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# World Nutraceutical Ingredients

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Industry Study with Forecasts for **2015 & 2020**

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*Substances with clinically confirmed health benefits and broad applications in foods, beverages, dietary supplements, and nutritional preparations will provide the best growth opportunities.*

## World demand to rise 7.2% yearly through 2015

World demand for nutraceutical ingredients is projected to increase 7.2 percent annually to \$23.7 billion in 2015. Global trends in nutraceutical ingredients will result in developing regions achieving much faster growth in both consumption and production than developed regions. Increasing economic prosperity will enable countries, such as the BRIC countries of Brazil, Russia, India and China, as well as Mexico, Poland and South Korea, to expand and diversify their food and beverage, processing, and pharmaceutical industries. Based on projected investment levels in these industries and rising consumer incomes, China will evolve into the largest global producer and consumer of nutraceutical ingredients by 2020, surpassing the United States and Western Europe.

## Naturally derived substances to lead gains

Nutrients, including proteins, fibers and various specialized functional additives, will remain the top-selling group of nutraceutical ingredients. World demand for these substances will increase 6.7 percent annually through 2015. Proteins will post the fastest gains as food and beverage makers throughout the world introduce new high value-added nutritional preparations. Functional additives and fiber nutrients will also fare well in the global marketplace, with demand gaining upward momentum from increasing clinical evidence of health benefits

## World Nutraceutical Ingredient Demand, 2015 (\$23.7 billion)



and expanding applications in specialty foods and beverages.

Naturally derived substances, consisting of herbal and botanical extracts and animal- and marine-based derivatives, will be the fastest growing nutraceutical ingredient segment. World demand for these substances is projected to increase 8.9 percent annually through 2015. Omega fatty acids based on fish oils and other marine sources will lead gains, reflecting clinically proven cardiovascular benefits and expanding use in dietary supplements and nutritional therapies. The rising popularity of homeopathic remedies, coupled with widespread trends promoting preventive medicine and self-treatment, will impact favorably on global demand for numer-

ous other natural nutraceutical ingredients, including cranberry, garlic, ginkgo biloba and ginseng extracts; and glucosamine and chondroitin.

World demand for minerals and vitamin ingredients consumed in nutraceutical applications is forecast to rise 6.2 percent annually through 2015. Well-established applications in food and beverage fortification; infant, adult and pediatric nutritionals; and dietary supplements will underlie growth. Continuing widespread acceptance of health and wellness benefits will keep minerals and vitamins among the most widely used nutraceutical ingredients worldwide in spite of recent studies questioning their effectiveness.

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## Sample Text, Table & Chart

### ASIA/PACIFIC

#### China: Nutraceutical Ingredient Supply & Demand

Total demand for nutraceutical ingredients in China will increase eleven percent annually to \$1.5 billion in 2020. China will represent the second-largest total demand for nutraceutical ingredients in the United States by 2020 in value. However, by 2020, the United States will continue to form the largest national market for nutraceutical ingredients. The rapid growth in Chinese demand for nutraceutical ingredients reflect the proliferation of health-conscious consumers as well as increasing personal income levels. This growth is being driven by an increasing demand for fortified and functional foods and beverages, nutraceutical preparations, dietary supplements, traditional medicines and nutraceutical-based therapies to prevent and treat health problems.

Continuing imbalances and deficiencies in the medical care system will keep a large percentage of Chinese residents dependent on nutraceutical products for health and wellness. The overall availability of these products in the country will increase rapidly as national food, beverage and drug makers broaden and diversify offerings targeted to health conscious consumers. Moreover, the expansion of retail distribution channels will boost demand for nutraceutical products. Over the past decade, China has seen substantial growth in the number of hypermarkets, supermarkets and drug stores throughout the country. These retail establishments, which comprise the large chain store of Auchan, Carrefour, China Nepstar, China Resources Enterprise and Wal-Mart, offer broad lines of fortified and functional foods, beverages, adult and pediatric nutritionals, and traditional and dietary supplements. Based on rising income levels, these nutraceutical products are expected to fare well in the burgeoning Chinese market.

