS MARKET, 2010 – 2017

Drivers	1 – 2 years	3 – 4 years	5+ years
Increasing demand of health and wellness foods (Clean label products)	★★★★★	★★★★★	★★★★★
Regulation banning the use of synthetic colors and flavors	★★★★★	★★★★★	★★★★★
Suitability of natural colors and flavors in wider applications	★★★	★★★★	★★★★
Additional health benefits of certain natural colors and flavors	★★★	★★★★	★★★★★
Advanced technological innovation	★★★	★★★★	★★★★★

★★★★★ **High** ★★★★ **Medium** ★★★ **Low**

Source: MarketsandMarkets Analysis

3.1.1.1 Increasing demand of health & wellness foods (Clean label products)

'Clean label' has been escalated across the world in the recent past. Clean label denotes complete natural colors and flavors. Natural flavors colors are having the advantage through clean label declarations. Marketing through the clean label criteria is common in the natural colors and flavors industry. With rising health awareness consumers are moving towards natural food products. Natural colors and flavors give the health benefits, and hence it is widely accepted by the consumers. Consumers are ready to pay premium price for the natural foods. It has been observed that three-fourth of the population thoroughly checks the labels before buying the product. This changing era has made manufacturer to undergo replacement of artificial with natural colors and flavors.

3.1.2 RESTRAINTS

FIGURE 3

IMPACT ANALYSIS OF MAJOR RESTRAINTS ON NATURAL COLORS & FLAVORS MARKET, 2010 – 2017

Restraints	1 – 2 years	3 – 4 years	5+ years
Lesser stability and availability	★★★★★	★★★★	★★★
High cost and higher dosage levels	★★★★★	★★★★	★★★
Inclusion rate of natural colors and flavors is slower	★★★★	★★★★	★★★

★★★★★ **High** ★★★★ **Medium** ★★★ **Low**

Source: MarketsandMarkets Analysis

3.1.2.1 Lesser stability and availability

Grey areas of natural colors and flavors bags some points such as less stability and availability. Conventionally natural colors and flavors are unstable during processing, handling, storage compared to synthetic colors and flavors. They are unstable to variation in pH, temperature, and light. For example, anthocyanins are not stable at neutral pH and tend blue in color, but as the pH rises they turn red and become more stable. Temperature and pH variation can degrade the color, and thereby the appearance of the food.

Natural colors starts decolorizing after some time of processing. Some natural colors during processing can impart off-tones to the final product, which turns the product more undesirable. Turmeric which is used as a natural colorant imparts off-tones to the products. It is necessary to thoroughly evaluate the properties of natural colorants in the system before its usage. Annatto addition can cause color changes from orange to pink in an acidic solution. Anthocyanins are not suitable for food with neutral pH, Carotenoids are sensitive to light, oxygen.

4 GLOBAL NATURAL COLORS MARKET, BY TYPE

4.1 INTRODUCTION

Natural Colors are exempted from certification, this include pigments derived from natural sources such as vegetables, minerals or animals. Natural colors are in demand for its eco-friendly nature and additional health benefits. Today food industry is producing natural flavors at a commercial level. The natural colors which are widely used in food industry are Caramel, Carotenoids, Anthocyanins and Carmine. After knowing the toxic nature of synthetic colors manufacturer are diverting towards natural options. Regulations are passed in many of the regions for using natural colors and to avoid synthetic colors.

Caramel are produced from carbohydrates, it is classified into four categories according to their manufacturer process. Caramel is widely used in beverages. Beta-carotene initially was synthetically produced, but now beta-carotene is available in natural forms. Beta-carotene is one of the important colorant with universal applications. Anthocyanins are the naturally occurring; water-soluble compounds produced from yellow-to-red plant. Anthocyanins are used to color in non-alcoholic beverages, confectionary and dairy based beverages. Annatto is a natural carotenoid extracted from tropical shrub. Annatto has a wider application range, due to its good stability. It plays multiple role in imparting flavor and color to the food product. And also acts as an anti-oxidant. Most of the yellow colored products are colored by annatto, confectionary, dairy and snacks are the highest application segment of annatto. Turmeric is traditionally used in coloring prepared food dishes. It is available in three forms essential oils, oleoresin and Curcumin. Due to its excellent stability it has wide application in food and beverage. It has also been recognized for its additional health benefits. Cochineal is extracted from the shells of the cochineal beetle. Cochineal extracts is one of the stable pigment which has highest resistant to degradation.

