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December 2024

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Essential Oils and Citrus Blends: Maintaining Quality Amidst Rising Costs and Adulteration

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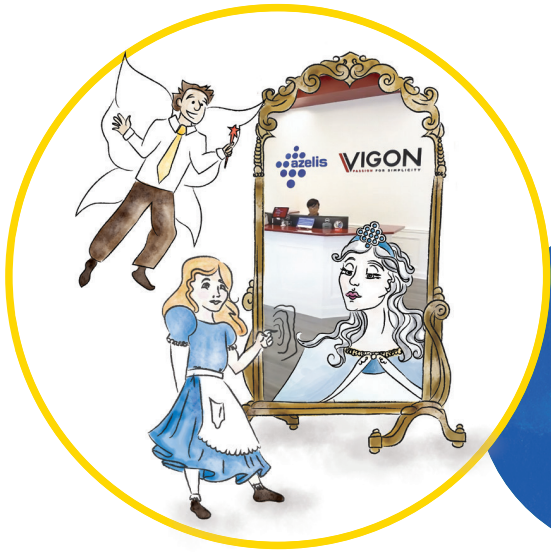
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Perfumer & Flavorist+ magazine
336 Gundersen Drive, Suite D
Carol Stream, IL 60188-2403 USA
fax: 1-630-653-2192 • e-mail: perfumer@allured.com

@perfumerflavorist Perfumer & Flavorist @perfumer_flavorist

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EDITORIAL

Content Director	Jeb Gleason-Allured | 1-630-344-6069/jallured@allured.com
Editor in Chief	Katie Anderson | 1-630-344-6077/kanderson@allured.com
Managing Editor	Jenna Troyli | 1-630-344-6053/jrtroyli@allured.com

SOCIAL MEDIA

Social Media Manager	Emmanuel Henderson | 1-630-344-6020/ehenderson@allured.com

ADVERTISING SALES

Associate Publisher	Paige Crist | 1-630-344-6060/pcrist@allured.com
Advertising Production Manager	Kasia Smialkowski | 1-630-344-6025/ksmialkowski@allured.com
Advertising Production & Business Intelligence Specialist	Ethan Grisham | 1-630-344-6068/egrisham@allured.com

AUDIENCE DEVELOPMENT

Audience Development Manager	Sam Attebery | 1-630-344-6027/sattebery@allured.com
Customer Service	1-847-559-7554/customerservice@perfumerflavorist.com

DESIGN

Assistant Design Manager	James Fergus
Senior Graphic Designer	Hon Bannapradist
Digital Production Specialist	Kyle Torain

CORPORATE

Partner & CEO	George Fox
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Allured Business Media
1-630-653-2155 • fax 1-630-653-2192
336 Gundersen Drive, Suite D
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Perfumer & Flavorist+ (ISSN 0272-2666) is published monthly by **Allured Business Media**.

Subscriptions: Subscribe online: *www.PerfumerFlavorist.com/subscribe*

For both the US and internationally, telephone: 1-847-559-7554
(9 AM-5 PM Central, Mon-Fri) | Fax: 1-847-291-4816
E-mail: customerservice@perfumerflavorist.com
Address: *Perfumer & Flavorist+*, PO Box 3009, Northbrook, IL 60065-3009

Periodicals Postage paid at Carol Stream, Illinois, and additional mailing offices.

Print subscriptions are free to qualified individuals in the United States.
Print subscriptions are not available to those living internationally.

POSTMASTER: Send address changes to *Perfumer & Flavorist+*, PO Box 3009, Northbrook, IL 60065-3009

Change of address: Give both the new and old addresses. Allow two months for a change to become effective.

Missing issues: Claims for missing issues must be made within three months of the date of issue.

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The United States Enters its Fragrance Layering Era



Layering fragrances is a way to create personalized scents for the user, and it's becoming more popular among Western consumers and being capitalized on by brands like Glossier.

Headlines have shown a significant shift in consumer behavior, focusing on the growing trend of layering different fragrances to create personalized, unique scent experiences.

In Amy Marks-McGee's "Forward Thinking" article from October 2023, discussed the TikTok phenomenon of the "Everything Shower," which is said to be a long, luxurious shower that involves a variety of steps to cleanse and pamper your body and hair. This has informed an increasing desire for customization in beauty and wellness routines, where consumers experiment with combining/layering perfumes, body mists, and home scents to suit their moods, occasions, or identities.

In a recent interview with BeautyWorld Middle East representatives, they shed some light on the layering trend in the West, "The influence of the Middle East on the Western fragrance market has been profound in recent years. From the global adoption of oud, (with different levels of intensity and authenticity) to the shift of consumer preference toward rich and opulent scent, Middle Eastern perfumery has moved from niche to mainstream.

Consumers all over the world are familiar with the key accords of Arabian perfumery. The generalized presence of intense dry ambers in many scents, seeking lasting and sillage, is also to be a by-product of this influence.

Ingredients like saffron, musk, and dates are ever-growing in popularity, and consumers are seeking the opulent richness of Middle Eastern cultural notes in modern and innovative ways."

The adoption of oud and layering are echoed in Glossier's recently debuted Impressions of You collection described as a line of skin-scent enhancers with the same warm, musky base notes—allowing users to play with and layer them to create their own unique fragrance wardrobe.

The inaugural Impressions of You scent, Glossier You, is comprised of sparkling pink pepper, earthy iris, and Ambrette seeds with an Ambrox base.

The two latest additions to this line are Gossier You Doux and Glossier You Rêve, both boasting a musky base formulated with Ambrox.

Glossier You Doux is described as a soft and serene woody fragrance that opens with sweet violet, followed by a precious blend of woody palo santo, frankincense and smoky Myrrh—heightened by a warm, musky base driven by Ambrox.

