Food & Beverage Additives

US Industry Study with Forecasts for 2014 & 2019

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Advances will be driven by increasing consumer interest in nutritionally-enriched products and all-natural foods, which promotes demand for high-value premium and natural additives.

US demand to rise 3.5% annually through 2014

US demand for food and beverage additives is forecast to expand 3.5 percent annually to $8.5 billion in 2014. Advances will be driven by increasing consumer interest in nutritionally-enriched products and all-natural foods, which promotes demand for high-value premium and natural additives. As consumers are wary of foods with artificial-sounding ingredients, processors seeking to create “clean” ingredient labels are increasingly favoring natural additives.

Flavors, sweeteners to remain largest types

Flavor products and alternative sweeteners will remain the largest product types in the US food and beverage additive market. Although the flavor segment is generally mature, the constant emergence of new food and beverage products continues to create new demand for flavors and enhancers. The inclusion of functional additives such as probiotics in a widening array of foods and beverages will benefit demand in this segment, as these nutraceuticals are often associated with a bitter taste that must be masked by flavor additives. Additionally, the National Salt Reduction Initiative -- a coalition of cities, states and health organizations working to curb the incidence of cardiovascular disease through voluntary reductions in the amount of salt in processed foods -- will promote demand for flavor enhancers, as these additives improve the flavor profile of reduced-sodium foods. Among alternative sweeteners, aspartame will continue to account for the largest share of demand, due primarily to its widespread usage in the diet carbonated soft drink segment. However, more rapid gains will be achieved by sucralose, acesulfame potassium (ace-K) and certain polyols. Additionally, trends favoring natural products will bode well for stevia sweeteners, which were approved for use as food additives by the US Food and Drug Administration in late 2008.

Among the various types of food and beverage additives, nutraceuticals -- which include vitamins, minerals, herbal extracts and probiotics -- are projected to experience the most rapid gains. Advances will be based on the growing popularity of functional foods containing additives that promote health and wellness. Nutraceuticals will continue to expand their presence beyond traditional applications like breakfast cereal, milk, bread, yogurt and juice into a wide variety of other foods and beverages. Soft drinks, snack foods, desserts and candy are now being fortified with vitamins and minerals, while vitamins and herbal extracts are used to enhance bottled waters. Probiotics have found success in the yogurt segment and will increasingly be incorporated into a variety of other products, such as tabletop sweeteners, chocolate, nutrition bars and juice.

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Demand for sucralose is projected to increase 5.3 percent per year to $310 million in 2014. This above-average pace represents a significant deceleration from the years immediately following its introduction, which fortuitously coincided with the low-carb diet trend. Approved by the US FDA in 1998, sucralose quickly gained a foothold in the alternate sweetener market and is likely to further expand its market share at the expense of aspartame due to its higher sweetening potency, longer shelf life, and superior heat and acid stability. Sucralose (the sweetener in SPLENDA) quickly became the dominant product in the tabletop market, surpassing such established sweeteners as aspartame (the sweetener in EQUAL) and saccharin (the sweetener in SWEET’N LOW). However, it has not been able to achieve this level of success in the large carbonated soft drink market.

Growth in demand in value terms is expected to be moderated by declining prices, as sucralose’s patent protection has expired and new suppliers are entering the market. Litigation on the part of Tate & Lyle to preserve its patent protections have been unsuccessful, with the US International Trade Commission ruling that manufacturers in China did not infringe on the company’s patents related to the sucralose manufacturing process.

Sucralose is a free-flowing white crystalline powder with a high solubility in water, ethanol and methanol. It is noncaloric and noncarcinogenic (i.e., it does not promote tooth decay), making it beneficial for use in diet beverages, chewing gum and other reduced-calorie or dental health applications. As the only noncaloric sweetener derived from sugar, sucralose has appealed to consumers who are concerned about health charges directed at other high intensity sweeteners and want a sweetener that is natural in origin, although the process by which the sweetened has caused a negative consumer response in some cases.

### Table V-3

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### Chart VI-1

US FOOD & BEVERAGE ADDITIVE MARKET SHARE, 2009

- **Others**: 78.4%
- **Other**: 21.6%

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Sample Profile, Table & Forecast

COMPANY PROFILES

Kemin Industries Incororporated
2100 Maury Street
Des Moines, IA 50317
515-559-5100
http://www.kemin.com

Annual Sales: $225 Million (estimated)
Employment: 835 (estimated)

Key Products:
Kemin Industries is a producer of livestock feed, pet food and food ingredients; and livestock feed preservatives and nutraceuticals. The Company is privately held.

The Company is active in the US food and beverage industry through the operations of its Kemin Food Ingredients subsidiary (Des Moines, Iowa). Kemin Food Ingredients manufactures and markets such food and beverage additives as preservatives and nutraceuticals.

Preservatives from Kemin Food Ingredients are marketed under the SHIELD and FORTIUM brand names, and are designed to improve the shelf life and quality of processed foods. SHIELD products are preservatives that inhibit the growth of bacteria, mold and yeast in baked goods. Among applications for these products are tortillas, bread, cakes and other cereal-based foods. The company’s FORTIUM product line encompasses antioxidants that are based on rosemary extract or delta-tocopherols. These products are suitable for use in the preservation of meat and poultry, fried foods, bread, crackers, spices and seasonings, fats, oils, margarine, salad dressings, condiments and ready-made meals. FORTIUM products are engineered to preserve the natural flavors, aromas, colors and nutritional value of foods. The

“Demand for food additives in bakery products is forecast to rise at an annual pace of 2.9 percent to $912 million in 2014. Gains will be restricted by trends toward healthier eating and continued efforts on the part of consumers to limit their intake of carbohydrates, a lingering effect of the low-carb diets popular in the early 2000s. On the other hand, demand will benefit from the decline of home baking (which typically uses fewer additives) and continued growth in the bakery product industry. A leveling off of consumer interest in no-fat and low-fat products will also impact the product mix of bakery additives as ...”

--Section IV, pg. 195

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