5 GLOBAL NATURAL FLAVORS MARKET, BY TYPE

5.1 INTRODUCTION

Over hundred of ingredients used in flavor industry are natural. The chief operator for the growth of natural flavors market globally is association of consumers for natural products as they imply healthy living. This leads to lift-up admire for natural component in food products. The natural flavors ingredients are broadly classified into seven major groups: Essential Oils, Extracts, Oleoresins, Concretes, Absolutes, Resinoids, and Tinctures. Natural flavors market comprises three major types which are spread in the food industry globally these are essential oils, natural extracts, and aroma chemicals. Beverages is the major segment in which essential oils goes, such as flavored water, soft drinks, alcoholic drinks, and hot beverages. Natural extract is also showing a commendable demand for its bonding with nature. The constant increment in nature concern amongst the consumers has contributed to the growth of nature extracted ingredients. Aroma chemicals are the second largest natural ingredient holding natural flavors market. It is forecasted that the market for essential oils and natural extracts will exceed in these five years and shall seize the market position of synthetic flavors. Natural flavors market will grow due to the agile growth in the developing countries of South America and Asia-Pacific. The main reason to account higher growth in these regions is the lower labor cost, which propels the large flavor houses to start their ventures in these regions.

The flavor industry first developed in Europe, diffused to the U.S., and later entered an international level. The North America, Europe and Asia-Pacific are the main consumers of natural flavors and account for approximately three quarters of total world natural flavors consumption. In 2011 the consumption of plant extracts in the U.S. accounted for more than XX% of the world. In 2011 Asia-Pacific’s natural extracts market is $XX million, accounting for about XX%. The forecasted compounded annual growth rate for natural extracts is XX% from 2012 to 2017.

6 GLOBAL NATURAL COLORS MARKET, BY APPLICATION

6.1 INTRODUCTION

6.1.1 BEVERAGES

Caramel is the most widely used food color across the world. It is extensively used in alcoholic beverages to differentiate products and help protect flavor from light. Caramel is a key ingredient for alcoholic beverage manufacturers' globally. There are four classes of caramel color i.e.: Class III carries a positive charge whereas Class I, II, and IV are negatively charged. Negatively charged classes usually are best fit for spirits and liqueurs to acquire stability with tannins. Positively charged class is used in beer and malt drinks for stability with protein. Mixing positively charged class with negative ones will result in precipitation. Negatively charged classes may serve as substitutes for each other.

The 'clean label' trend has helped Class I caramel color and burnt sugar to increase its market share. In North America, products containing caramel color are labeled as 'caramel color' regardless of its class. But, E-numbers are used for labeling in Europe. 'Burned Sugar', obtained exclusively from the controlled heating of sucrose, is an ingredient option for spirits.
Scotch whisky contains Class I caramel color whereas single-barrel whisky does not contain any caramel color. Class I or IV caramel color is often found in varieties of Irish and Canadian blends. Dark, spiced, and aged rum contain negatively charged caramel color for its high-proof alcohol stability; and very common in tequila too. Grape brandy aged in wooden barrels contains Class IV to match the effect of aging. France's Cognac and Spain's sherry have Class II caramel color in them. Fruit brandy and fortified wines also contain caramel color. It is abundant in cocoa, coffee. In cream drinks, caramels color is premixed with alcohol before adding cream ingredients for improved stability. Class III caramel color is best suitable for malt-based flavored beverages.