Glossier You Rêve is described as a lush, dreamy gourmand fragrance that opens with rich buttercream, followed by an addictive center of plum Butter, toasted almond, iris and creamy white sandalwood—heightened by a warm, musky base driven by Ambrox.

We'll see how this trend will continue to evolve as users continue to play with their fragrance experiences.



JENNA TROYLI
Managing Editor
jrtroyli@allured.com

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Symrise Debuts Scent & Care Office in Barcelona

Symrise's new office in Barcelona is said to serve as a hub for ideation, creativity and collaboration across the Scent & Care division, "to push the boundaries of fragrances and cosmetic ingredients capabilities."

The 600-square-meter space is designed to reflect Symrise and the unique style of Barcelona, paired with natural elements such as wood, stone and earthy tones.

"Opening the doors to this office marks an important and exciting milestone for Symrise Scent & Care," says Timothy Kenny, president of cosmetic ingredients at Symrise. "As a leader in the cosmetic ingredients industry, we have committed ourselves to high proximity to our customers, understanding their needs, and delivering solutions that add value to their business in today's dynamic markets. We are looking forward to embracing the opportunities of our new creative hub in Barcelona. It will enhance collaboration and enable high-quality innovation tailored to customers' evolving demands." p&f+



L to R: Timothy Kenny, President Cosmetic Ingredients, Montserrat Delor, Sales Director Spain & Portugal, Karim LISI, Vice President Sales Fragrances & Oral Care, Southern Europe, Ricardo Omori, Global President Fragrance Division, all Symrise.

Givaudan's Joint Venture with Privi, Prigiv, Launches Operations at Mahad Fragrance Ingredients Facility

Givaudan has announced the commencement of operations at the new Mahad Fragrance Ingredients facility, as part of its joint venture with Privi Speciality Chemicals Limited (Privi).

Privi holds a 51% equity stake in the joint venture, while Givaudan retains the remaining 49%. The new facility is said to manufacture a diverse portfolio of value-added products, with a planned ramp-up of activities over the next two to three years.

Maurizio Volpi, president Fragrance & Beauty at Givaudan, stated, "We are thrilled to mark this important milestone in our joint venture with Privi. The opening of the Mahad facility is a testament to our collaborative spirit and commitment to innovation. This state-of-the-art facility will enhance our ability to deliver high-quality fragrance solutions, ensuring we meet our customers' evolving needs while driving sustainable growth together."

Mahesh Babani, chairman and managing director of Privi, commented, "We are excited to mark this significant milestone with Givaudan. This facility is designed for the production of complex ingredients through advanced chemical synthesis processes. Our enduring partnership with Givaudan, bolstered by their investments, underscores our capability to deliver high-quality, complex products. This project not only fortifies our collaboration, but also highlights our commitment to the flavor and fragrance industry." p&f+



The facility is said to manufacture a diverse portfolio of value-added products, with a planned ramp-up of activities over the next two to three years.

From top: courtesy of Symrise; Givaudan

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Osmo's Fragrance 2o Beta Program Utilizing AI to Build and Buy Fragrance



The release also reiterates the company's promise to highlight the creative minds behind the creation, "Osmo's technology will free perfumers to focus even more intensely on creation, and we believe the world should recognize their masterpieces alongside Frida Kahlo, Prince, Frank Lloyd Wright, Coco Chanel and Alan Kay."

Osmo, the digital olfaction company, announced the launch of Fragrance 2o (*www.fragrance2o.com*), described as "an initiative merging the creativity of perfumery with the latest advancements in chemistry and artificial intelligence."

"The fragrance industry hasn't changed in nearly 100 years. It's time for something new," said Osmo CEO, Alex Wiltschko. "Fragrance 2o defines a new way to build and buy fragrance—with the art, science, and business o fragrance blended harmoniously."

As part of Fragrance 2o, Osmo is inviting brands selling fine fragrances in the U.S. and European markets to submit their creative briefs to Osmo's Fragrance 2o Beta Program. This program is designed for brands planning to launch fragrances within the next 3-6 months.

Osmo's technology aims to bring a wave of innovation across the fragrance industry, helping fragrance houses and commercial brands alike to establish transparency, improve efficiencies, create safe products, and innovate around new and existing scents.

How it Works

According a release, Osmo has created a scientific method to precisely measure how similar scents are. This technology is said to enable Osmo to predict consumer preferences and give their partners a competitive advantage. The company shares, "Later this year, we're also launching four new captives. Together, these efforts make our products unique and open up new opportunities for personalized experiences[..] We're also working to revive rare scents, like saffron and peony, and protect endangered ones."

The release also reiterates the company's promise to highlight the creative minds behind the creation, "Osmo's technology will free perfumers to focus even more intensely on creation, and we believe the world should recognize their masterpieces alongside Frida Kahlo, Prince, Frank Lloyd Wright, Coco Chanel and Alan Kay [..] We are opening up a radical new era in ingredient-level transparency and consumer respect."

Courtesy of Osmo

Axxence and Natural Advantage Announce Merger

On October 9, 2024, Axxence Aromatic GmbH (Axxence), a leading European manufacturer of natural aroma ingredients, and Natural Advantage announced the signature of a definitive agreement to combine their businesses. This strategic move is designed to be aligned with Axxence's growth strategy to expand its market reach and product offering and will create a global leader in the natural aroma ingredients sector, serving the food, beverage, and fragrance industries worldwide. The newly-formed group is said to capitalize on both companies' formidable market presence and shared dedication to quality and innovation.



The Group will generate approximately €60.0 million in combined revenues, operating 3 production sites with its natural products and compounds distributed across 45 countries.

