

Flavors and Fragrances

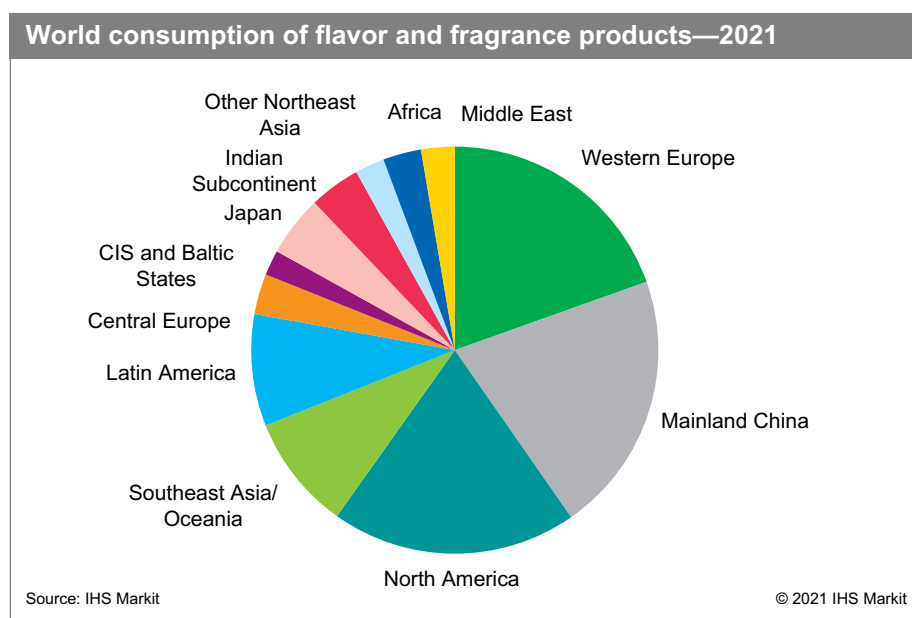
October 2021

Abstract

Flavors and fragrances are integral components of a wide range of consumer goods. Natural and synthetic flavor compositions are responsible for the fruity taste of cherry cola and the cool mint flavor of toothpaste. Fragrance compositions add the fresh scent of pine to household cleaning products and exotic top notes to fine perfumes. Worldwide consumption of flavor and fragrance (F&F) products—flavor and fragrance compositions as well as the essential oils, natural extracts, and aroma chemicals that serve as starting materials—amounted to almost \$40 billion in 2018 (merchant sales of F&F products only). The use of aroma chemicals (which are primarily synthetic) has increased at the expense of essential oils and extracts of natural origin. Synthetic aroma chemicals generally offer security of supply and price stability, whereas essential oils and natural extracts can be subject to supply shortages and price volatility.

Mature markets—North America, Western Europe, and Japan—accounted for less than half of 2018 consumption value; developing markets—Latin America, Central and Eastern Europe, the Middle East, Africa, China, and Other Asia—made up the remainder.

The following pie chart shows world consumption of flavor and fragrance products:



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Analysis of global consumption by product category over time shows that the use of aroma chemicals (which are primarily synthetic) has increased at the expense of essential oils and extracts of natural origin, despite increased consumer interest in natural ingredients.

Sales of flavor compositions generally exceed sales of fragrance compositions; in Other Asia, however, the opposite is true. Sales of aroma chemicals typically exceed sales of essential oils and natural extracts; in Japan, sales of essential oils and natural extracts exceed those of aroma chemicals. Japan's consumption of fragrance compositions is much smaller than its consumption of flavor compositions, and thus demand for aroma chemicals—the raw materials for compounded fragrances—is smaller. Consumption of F&F ingredients (essential oils, natural extracts, and aroma chemicals) is comparatively low in regions that are strongly dependent on imported flavor and fragrance compositions, such as Central and Eastern Europe, the Middle East, and Africa.

Important trends in the F&F industry include the following:

- Increased interest in healthy eating. Demand for “better-for-you” foods—foods with wholesome ingredients and reduced salt, fat, or sugar content—is growing. Sophisticated flavor systems can help food manufacturers reduce the salt or calorie content of their products without sacrificing taste.
- Consumer preference for natural (as opposed to artificial) ingredients. Many consumers believe that natural ingredients are safer, healthier, and better for the environment than their synthetic counterparts. Demand for foods and beverages that are free of artificial or chemical-sounding ingredients, including artificial flavors, colors, and sweeteners, is growing. The growing consumer preference for natural ingredients also affects the personal care, home care, and fabric care product industries.
- Strong demand for convenience foods, including microwaveable and prepared foods, in developed markets. This trend has generally increased the demand for flavors.
- Increased consumer interest in bold flavors and a willingness to experiment with novel and artisanal foods with nontraditional or exotic flavor profiles.
- Consumer and corporate concerns about the sustainability and environmental impact of certain F&F ingredients such as vanilla, sandalwood, and agarwood.
- The growing influence of social media, consumer activists, advocacy groups, and retailers in framing the discussion about ingredients in food and personal care products.
- Heightened concerns about the allergic potential of widely used fragrance ingredients.
- Consumer demand for transparency with respect to fragrance ingredients, including full disclosure of fragrance components in household cleaning and personal care products.
- The expanding role of biotechnology and fermentation processes in the production of aroma chemicals such as vanillin, nootkatone, and valencene.

Worldwide consumption of F&F products is expected to grow at an average annual rate of about 3.5% over the next five years. The potential for growth is greater in China, Other Asia and Oceania (especially India, the Philippines, and Thailand), and the Middle East than in the comparatively mature markets of North America, Western Europe, and Japan. GDP growth, urbanization, the expansion of the middle class, and increased demand for consumer products will drive consumption growth in developing countries.

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