7 GLOBAL NATURAL FLAVORS MARKET, BY APPLICATION

7.1 INTRODUCTION

Natural flavors are widely spread in food and beverage industry. Health concerns have opened the doors for the acceptance of natural foods in the daily routine, which have uplifted the anxiety amongst the food manufacturer to adopt natural flavors in food and beverages. Consumers are always looking for novelty with essence of nature. Flavor is the prime ingredient to increase the sensuality of the food. Manufacturers are moving on the trend line to link flavor with emotions and health awareness. The five top food categories with natural flavors are beverages, confectionary, bakery, savory and others which include meat and poultry. New technology vibes in natural flavors has increased its emphasis in food industry, Encapsulation technology has given a new phase to volatile natural flavors. Due to encapsulation flavors are more stable and can be incorporated in confectionary, bakery, tea, and coffee production. The natural flavor profiles of botanicals extracts developed by natural flavors manufacturers are applied in beverage, sweet, savory, and dairy products. The largest Food & Beverage market is Europe, followed by North America. The European and North American markets are now highly mature; they are rather stagnant market and are shifting towards emerging markets of Latin America and Eastern countries. Asia-Pacific. Europe has totally accepted natural flavors applications, while North America is still confine towards artificial flavors in most of its food segments. U.S. is having the highest market for snacks and savory. Food processing segments in Asia and Latin America are accepting natural flavors. Many of the flavor houses are implanting innovations in food sector, for example, IFF (International Flavors and Fragrances) is developing authentic tea profiles.

8 GLOBAL NATURAL COLORS MARKET, BY GEOGRAPHY

8.1 INTRODUCTION

Food and beverage manufacturers from around the world who wish to convert to natural colors are looking for premium quality natural colors and expertise and support. Market trends are inspiring color companies to increase their spending on research and development activities to initiate innovations in natural colors. Emerging economies have also opened new doors of opportunities for color companies to expand. Color companies are carefully identifying and targeting specific needs of today's evolving market. The impact of health concerns are changing consumer eating habits and driving the natural colors market to optimize innovation for stimulating growth.

The developing trends are altering the dynamics of the global natural colors market. Many players are strengthening their position in the market by collaborating with research organizations to introduce better ingredients and technologies in the field of natural colors. Moreover, energy-efficient technologies are being introduced to minimize the impact of rising fuel prices on operational costs. Consumers today are more aware about the foods they eat and their health and are more concerned about the quality of the diet they follow. Moreover, health trends are not only confined to a certain demographic but also have entered the mainstream population. Demographics and nutritional awareness are the major market drivers, especially with the growing population of aged ones.

Natural colors are more popular compared to synthetic colors due to growing demand for the healthy and clean label foods and beverages. The nutritional value of carotenoids and anthocyanins are also in the growing demand for value added foods. The increasing popularity of organic and functional foods has also widened the scope of natural colors. However, natural colors are more expensive and less resistant to external parameters during processing and storage.

9 GLOBAL NATURAL FLAVORS MARKET, BY GEOGRAPHY

9.1 INTRODUCTION

Natural flavors market has withstood the economic fall. This market was $XX million in 2011 and is predicted to grow at a CAGR of XX% from 2012 to 2017; and will reach $XX million by 2017. Global natural flavors market is growing strongly; natural products are in demand in developed countries. Three-fourth of the global natural flavors market is dominated by North America, Europe and Asia-Pacific. Natural flavors are surpassing the growth of synthetic flavors; this is due to consumers' swirling interest towards healthy food and beverages. Consumers, manufacturers, and retailers desire natural ingredients and 'clean label' food products. The food industry is compelled to switch to natural options in food products by the consumers due to health issues noticed globally. Food manufacturers are coming out with a phenomenon of imaging unhealthy food into healthier ones. Major houses are constantly questing for new natural flavors. Manufacturers are producing natural flavors having its applications over a large array of categories.

Natural flavors have certain regulations which drive its usage in food, but these regulations are authoritarian in U.S. and Europe regions. Europe plays a vital role in the global natural flavors market. The country values the presence of natural flavors in food and it also posses a large food industry. As a result it has been a remarkable competitor in natural flavors market with a share of XX%. European market has an expeditious growth in natural flavors, and is expected to contribute $XX million by 2017.

10 COMPETITIVE LANDSCAPE

10.1 INTRODUCTION

In competitive landscape we have studied the growth strategies adopted by the companies between 2009 and 2012. Players in this market have adopted various strategies to expand their global footprint and increase market share. New product developments, agreements and collaborations and acquisition and mergers followed with expansions are some of the major strategies adopted by player to achieve growth.