"This merger marks a significant milestone in both companies' history," states Ron Honing, CEO of Axxence. "By combining our strengths, we not only enhance our geographic reach and customer base but also amplify our capability to produce complex natural aroma ingredients with guaranteed traceability, exceptional product quality, and expedited delivery. Together, Axxence and Natural Advantage are perfectly positioned to meet the growing demand for natural and sustainable products in our industry. We look forward to welcoming the talented team from Natural Advantage and working together to drive innovation and exceptional customer service standards."

Carol Callahan, founder and CEO of Natural Advantage, adds, "We are very pleased to be able to join forces with Axxence. This business combination not only provides exciting opportunities for our employees and customers but also ensures the continued success and growth of the business we have built. We are confident that Axxence's leadership and expertise will take Natural Advantage to new heights, and we are pleased to entrust the future of our company to such capable hands."

Merger Details

The Group will generate approximately €60.0 million in combined revenues, operating three production sites with its natural products and compounds distributed across 45 countries.

Under the terms of the agreement, Axxence will integrate some of Natural Advantage's production assets in Oakdale, Louisiana (USA) and assume ownership of all inventory and intellectual property rights. The newly-formed entity will operate under the name Axxence Production USA in Natural Advantage's existing facilities. Upon completion of the transaction, all employees of Natural Advantage will be offered positions in the newly formed Axxence Production USA, ensuring continuity and stability. As part of the transition, owners Carol Callahan and Brian Byrne will retire, transferring leadership to Axxence's experienced management.

The transaction, which is subject to customary closing conditions, is expected to close in early October. The purchase price remains undisclosed by mutual agreement.

p&f+

Courtesy of Axxence

Mosaic Flavors Names Rich Flanagan as CCO & Andrew Kim as CFO

Mosaic Flavors has announced the appointment of **Rich Flanagan** as chief commercial officer (CCO). Flanagan brings over 20 years of experience in the food and beverage industry, specializing in sales strategy, product development, and customer engagement. Flanagan holds a Bachelor of Science in Food & Nutrition from Florida State University.

As the CCO, Flanagan will lead Mosaic's commercial strategy, driving innovation and accelerating growth within the company's key markets, including beverages, dairy, specialty nutrition, sauces, dressing, and bakery. His role will be instrumental in further connecting Mosaic Flavors' customers with the company's unique custom flavor solutions.

Andrew Kim has been appointed chief financial officer (CFO). With over 10 years in the food and beverage industry, Kim brings extensive experience in financial management, strategic planning, and mergers and acquisitions. He holds a Bachelor of Arts in Economics from Northwestern University.

Crista Righi has been promoted to senior director of marketing. Righi, who has been with Mosaic Flavors for two years, will now oversee the company's marketing strategy, focusing on outreach and brand development. She holds a Bachelor of Science in Chemistry from the University of Northern Iowa and MBA from the University of Iowa.

"I am confident that these leadership changes will position Mosaic Flavors for continued success as we bring 'The Art of Flavor' to life for our customers," said Mark Becker, CEO of Mosaic Flavors. "The collective experience and innovation that Rich, Andrew, and Crista bring to the team will enhance our ability to meet evolving customer needs and push the boundaries of flavor development."



Rich Flanagan brings over 20 years of experience in the food and beverage industry, specializing in sales strategy, product development, and customer engagement.

Courtesy of Mosaic Flavors



Ingredients



Natural β-Caryophyllene 80

Isobionics®

https://www.isobionics.com/global/en/product-finder/natural-beta-caryophyllene-80

Isobionics® natural β-caryophyllene 80 (FEMA#: 2252, CAS#: 87-44-5) is not derived from clove oil and has the benefit of no phenolic and no eugenol character; it is produced from renewable resources using cutting-edge biotechnology. With 80% purity, the product is suitable for a broad range of applications like beverages, food and fragrances.



Sultanene

Symrise AG

https://www.symrise.com/de/scent-care/aroma-molecules/perfumery-ingredients/#Sultanene

Unleash the beauty of Symrise's Sultanene® (CAS# 15848-49-4). This high-impact fragrance ingredient conveys captivating accents of pineapple, pear, plum and jackfruit. Sultanene® is biodegradable and gives exceptional strength even at low usage levels. The stable all-in-one power ester delivers sustainability and outstanding effects for more than just fruity vibrations.

Butyl Valerate

Avant Organics

www.avantorganics.com



Butyl valerate (FEMA#: 2217, CAS#: 591-68-4) is a fruity ester known for its vibrant and sweet aroma, often described as reminiscent of ripe apples, pears, and tropical fruits like pineapples and bananas. Its sensory profile is smooth and slightly creamy, making it ideal for use in confectionery, beverages and fruit-flavored applications. Butyl valerate's light, refreshing character also lends itself well to enhancing the freshness of citrus notes and other floral-fruity blends. In alcoholic beverages, it can contribute to the fruity bouquet found in cocktails or liqueurs; while in fragrances, it adds depth to fruity top notes. This versatile ester plays a subtle but essential role in creating full-bodied flavor profiles without overwhelming other elements. Avant Organics provides this material as EU Natural, Kosher, non-GMO and Halal. For your free sample please email info@avantorganics.com.



Bergamot Rectified Essential Oil – M0063590

Mane

https://www.youtube.com/playlist?list=PLgDIh7L4kisLRSBkOShtbN0I6JHizlXUL

Bergamot rectified essential oil (furocoumarin reduced) (CAS#: 8007-75-8 or 89957-91-5) serves as a cornerstone in fragrance compositions and is renowned for imparting a refreshing top note. At Mane we sustainably source this timeless citrus from the scenic landscapes of Calabria, Italy. Our value chain is very short, ensuring full traceability from the fruit to the final extract.

