

Site Visit: Symrise

Uniting R&D activities, acquisitions, boosting mint and menthol production, and more.

Just days before the company announced its acquisition of Yonkers, New York-based fragrance manufacturer Belmay, expanding its fine fragrance, personal care and air care activities, *P&F* magazine was afforded an opportunity to visit Symrise's headquarters in Holzminden, Germany. The company is a massive presence in the small town where, in 1874, Ferdinand Tiemann and Wilhelm Haarmann harvested local pine bark from which they derived coniferin for the first-ever synthesis of vanillin, providing the basis for Symrise forbearer, Haarmann & Reimer.

The company, which marks its 10th anniversary this year following the merger of the former Dragoco and Haarmann & Reimer, is in the midst of uniting its Holzminden research activities in a newly renovated space on its massive campus. While many top F&F houses operate flavor and fragrance businesses completely separately, CEO Heinz-Jürgen Bertram told *P&F* that it was crucial to have basic research and analytical operating in between the flavor and fragrance teams to maximize collaboration and technical cross-fertilization. Housing technical staff from around the globe under one roof will create an in-house scientific community.

The discussion with Bertram also coincided with the company's annual meeting of perfumery and R&D staff in Holzminden. This, he said, rectifies any disconnects between the development and implementation of captive materials and other technologies. Bringing the teams together allows the perfumers to share insights into formulations and other troubleshooting. The on-site visits are a companion to the company's internal perfumery online discussion boards, which similarly encourage information-sharing on a global basis.

"We believe there are synergies between flavors and fragrances, different creative ideas," Bertram said. "It's good to have different approaches from the analytical and basic research. This is one of the things we try to do differently."

The bright multilevel space is constructed with an openness unlike a typical research facility—an intentional move, Bertram noted. The company expects the site to officially open by summer.

Acquisition Track

During *P&F*'s visit, Bertram dismissed talk of Symrise rising to the status of the industry's third-largest player. As he described it, size does not necessarily equal value. Pursuing acquisitions for scale without considering inherent business models does not, he said, hold any interest. Bertram sees Symrise's expertise beyond traditional F&F, including cosmetics and consumer health, as one of its real strengths and differentiators. Meanwhile, the company's size allows it to cater to each customer's personality, whether it be focused on unique technology or innovative service.



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"Whatever it is," he concluded, "it has to be somehow special."

Days later, the company announced that it had acquired Belmay, boosting its presence in North America. (The companies have kept the purchase price confidential.) Symrise has taken over Belmay's existing fragrance customer and product portfolio, its research and development department, specialists, and selected property, plants, and equipment. In fiscal 2012, Belmay generated fragrance sales of around \$60 million.

Early last year, Symrise took over Belmay's Brazilian fragrance business, which has been integrated into local operations. (That move coincided with the acquisition of the U.S. natural fragrance manufacturer Trilogy Fragrances [since renamed PureScents], and a strategic partnership with the Swedish biotech firm Indevex regarding consumer health projects.) The acquisition continued Symrise's expansion into emerging markets, including Latin and South America, which offer strong growth figures in categories such as fine fragrances, hair care and personal care. Since its Brazilian acquisition, Symrise has invested about €12 million in a new facility near São Paulo, roughly tripling its space and boosting its capacity to develop products tailored specifically for the rapidly growing Latin American market.

At the time of the investment, Eder Ramos, regional president, scent and care, said, "Brazil is the world's largest market for perfumes, deodorants and baby care products. "The market for hair care products is also growing rapidly in these emerging economies, which is why we have decided to set up Symrise's international hair care center at the new location as well."

Of the acquisition of Belmay's North American activities, Bertram said, "Symrise aims at profitable growth and continuously expands its activities in market segments that are growing dynamically. The market for air care products, for example, has been experiencing above-average growth for the past few years. This holds true on an international level and especially



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for North America, where demand for air care products is particularly strong. Belmay has a strong market position and has been operating profitably for years.”

Fresh and Beyond: Expanding Mint and Menthol Activities

Consumers link mint with fresh breath, overall freshness and cleanliness, explained Ralf Hecker, global business unit vice president for oral care, and Arnold Machinek, senior flavorist, global business unit oral care, during a discussion at Symrise’s headquarters.

To gain a deeper level of understanding, the company has collaborated with market research agency GfK to determine longer-term trends for consumer needs in sensory science. Working with trained panelists in Holzminden and Shanghai, Symrise’s oral care experts have derived insights for flavor profiles for global briefs. The oral care team also surveys markets, creating flavor genealogies for product clusters, similar to the categorizations Symrise uses for fine fragrance.

Machinek explained how certain markets are developing specific preferences. Europe and Asia, for example, are picking up on whitening and related flavor profiles. Meanwhile, Symrise has identified “bouquet notes” that can maximize palatability of oral care flavors in different regions. In India, cardamom and clove are popular, while green and white tea flavors that are accompanied with antioxidant claims are preferred in Japan.

In addition to consumer insights and formulation expertise, the oral care unit provides brand ideation and fingerprinting for some customers, as well as recommendations for bases and packaging. Today’s customers, said Machinek and Hecker, often require full-service solutions from their flavor suppliers.

Minty Sensations

Beyond its expertise in natural mint and menthol, and synthetic menthol, the company has boosted its oral care innovations with sensates. In addition to—or in place of—aroma, these materials provide such diverse functionality as sinus clearing, improved flavor impact/intensity, tingling and clean mouthfeel, and, for halitosis sufferers, saliva flow enhancement and bactericidal activity. Optacool and Frescolat SC1 provide a pleasant, cooling effect. Optaflow improves mouthfeel and thus is suitable for oral hygiene products, while Optafresh (a blend of materials) neutralizes the bacteria that cause bad breath and gives a clean feeling throughout the day.