The global natural colors and flavors market is very competitive and quite concentrated within regional players. The developments in the global natural colors and flavors market are dominated by companies such as Chr. Hansen (Denmark), D.D. Williamsons (U.S.), Givaudan S.A. (Switzerland), IFF Inc. (U.S.), Firmenich S.A. (Switzerland), Sensient Technologies (U.S.), and Symrise AG (Germany).

10.2 NEW PRODUCTS LAUNCH - MOST PREFERRED STRATEGIC APPROACH

Leading companies focused on new product development and research for patent rights of upcoming technologies. The major objective behind expansion was better penetration of their business in the new applications and geographies. During the period from 2009 to 2012, new products launch had been the main growth strategy for the natural colors and flavors companies, accounting for a share of XX% in the total developments.

11 COMPANY PROFILES

11.1 KERRY GROUP PLC.

Prince's Street

Tralee

Co. Kerry

Ireland

Tel:35-3-6671-8200-0

Fax: 35-3-6671-8296-1

Website: www.kerrygroup.com

11.1.1 OVERVIEW

Established in 1972, Kerry Group Plc. is headquartered at Kerry County, Ireland. The company is involved in the production and marketing of consumer food products. The major products offered by the company include ingredients, flavors and integrated solutions, savory and dairy systems and cereal & sweet systems for the food and beverage industries. It operates through two business segments, such as ingredients & flavors and consumer foods. Kerry operates in U.S., U.K., Australia, Malaysia, Singapore, Germany and New Zealand. The subsidiaries include Kerry Ingredients Australia Pty. Limited, Kerry Ingredients Malaysia, Kerry Ingredients North America, Kerry Agribusiness Ireland, Dera Holding NV (Belgium), Kerry Ingredients France S.A.S., Kerry Foods GmbH (Germany), Cremo Ingredients A/S (Denmark), Kerry Ingredients Italia S.p.A., Kerry Polska Sp. z.o.o. (Poland), and Kerry Ingredients U.K. The company had a headcount of 24,045 employees as of 2011. The competitors include Aryzta AG (Switzerland), Cargill Foods Inc. (U.S.), Dairygold Co-operative Society Limited (Ireland), Givaudan (Switzerland), Northern Foods Limited (U.K.), Premier Foods Plc. (U.K.).

11.1.2 FINANCIALS

TABLE 1

KERRY: MARKET REVENUE AND R&D EXPENSES, 2010 – 2011 ($MILLION)

Particular	2010	2011	%Change
Total revenue	XX	XX	XX
R&D expenditure	XX	XX	XX

Source: Company Website, Annual Reports, MarketsandMarkets Analysis

The total revenues increased by XX%, registering $XX million in the year 2011. The rise in the revenues was attributed to the increase in the volumes of products and rise in the selling prices. R&D expenses reported an increase by XX%, registering $XX million in the year 2011. The expenses were incurred to study the market trends to develop customer-focused products and advance their technological innovations and also to study the market trends.

TABLE 2

KERRY: MARKET REVENUE, BY SEGMENTS, 2010 – 2011 ($MILLION)

Segment	2010	2011	%Change
Ingredients & flavors	XX	XX	XX
Consumer foods	XX	XX	XX
Group eliminations and unallocated	XX	XX	XX
Total	XX	XX	XX

Source: Company Website, Annual Reports, MarketsandMarkets Analysis

The ingredients & flavors sales grew by XX%, registering $XX million in the year 2011. The growth was primarily driven by the increased sales of products in savory & dairy systems increased by XX%, cereal & sweet systems XX%, beverage systems XX%, pharma, nutritional & functional ingredients XX% and regional technologies XX%. Also the acquisition of Cargill's global flavors business in September 2011 supported the rise in the sales. Consumer foods sales grew by XX%, registering $XX million in the year 2011. The sales were impacted by higher sales of reflecting from the increased volumes by XX%, reflecting XX% volume growth in the U.K. and good performance of Mattessons, Richmond, Cheestrings brands in the market in 2011.