Images courtesy of the manufacturers



Springer® Precursor 401

Biospringer by Lesaffre

https://biospringer.com/en/natural-products/springer-precursor/

Discover our new yeast extract, Springer® Precursor 401, rich in sulfur compounds to develop vegan and natural red meat flavors through Maillard reaction. As an ingredient derived from yeast fermentation, it is of natural origin, hence "natural flavor" on the finished product. Suggested applications for this extract include vegan applications especially meat snacks and other meat applications with red meat flavor improvement.

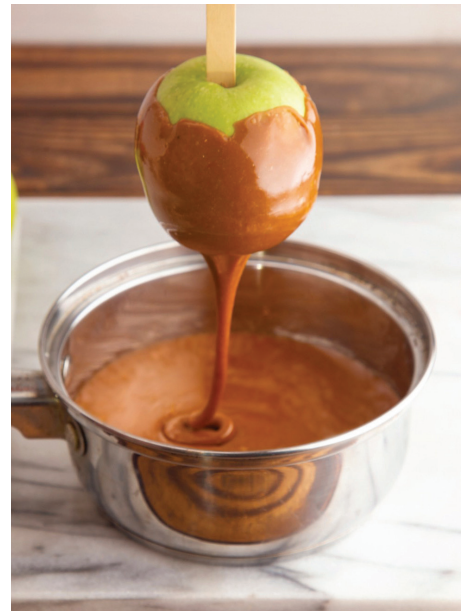


Davana Oil

Berjé Inc.

https://www.berjeinc.com/products/essential-oils/davana-oil/

Davana oil (FEMA# 2359, CAS# 110-40-7) imparts a distinct plum-like note, possessing a rich, diffusive, and fruity-boozy- profile that becomes especially appealing when paired with other fruity or floral materials. The aroma of Davana is initially strong, sharp, and fruity-green, but unfolds into sweet and balsamic undertones that retain exceptional tenacity.



Acetol, Natural, Neat

Penta International Corp.

https://pentamfg.com/search

Now offering acetol, natural, neat (FEMA# 4462, CAS# 116-09-6, JECFA# 1945). Contains a flavor profile that is sweet, slightly green and burnt. The odor notes are pungent, sweet, caramellic and ethereal. Our material is Kosher and Halal Compliant.



Natural α-Bisabolene 98

Isobionics®

https://www.isobionics.com/global/en/product-finder/natural-alpha-bisabolene-98

With 98% purity, Isobionics® natural α-bisabolene 98 (FEMA# 5067) is suitable for a broad range of applications like beverages and food. Due to our cutting-edge fermentation technology, we guarantee premium quality and reliable availability. It is EU/U.S. natural, pesticide-free, kosher and halal certified as well as compliant with EU/U.S. food-grade regulations.

PROFILES:
CHIRAZ MOURADIAN

Mouradian shares, “I grew up in Paris, influenced by a multicultural household rich in the fragrances and flavors of Armenian and Middle Eastern heritage.”

***Perfumer & Flavorist+ [P&F+]*: What led you to the fragrance industry?**

Chiraz Mouradian [CM]: I grew up in Paris, influenced by a multicultural household rich in the fragrances and flavors of Armenian and Middle Eastern heritage. My primary inspiration for perfumery stems from nature, a connection I nurtured during my childhood days spent on scouting trips, camping, and hiking, as well as through the botanicals my herbalist grandmother blended for her concoctions.

I always had a passion for chemistry and art. I always loved science, especially chemistry and at 15, after reading an interview with a perfumer in a magazine, I became obsessed with the craft. That led me to Pierre and Marie Curie where I did my undergraduate studies in chemistry to then study perfumery and phytochemistry at ISIPCA and Corte University. After gaining a few years of experience, I developed a deep fascination with understanding raw materials and how they interact to create unique olfactory stories.

***P&F+*: What applications do you primarily formulate for? Has this changed since you first began your career?**

CM: As a cross-category perfumer, I work on a diverse range of product applications. When I began my career, I focused primarily on personal care and skincare products. Over time, my experience has expanded to include hair care, air care, bath and body care, fine fragrances, and essential oil blends.

Being a cross-category perfumer allows me to experiment with various raw materials in different contexts, enhancing my understanding of their distinct characteristics and performance. Each application offers a unique perspective and serves as a rich source of fragrance inspiration. My favorite applications are fine fragrances and candles.

In fine fragrance, working with alcohol and applying scents to the skin allows for the use of natural raw materials that lend unique nuances to the fragrance, much like wearing a piece of jewelry. Creating candles involves crafting two fragrances in one: the cold throw in wax, which reflects like a precious gem, and the hot throw, which diffuses the scent throughout a space. Each is crucial, providing a different dimension to the full fragrance experience, much like the difference between listening to music on a device and experiencing it live.



Name: Chiraz Mouradian

Title: Perfumer, Lebermuth

Location: South Bend, Indiana, USA

***P&F+*: What are some of the current trends that are exciting you at the moment?**

CM: I'm particularly excited by two trends. First, the way Gen Z experiences fragrance as consumers is fascinating. They are driven by emotion and experience, giving perfumers immense creative freedom. This generation is complex, conscious, and mindful of what they consume, seeking cost-effective, high-quality, and sustainable options. They also use fragrances to express themselves beyond traditional fragrance aesthetics.

The second trend is the fragrance industry's incorporation of multisensory and multimedia elements in marketing for social media and showrooms. Perfumers are increasingly developing synesthetic projects and

Courtesy of Lebermuth

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collaborating with other media artists. Fragrance is emerging as a captivating art form that appeals to the world, beyond our niche industry.

***P&F+*: Are there any formulations you would consider timeless? Why?**

CM: I believe a fragrance becomes timeless when it resonates with people or a generation, creating a lasting bond that marks a social and cultural milestone with its unique aesthetic and sillage. For me that's Santal 33. This fragrance is uniquely complex yet simple and has come to define the 2010s, beginning in New York and spreading across the globe.