Lastly, demand for nutraceutical products and ingredients will benefit from new food safety regulations adopted in 2009. These

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SAMPLE  
TEXT

TABLE VI-10

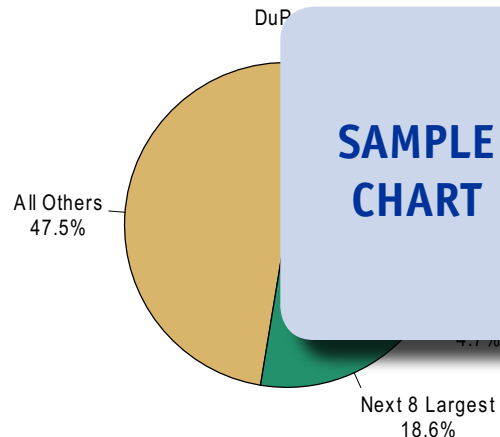
### CHINA -- MINERAL & VITAMIN INGREDIENT DEMAND BY TYPE (million dollars)

Item	2000	2005	2010	2015	2020
Nutraceutical Product Shipments (bil \$)	1.1	1.5	2.0	2.5	3.0
\$ ingredients/000\$ products	15	15	15	15	15
Mineral & Vitamin Ingredient Demand	5	5	5	5	5
Minerals:	0	0	0	0	0
Electrolytes	0	0	0	0	0
Essential Minerals	0	0	0	0	0
Trace Minerals	0	0	0	0	0
Vitamins:	5	5	5	5	5
Vitamin C	0	0	0	0	0
Vitamin A	0	0	0	0	0
B-Group Vitamins	8	8	8	8	8
Vitamin E	6	6	6	6	6
Other Vitamins/Related Ingredients	1	1	1	1	1
net exports	5	5	5	5	5
Mineral & Vitamin Ingredient Shipments	197	477	1013	1673	2350

SAMPLE  
TABLE

CHART VIII-1

### WORLD NUTRACEUTICAL INGREDIENTS MARKET SHARE BY COMPANY, 2010 (\$16.75 billion)



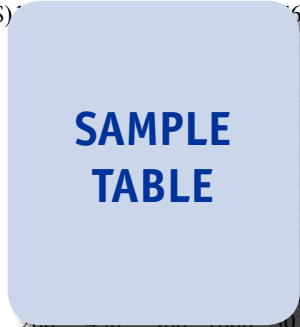
SAMPLE  
CHART

## Sample Profile, Table & Forecast

**TABLE VI-8**

**CHINA -- NUTRIENT INGREDIENT DEMAND BY TYPE**  
(million dollars)

Item	2000	2005	2010	2015	2020
Nutraceutical Product Shipments (bil \$)					6.4
\$ ingredients/000\$ products					5
Nutrient Ingredient Demand					15
Protein Additives					30
Functional Nutrient Additives:					30
Probiotics					40
Other					90
Fiber Additives					85
net exports					55
Nutrient Ingredient Shipments	200	450	700	1000	2010



**COMPANY PROFILES**

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**Biothera**  
 3388 Mike Collins Drive  
 Eagan, MN 55121  
 651-675-0300  
<http://www.biothera.com>

Annual Sales:  
 Employment:  
 Key Products:

**SAMPLE PROFILE**

Biothera is a leading provider of natural ingredients for cosmetic, therapeutic, and nutraceutical applications. The privately held company operates through two segments: Pharmaceutical and Healthcare Group.

Biothera participates in the world nutraceutical ingredient market through its Healthcare Group segment, which produces and markets a variety of natural health ingredients for functional foods and beverages, nutritional supplements, cosmetics and animal nutrition products. Among the segment's food-grade ingredients are beta glucan, a glucose polysaccharide derived from the cell wall of *Saccharomyces cerevisiae*. Also referred to as Baker's yeast, the compound supports the immune system by activating innate immune cells. Specific beta glucan binds with receptors on neutrophils, monocytes, macrophages and other immune cells to increase these cells' anti-infective, anti-tumor and hematopoietic properties. Beta glucan is marketed in bulk form under the WELLMUNE WGP, BETARIGHT and WGP 3-6 and APG 3-6 brand names. Biothera's beta glucan-based nutritional supplements are available in adult dosages, as well as in chewable tablets for children. These products are sold under the SOURCE BASICS, IMMUNE HEALTH BASICS and IMUCEL brand names.