Closing the Mint Capacity Cycle

Focusing on fresh taste and cooling for oral care products, chewing gum and confectionery, the company has created a “think mint” umbrella brand for its activities. The move comes after a multiyear effort to expand its menthol capacity. In response to both volatile markets and specific customer and product requirements, Symrise has backward-integrated key ingredients and created its own sources of raw materials for mint flavors, including menthol production facilities. In some cases, the company is supplementing natural offerings with natural mint oil alternatives. This closed cycle of raw materials, the company says, ensures sustainable supply of ingredients.

“The global demand for menthol has been increasing at high single digit rates for years now, said Bertram when the expansion began. “[W]e are expanding our product range in the menthol sector so that our clients are able to respond to consumer preferences better and more flexibly.”

As part of this expansion, the company doubled its synthetic menthol manufacturing capacity in Holzminden. This corresponded with a double-digit increase in menthol sales, as noted in a report released early in 2012. The company is now one of the largest menthol suppliers in the world.

Natural Mint

Hecker and Machinek stressed that while the company has boosted its synthetic menthol capacity, natural mint products and profiles remain crucial to its mint, oral care, confectionery and other activities. Just as it has built strong citrus, vanilla, onion and other competencies, Symrise continues to refine its mint offerings with a focus on the natural products’ pricing issues. It also continues to perform some in-house rectification of mint oils.

Flavor loads of mint in oral care can fall in the range of 1–1.5%, said Hecker and Machinek. This total will often be paired with other active ingredients for masking the product base. For flavor suppliers, they said, it is crucial to provide standard qualities for customers—for example, a peppermint oil comprising 50% menthol, 35% menthol derivatives, 13% terpenes and menthofurans, etc.

Oral care and chewing gum, Hecker and Machinek said, present opportunities for growth as frequency of consumption increases in developing markets. The natural products that fall under the company’s mint umbrella are:

- Spearmint (*Mentha spicata*)—Native and Scotch varieties, which typically possess 60–75% carvone—is purchased by Symrise exclusively from North American sources. Spearmint, Hecker explained, adds full body and aroma to applications.
- *Mentha arvensis* (sometimes known as “Japanese mint”), meanwhile, contains l-menthol content just under 40%. Hecker described the aroma as earthy, stuffy, phenolic and bitter and explained that it has stronger cooling capacity compared to *Mentha piperita*. Dementholized *M. arvensis* oils (DMO) are winter-stable and won’t crystallize. Machinek said that this mint oil is preferred in the localities in which it is grown.
- *Mentha piperita* is sourced from the U.S. Midwest and West, said Hecker. The oil is described as rounded, sweet and tea-like, with a fresh impression and strong cooling impact.

Growing Sophistication in Mint Applications

The company's portfolio of mint, menthol and active materials allows it to address the growing sophistication of consumer product launches, said Hecker and Machinek. Freshness boosters; taste enhancers; astringency, bitterness and sourness maskers; and other materials, paired with traditional flavor compounds, are necessary for the next generation of product launches, ensuring sensory acceptance and chemical stability over the long term. Formulators don't want things turning up as an off note later on, the oral care experts explained. Product bases are getting more sophisticated, including low-pH. Meanwhile, taste and mouth-feel sensation agents can have negative sensory effects, requiring a tweaking of the flavor for the desired profile. Whether swallowed or not, Hecker and Machinek said, flavors need to have an appropriate flavor level.

Training the Next Generation

Before departing, *P&F* was granted a brief tour of Symrise's flavor and fragrance training programs, which draw candidates from around the world—both internal and external—and bring them to Holzminden for intensive training. Following an initial fragrance program in Germany, perfumery trainees are transferred to Symrise locations around the globe to gain on-the-job experience servicing regional consumer tastes. The goal is to prepare technical professionals for the evolving world markets of the 21st century.

Beverage flavorist Susanne Otte provided a tour of the company's flavor academy, which recently inaugurated a new training facility. Each group of trainee flavorists comprises seven or eight trainees from around the world from various disciplines (food chemistry, applications, general chemistry, etc.) and spends six months in Holzminden. During the first three months, the trainees learn raw materials. They are then given a flavor matching exam. The participants also learn to use descriptors and analogs for fruits, vanilla, mint, vegetables, etc. The program also covers analytical, emulsions and spray drying. It then concludes with a long-term project in collaboration with mentors. Graduates of the flavor trainee program will undergo extended training for specific applications and will eventually be placed in different markets to develop global consumer and customer understanding.

Meanwhile, the perfumery program, which was opened in 2011, features training on a palette of 2,500 ingredients, fragrance composition, ingredient interactions and applications. Working with mentor perfumers, trainees delve into areas of specialization and increasingly sophisticated blends of materials and accords. Like their

flavorist colleagues, perfumery trainees eventually spend time at locations around the globe.

"My wish for this school is that it will always teach talented young people and produce accomplished perfumers," said Achim Daub, global president scent and care, during the perfumery training center's inauguration. "I have no doubt that these individuals will play a significant role in our company's success, ensuring that Symrise will continue to launch successful fragrance compositions on the market."

Focusing on technical and consumer innovations and cultivating its internal know-how, Symrise is preparing for a changing F&F industry.

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