Having moved to the United States six years ago and lived in three different cities while traveling through several states, I've gained a deeper understanding of why Santal 33 has become such an iconic and timeless fragrance, setting trends in this country. It's a genderless fragrance, connecting urban modernity to nostalgia for nature.

***P&F+*: Advice for people coming into the perfume field.**

CM: The fragrance world is thrilling and continuously evolving, with perfumers continually seeking new trends and innovative ways to convey unique olfactive stories and sensations. Countless possibilities and untold stories await exploration.

***P&F+*:** I believe future and more diverse generations will bring fresh perspectives to this art form. Staying curious and continually self-reflecting are vital for honing your skills and becoming an exceptional storyteller.

p&f+

ZAREENA VALAPPIL

Learn about Valappil's journey in the flavor industry, formulations she considers timeless and trends that are currently exciting the flavorist.

What led you to the flavor industry?

Zareena Valappil [ZV]: I grew up in India, which I consider the land of spices and amazing flavors. My first professional foray into flavors started when I was working in India for a research institute, where we studied the impact of food preservation methods on flavor profiles of spices, like saffron, turmeric, pepper and nutmeg. Even though my background and my master's degree were in biochemistry, with this newfound interest in flavors, I came to the US to pursue my Ph.D. in Food Science at the University of Florida. That's also where my passion for citrus started, because Florida is the center of the citrus industry. It was also during my doctoral studies that flavor chemistry started to intrigue me because it is so complex. Whether it is a fruit flavor or a savory flavor, the amount of complexity that nature incorporates is really astonishing. Initially, I started as a research scientist in R&D before transitioning into a flavorist role. I was hooked from day one of my flavor training and never looked back.

What applications do you primarily formulate for? Has this changed since you first began your career?

ZV: As flavorists, we typically get broad training in every type of flavor tonality and its application across



Courtesy of ADM

Name: Zareena Valappil, Ph.D.

Title: Sr. Technical Director & Chief Global Flavorist, ADM

Location: Cranbury, New Jersey, USA

all product categories; and there are a lot of flavorists who are generalists. Early on, though, I knew I wanted to specialize and my true passion is for citrus. Citrus is almost 50% of all beverage launches. Therefore, I typically formulate different types of beverages. Alcohol is one of my favorite categories, as citrus is always a key taste driver in alcohol launches.

Regarding the question of change, citrus, like other natural products, is impacted by market volatility in terms of cost, availability and quality. Citrus greening and weather fluctuations have impacted citrus, especially oranges, with declining production globally. So, as flavorists, we have to incorporate technology, like ADM's CitrusFlex, and creativity in designing citrus flavors to ensure consumers get the same great-tasting citrus products with no compromise on quality or cost.

Over the years, I've also specialized in vanilla and have had opportunities to work in dairy, bakery and confections. Recently I've been working in the interesting category of taste modulation. Here we focus a lot on incorporating new innovations, helping to make food formulations healthier and more consumer preferred.

What are some of the current trends that are exciting you at the moment?

ZV: Today's consumers are increasingly health conscious and they desire products, including beverages, with added functional benefits. So, we're seeing a surge in products with reduced sugar or those that have functional ingredients added to them. However, when reducing sugar, for example, base challenges, such as off-notes or more bitterness or astringency, rise to the top, such that flavors have to work really hard to make the product appealing. Flavorists use many characterizing flavors and masking solutions to overcome these hurdles. At ADM, we've developed our own TasteSpark[a] flavor modulation technology, which leverages our captive molecules to address these challenges.

I also find the globalization of flavors exciting. Gen Z consumers, in particular, are very aware of global cuisines and are enjoying new food experiences. They're asking for savory twists like black lime or charred orange and unique citrus fruit profiles like yuzu, finger lime and Calamansi. This trending interest gives me an opportunity to push my creativity beyond the traditional.

Are there any formulations you would consider timeless? Why?

ZV: Cola is a timeless flavor. It's true ingenuity. Somebody really thought outside the box, right? There was no reference for a cola flavor. It's not like a fruit profile, such as orange or lemon; this was purely one of the first flavors that was created, and it was not something with which people were familiar. Like, who could have imagined? From a flavorist's perspective, cola is a unique combination of citrus, vanilla and botanicals, and this mix creates a taste profile that is loved globally by consumers. Irrespective of the region, cola is one of the most popular profiles in beverages, and it continues to stand the test of time. Since it was developed in the 1880s, it is still one of the popular flavor profiles with which people are fascinated and continue to consume. Cola, for me, is one of those timeless flavor profiles that I return to.

Are the types of projects you're working on changing over time? How are the creative demands of the job evolving?

ZV: Absolutely everything is changing. The sheer number of products that are available on the market now is astounding. Before, you had three or four beverage choices, such as juice, carbonated soft drinks or milk. But now, you have new categories blooming every day like plant-based products, zero-alcohol beverages and food with functionality. It's hard for one flavor to work across the board, and flavor toolboxes need to keep changing. If you add to that the challenges of raw material fluctuation, cost and the changing global regulatory landscape, these factors make a flavorist's role quite daunting. But I also have never seen a flavorist who does not like a good challenge. For instance, I rely on new technologies, like ADM's Corefold[b] technology, to create bold and impactful flavors that can shine through any type of application. The dynamic nature of the food and beverage space keeps flavorists' creativity going, as we cater to our customers' needs, as well as to new markets.

[a]TasteSpark is a trademark of ADM

[b]ADM's Corefold is a trademark of ADM




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Fifty ppm is ideal for fresh tomato flavors, but the level can be doubled in flavors with a processed note.



BY JOHN WRIGHT
johnwrightflavorist@gmail.com

FLAVOR BITES:

Guaiacol in Savory, Brown, Nut, Fermented & Other Flavors

See how Guaiacol plays a lesser, but still important, part in a wide range of flavors that have some heated nuance within their profile.