477

**TABLE VI-7**

**CHINA -- NUTRACEUTICAL INGREDIENT SUPPLY & DEMAND**  
(million dollars)

Item	2000	2005	2010	2015	2020
Nutraceutical Product Shipments (bil \$)					6.4
\$ ingredients/000\$ products					7
Nutraceutical Ingredient Demand					10
Nutrients					5
Herbal & Related Ingredients					10
Minerals & Vitamins					5
net exports					10
Nutraceutical Ingredient Shipments					10
Nutrients					10
Herbal & Related Ingredients					10
Minerals & Vitamins					50







**OTHER STUDIES**

**Alternative Sweeteners**

This study analyzes the US alternative sweetener industry. It presents historical demand data for the years 2000, 2005 and 2010, and forecasts for 2015 and 2020 by product (e.g., high intensity sweeteners, polyols) and market (e.g., food, beverages, personal care products, pharmaceuticals). The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry players.

#2819 .....December 2011 ..... \$4900

**Biologics**

US demand for biologics is expected to grow 6.5 percent annually through 2015, driven by dramatic shifts in production technology and more targeted diseases such as cancer, diabetes and other serious medical conditions. Monoclonal antibodies will remain the largest category and be one of the fastest growing segments, outpaced only by hormones. This study analyzes the \$74.3 billion US biologics industry, with forecasts for 2015 and 2020 by product and application. The study also evaluates company market share and profiles industry competitors.

#2792 .....September 2011..... \$4900

**Cosmeceuticals**

US demand for cosmeceutical products is expected to increase 5.8 percent annually through 2015. Injectables and skin care products will see the fastest growth, based on anti-aging benefits. Among chemicals, antioxidants will remain the largest category, while botanicals continue to see the fastest gains. This study analyzes the \$6.5 billion US cosmeceuticals industry, with forecasts for 2015 and 2020 by product and chemical. The study also evaluates company market share and profiles industry competitors.

#2758 .....July 2011..... \$4900

**Excipients**

US excipients demand will advance 3.9 percent yearly through 2015, driven by continued growth in US pharmaceutical production and the increasing importance of excipients in drug formulation. Polymers will remain the top-selling type based on their use as fillers and binders in tablets. Fillers and diluents will remain the leading application and grow the fastest. This study analyzes the \$1.5 billion US excipients industry, with forecasts for 2015 and 2020 by product and application. The study also evaluates company market share and profiles industry players.

#2736 .....May 2011..... \$4800

**Flavors & Fragrances**

The US market for flavors and fragrances is forecast to rise three percent annually through 2014. Advances will be fueled by consumer interest in more complex, exotic and authentic flavors and fragrances, as well as the increasing use of these products as marketing tools and product differentiators. This study analyzes the \$4.8 billion US flavor and fragrance industry. It presents historical demand data and forecasts for 2014 and 2019 by market and product. The study also evaluates company market share and profiles industry players.

#2732 .....February 2011..... \$4900

**About The Freedonia Group**

The Freedonia Group, Inc., is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States, the emerging China market, and other world markets. Industries analyzed by Freedonia include:

- Chemicals • Plastics • Life Sciences • Packaging • Building Materials • Security & Electronics • Industrial Components & Equipment • Automotive & Transportation Equipment • Household Goods • Energy/Power Equipment

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Freedonia Custom Research is ideal for companies seeking to make a strategic difference in the status quo and focus on future business growth. Working side by side with clients, Freedonia's team is able to define a research project that is custom-tailored to answer specific questions and provide the basis from which a company can make informed business decisions.

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