TABLE 3

KERRY: MARKET REVENUE, BY GEOGRAPHY, 2010 – 2011 ($MILLION)

Region	2010	2011	%Change
EMEA	XX	XX	XX
Americas	XX	XX	XX
Asia/Pacific	XX	XX	XX
Total	XX	XX	XX

Source: Company Website, Annual Reports, MarketsandMarkets Analysis

EMEA region grew its sales by XX%, recording $XX million in 2011. The growth in regional sales was attributed to the increased business volumes by XX% as well as acquisition of certain assets such as the South Africa- based FlavorCraft and SuCrest businesses. The Da Vinci flavored syrups were highly appreciated in this region. America grew its sales by XX%, recording $XX million in 2011. The growth resulted from meat, dairy and snack sectors, expansion of the sweet system business in Latin America, Mexico and Brazil as well as the acquisition of Agilex Flavors and Caffe D'Amore business. Asia-Pacific region reported a growth of XX%, recording $XX million in 2011. The growth was attributed to the increased business volumes by XX% as well as good performance of ingredients and flavors in Japan, Malaysia, the Philippines, China, Asia and Indonesia.

11.1.3 PRODUCTS & SERVICES

TABLE 4

KERRY: FLAVORS APPLICATION & ITS DESCRIPTION

Flavors application	Description
Cereal Application Flavors	Product Offerings Include fruit flavors, Brown Sweet Flavors, Herb/Spice/Fantasy Flavors.
Beverage Application Flavors	Offers a wide range of product solutions including fruit flavors, brown & sweet, herb/spice/fantasy/alcoholic, add back systems, beverage flavor modulators, and beverage flavor emulsions & clouds.
Snack Application Flavors	Offerings Includes Snack Flavors - cheese & butter, snack flavors - tomato/paprika, snack flavors - meat, snack flavors - vinegar, snack flavors - onion, snack flavors - global tastes/other. It also provides custom flavors for chips, corn curls, nuts, rice cakes, pretzels, crackers, popcorn and meat snacks.
Savory Flavors	Provides Meat flavors for roasted, fried, fatty, broiled cooking profiles. Vegetable Flavors for sautéed, fried and roasted flavor profiles. Also provides Savory Flavor Modulators, Condiment, Fruit/Other Savory Flavors.
Oleoresins	Oleoresin is a natural liquid spice or herb extract which contains volatile and non-volatile components that characterize the aroma, flavor and color of the natural raw material.
Natural Flavor Ingredients	Offers natural and organic products such as Juice Add-Back Systems, Essential Oils & Extracts, and Crystals Freeze-Dried Fruit & Vegetable Powders.

Source: Company Website

11.1.4 STRATEGY

Kerry group is primarily focusing on widening the Group's market spread in budding and end-use-markets through acquisitions. Kerry is also focused on launching new flavor solutions for meeting needs of potential markets.

11.1.5 DEVELOPMENTS

Date	Approach	Description
September 2011	Acquisition	Kerry group acquired Cargill's global flavors business. Cargill Flavor Systems is provider of flavor ingredients and flavor systems for beverage, dairy, sweet and savory applications. This acquisition helped Kerry group to strengthen its potential to provide integrated consumer solutions across every food and beverage end-use-markets and widen the Group's market spread in budding markets.
June 2011	New product development	Kerry Ingredients & Flavors launched a six new palette of natural citrus flavors for beverages, known as 'taste twists' such as Kusiae lime 'type' for flavored still water, Rangpur lime 'type' for ready-to-drink (RTD) tea, Meyer lemon 'type' for flavored carbonated water, Pomelo 'type' for flavored still water, Blood orange 'type' for juice drink, Clementine 'type' for energy drinks.
March 2010	New product development	Kerry Ingredients & Flavors launched 'Mastertaste' natural flavorings at Djazagro 2010. This helped company to expand its presence in North Africa region.

Source: MarketsandMarkets Analysis

For information regarding permission, contact:

Tel: 1-888-600-6441

Email: sales@marketsandmarkets.com