Guaiacol is one of the simplest, smoke profile, substituted phenols-2-methoxy phenol (FEMA#: 2532, CAS #: 90-05-1). It is at the heart of the impact of almost all smoke flavors. It also plays a lesser, but still important, part in a wide range of flavors that have some heated nuance within their profile.

Note that the dose rates given throughout this article are the levels suggested for use in flavors intended to be dosed at 0.05% in ready-to-drink beverages or in a simple bouillon.

Savory Flavors

Bacon: The level of smoke character in bacon flavors is widely variable. Two thousand ppm would be a reasonable level in an obviously smoked bacon flavor.

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Beef: Levels also vary in beef flavors, but are generally lower. Twenty ppm would be a starting point in a subtly roasted beef flavor.

Ham: The level of smoke notes in ham flavors covers quite a wide range. Three hundred ppm represents a cautious starting point.

Olive: Olive flavors vary in character, but this raw material is almost always helpful. The level of addition is not subtle, around 200 ppm, but it does not impart obvious smoke notes.

Pepper, Jalapeno: Guaiacol adds an interesting note to all pepper flavors but it is especially useful in jalapeno pepper flavors. Twenty ppm is a subtle, but useful, level of addition.

Smoked Salmon: Levels vary with the degree of smoked character in the smoked salmon flavor. Fifty ppm is on the low side but represents a good starting point.

Smoke: Guaiacol is usually the central building block in smoke flavors. Levels vary, depending on the other phenols chosen, but 3,000 ppm is typical.

Soy Sauce: Soy sauce flavors are not typically overtly smoky, but a cautious addition of guaiacol adds authenticity to most styles. Fifteen ppm is a reasonable level of addition.

Tomato: All tomato flavors benefit from a modest addition of guaiacol. Fifty ppm is ideal for fresh tomato flavors, but the level can be doubled in flavors with a processed note.

Brown Flavors

Chocolate and Cocoa: One hundred ppm of guaiacol adds an attractive hunt of smoke to most chocolate flavors, rising to 150 ppm in cocoa flavors.



Levels vary with the degree of smoked character in the smoked salmon flavor.

Coffee: Medium roast coffee flavors are lifted by a medium level of guaiacol, typically around 800 ppm.

Honey: Guaiacol may seem way out of place in honey flavors, especially those with a noticeable floral connotation. Surprisingly, it does fit in, blending well with central raw materials like phenylacetic acid. Fifty ppm is a good place to start.

Licorice: Anethole is the ingredient that springs automatically to mind for licorice flavors, but guaiacol also plays an important role. Levels of 300 ppm and up are effective.

Maple Syrup: Real maple syrup is the product of a long cooking process and a modest level of this ingredient is helpful. Eighty ppm is a reasonable place to start.

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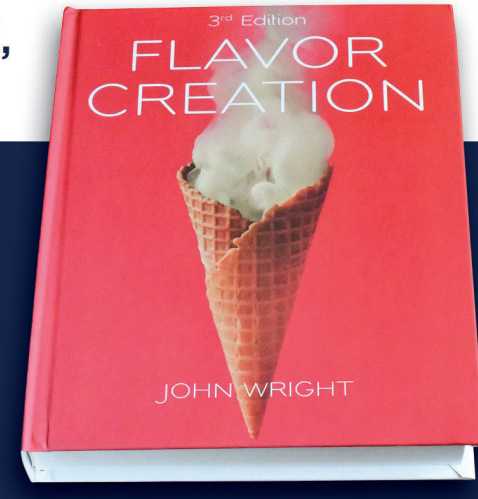


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Molasses and Brown Sugar: Most styles of brown sugar flavors only need a hint of guaiacol. Ten ppm works well. Molasses flavors are a little more open to higher levels, depending on the profile. Fifty ppm is a typical level.

Tea: Guaiacol should be used with care in tea flavors. A modest addition, around 10 ppm, can enhance black tea flavors. Guaiacol does really come into its own in Rooibos tea flavors, which can use at least 200 ppm to great effect.

Vanilla: The use of guaiacol in vanilla flavors is similarly a little tricky. A modest addition adds authenticity, but too much is very intrusive. In my opinion, the range from 50 ppm to 80 ppm works well in authentic vanilla bean-style flavors. This ingredient is not essential for French-style vanilla flavors, but a hint, of 40 ppm or less can be helpful.

Nut Flavors

Hazelnut: Guaiacol plays a modest part in many nut flavors, either as part of the roasted profile or as a modifier of the core nutty notes. The ideal level in hazelnut flavors is typical, around 40 ppm.

Peanut: Levels of addition of this raw material in peanut flavors vary, starting at around 30 ppm. Higher levels work well in more roasted profiles.

Walnut: Similar levels, in the region of 50 ppm, add depth and realism to all styles of walnut flavors.

Fermented Flavors

Beer: All fermented profiles gain from the addition of low levels of guaiacol. Part of the benefit in beer flavors is the emulation of the processing of the grain. This applies particularly to dark beers. Eighty ppm is a good level of addition.

Rum: Guaiacol contributes to rum flavors in the same way as brown sugar flavors. Levels vary with the profile, from 10 ppm upwards. Dark rum flavors may benefit from higher levels.

Tequila: Similar levels, around 10 ppm, can also contribute to tequila flavors, enhancing the aged aspects of the profile.

Whisky: The effect of guaiacol in whisky flavors depends to a large extent on the desired profile. Five ppm is a good starting point in mild, blended profiles, but higher levels work well in more aged and powerful profiles.

Wine: Much of the contribution of guaiacol in wine flavors derives from the contribution of this raw material to the cask-aged profile. Consequently, levels around 20 ppm are effective in red wine flavors, but much lower levels are better in white wine flavors.



