The Continuing Evolution of Terpene Products and Specialties

How sustainability and biotech are driving Renessenz's F&F industry presence

he growth in ingredients from natural renewable feedstocks is exciting," says Theodore Butz, president and CEO of Renessenz parent company, Pinova Holdings. "Feedstock volatility is a big issue for many F&F players and we are actively developing solutions that reduce this volatility while still in a renewable form." With feedstocks coming from byproducts of other industries including citrus processing and paper production, terpene producers are in a good position to address these concerns.

"More than 90% of the sales in our company are based on renewable materials," says Butz. "Sustainability is growing by leaps and bounds. We have a lot of customers who are very demanding in this area, and we're setting a lot of our agenda on helping them."



Theodore Butz, president and CEO of Pinova Holdings



Michael Klamm, vice president, commercial and technology

A Changing Terpene Business

Renessenz's history stretches back 101 years to the foundation of Standard Turpentine Co., which then focused on the naval stores industry. Subsequently the company operated under a number of names, including SCM-Glidden, Millennium Chemicals and LyondellBasell until it was acquired by Torquest and placed under Pinova Holdings, a sister company to Pinova Inc. Renessenz is one of the largest F&F ingredient houses based on natural renewable feedstock and is focusing on innovation and sustainability, particularly in the elimination of impurities and excess wastewater^a.

Butz and Michael Klamm, vice president, commercial and technology, state that the majority of the company's customer base comprises category leaders in their respective niches, including flavor and fragrance houses and beverage companies. The relatively fast growth of these companies has led Renessenz to focus on bringing more ingredients to them rather than broadening its customer base.

As for future growth, says Butz, "We're not looking for a silver bullet. There are interesting opportunities for us to continue to expand our presence in rapidly growing emerging markets, to build in Asia and Latin America where growth rates are faster than the United States or Europe. We are also looking at a number of specialty niches. We're not interested in adding a lot more commodity products to who we are."

Evolving Ingredient Palette

The company manufactures its materials in its Jacksonville, Florida, and Colonels Island, Georgia, plants. Its feedstocks comprise crude sulfate turpentine, which is a co-product from the paper mills and used to make terpene-based products; orange-peel-derived d-limonene, a co-product of orange juice processing, which is used to produce l-carvone; and natural menthol, which can be used to manufacture coolants such as l-menthyl lactate (for use in confectionary for its lasting cooling effect and absence of taste) and cyclohexanecarboxamide (for use in oral care, confectionery and personal care products for its intense and clean cooling sensation).

Renessenz's products service the fragrance, flavor and intermediates markets for F&F houses and consumer goods companies.

"The fragrance [materials] are basically for household and personal care products, including detergents, washing powder, soaps and some fine fragrances," says Klamm. "We make some of the staples of the industry, including dihydromyrcenol, linalool, geraniol and citronellol—products that are coming from the terpene family. In flavors, we predominantly serve oral care and confectionery markets. We provide three major ingredients for the oral care industry: the sensory coolants, anethole and the l-carvone." He adds that materials for the flavor industry represent areas of growth, as are fragrance ingredient mixtures for perfumers.

Renessenz serves the oral care and confectionary industries, supplying sensory coolants derived from its patented process technology. The company's l-carvone process is also patented, producing a "green" l-carvone free of the chloride and nitrocycle compounds found in traditional processes. Renessenz also sells intermediates to flavor and fragrance producers to make the next level of intermediate and supplies a family of products that

^a Pinova Holdings employs nearly 500 staff and has annual revenue of about \$300 million.



Renessenz's Colonels Island, Georgia, facility

are initiators for the rubber industry for the production of tires.

The Future

"What we have is a series of niches, including industrial specialties," says Butz. "Most of our products are supplied from crude turpentine from North American pulp mills. We're actively expanding that by broadening where we get our turpentine from and growing the flavor aspects of the business that don't rely on turpentine for the basis of the products."

Meanwhile, he says, "When we look at how to leapfrog our technology, there are biotech answers in a number

of areas that are very interesting. Some may take a little more time than others, but the overall evolution of many areas is advancing greatly. We see that with many of our customers on the F&F side. We see a number of opportunities for new products and in improving processes. We will dedicate more and more of our innovation spends in this area."



Two views of Renessenz's Jacksonville. Florida, facility

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