Twenty ppm would be a starting point in a subtly roasted beef flavor.

Other Flavors

Acai: The impact of guaiacol in acai flavors has no relationship to the application of heat factor that was important in all the prior profiles. In contrast, it helps recreate the skin profile. One hundred ppm works well.

Cherry: The same comments apply to cherry flavors. The level of addition can vary radically, from 5 ppm in delicate flavors up to much higher levels in benzaldehyde-dominated creations.

Corn, Toasted: Here we obviously have a heat factor again. One hundred ppm is a reasonable starting point.

Peppermint: Realistic peppermint flavors consist of two, quite distinct, levels of raw materials. On one hand, the major ingredients, such as menthyl acetate, are often present at percentage levels. On the other hand, there is a range of trace components that, nevertheless have a big impact. Guaiacol is typical of the second group, with a level of addition of around 2 ppm.

Sesame: Sesame flavors should be noticeably smoke-tinted and 500 ppm of guaiacol is a good building block.

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The Natural Choice for Flavor and Fragrance Ingredients

Essential Oils and Citrus Blends: Maintaining Quality Amidst Rising Costs and Adulteration

Discover the innovative strategies and testing techniques they are adopting to ensure that every drop meets the highest standards, even in a volatile market.

BY ELIZABETH BERDIS, Ph.D., senior lead scientist, Citrus, IFF



Elizabeth Berdis, Ph.D.

Citrus essential oils face a number of issues that can alter their composition or quality from season to season and even within a given season.

Images courtesy of IFF

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For a brand to succeed, transparency, authenticity, and accountability cannot be compromised. Essential oil is a highly volatile material that is extracted from a single botanical species, fragrant plant. The oil derives its name from the plant.[1] The cost of a kilogram of essential oil can range from dollars to thousands of dollars due to the high cost and restricted availability of natural oils, experts in the field and researchers are looking into and developing alternatives to satisfy consumer demand. While nature offers varying qualities depending on the source, growing season, harvest time, and origin, the industry seeks uniform qualities, standardization of the oil. In order to target the quality of the authentic essential oil and reduce the cost to a more affordable price, the authentic oil is blended with other natural oils, isolates, and/or synthetic compounds. While the industry allows standardization through blending, any product labeled as FTNF (from the named fruit) must be source species specific.

The flavor and fragrance of citrus oils come from a wide range of volatile and non-volatile constituents, making them incredibly complex. When there is a lack of transparency and "alternative" materials are marketed as authentic essential oils, problems can arise. If the essential oils are not marketed as authentic, using non-FTNF essential oils is not problematic. By providing substitute oils for applications that do not require authentic essential oils, alternative non-FTNF blends contribute to increased sustainability and lower cost.

Challenges in Citrus Oil Segment

Citrus essential oils, which are vital to natural flavors and fragrances, face a number of issues that can alter their composition or quality from season to season and even within a given season. These issues may cause low aldehydes or increase in other undesirable components. Fruit processing results in the production of citrus essential oils. Citrus cold-pressed oil is extracted mechanically from the peel, and essence oil is extracted during evaporation from the juice. Among other things, disease, natural disasters, and changes in the weather during the growing season are the causes of the issues. Not only is the availability in jeopardy, but also the quality. There is less citrus fruit being processed, which drives up prices and reduces the amount of oil available.

Adulteration

Essential oil adulteration might include diluting essential oils with other oils, adding cheaper synthetic



Essential oil is a highly volatile material that is extracted from a single botanical species, fragrant plant.

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ingredients, introducing more natural isolates, or misrepresenting the oil's provenance and other volatile components. Adulteration may be detected using a variety of scientific techniques, as well as by comparing the cost to the authentic essential oil. It should be mentioned that during the extraction of genuine oils, there is a chance of involuntary mixing of the specific citrus fruit oil with other citrus fruit oils as the product line changes. This event is not adulteration. This kind of contamination, which usually causes minor alterations in the oil, is not motivated by economic factors yet rather arises from the processing of fruits and product crossover. When materials are purposefully added to the genuine product to mimic the genuine oil and make it seem better or more valuable, this is known as economic adulteration. Cold-pressed bergamot oil is an example. Bergamot oil is more expensive and less readily available than substitute or reconstituted oil, costing three to four times as much.

Citrus oils include both volatile and nonvolatile components as well as enantiomeric compounds, providing various properties for detecting adulteration. Unique chemicals in citrus tonalities, such δ-3-carene in sweet orange, can be used to detect adulteration. Citrus sinensis, or sweet orange, contains δ-3-carene, a monoterpene. This compound is present in trace amounts and/or undetectable in chemical analysis in other citrus oils such as lemon, lime, grapefruit, and mandarin. The presence of δ-3-carene in the other tonalities shows probable adulteration. Orange terpenes are a very affordable oil, making them an economical choice for use as an adulterant in other citrus oils.

Chiral Analysis

Citrus fruits are known to have characteristic enantiomeric key compounds. Chiral analysis can be used to discriminate authentic essential oils and oils mixed with synthetic compounds. Citrus oils also have numerous chiral compounds, such as α-pinene, δ-limonene, α-camphene, α-phellandrene α-thujene, β-pinene, camphene, α-pinene, sabinene, β-phellandrene, α-phellandrene, limonene, linalool, camphor, citronellal, linalyl acetate, terpinen-4-ol, and α-terpineol.

To produce premium citrus qualities, it is paramount to control the fruit origin ensuring traceability



Using citrus oils presents a challenge because of the possibility of adulteration, which is mainly caused by the expensive and limited availability of authentic oil.

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to the species and growing region, in addition to analytical testing. As part of the authenticity focus, external samples are typically presented as natural bergamot oil, obtained from various sources, and analyzed by gas chromatography. Adulteration in bergamot is caused by the scarcity and high cost of real oil. After Semmler and Tiemann discovered in 1892 that linalyl acetate is a major part of bergamot oil, it became frequent practice to adulterate bergamot oil with esters derived from various non-bergamot and/or synthetic sources, which have a lower economic value.[2] This practice can be seen today.

Based on chiral analysis, some of the external samples obtained were authentic bergamot cold pressed oil and others adulterated with synthetic linalyl acetate recognizable by the substantial change in the enantiomeric ratios of linalool and linalyl acetate. In nature, enantiomeric key compounds are biosynthesized by highly stereoselective enzymatic mechanisms in plants and in most cases one enantiomer is dominant. Ratios of enantiomeric compounds from authentic oil for various plant species are published by ISO (the International Organization for Standardization). In addition, peer-reviewed journal articles provide information on ratios of enantiomeric compounds for authentic oils.[3,4,5,6] In addition, adulteration using synthetic linalyl acetate is detected by the identification of the compounds dihydrolinalyl acetate and plinyl acetate. Dihydrolinalyl acetate and plinyl acetate are trace compound markers generated during the synthesis of linalyl acetate.

Overview

Using citrus oils presents a challenge because of the possibility of adulteration, which is mainly caused by the expensive and limited availability of authentic oil. Deceptive practices may also become more subtle as analytical methodologies to detect adulteration become more sophisticated. With a dedication to quality, transparency, sustainability, and cooperation, the industry can preserve the authenticity of citrus oils.

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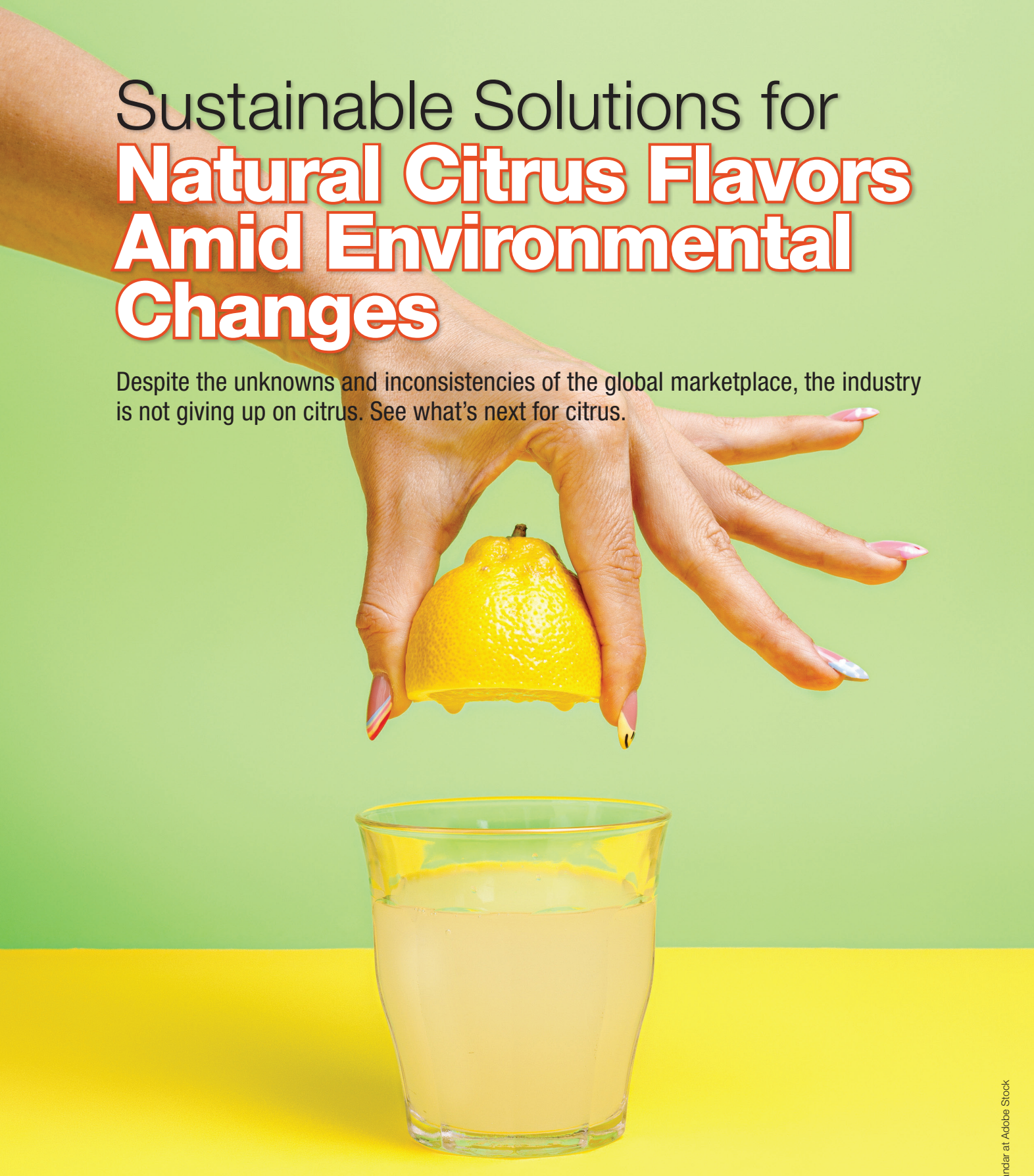
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Sustainable Solutions for Natural Citrus Flavors Amid Environmental Changes

Despite the unknowns and inconsistencies of the global marketplace, the industry is not giving up on citrus. See what's next for citrus.



People consume citrus flavors every day and – unlike some other taste profiles – there are well-established expectations for a citrus-based sensory experience that is consistent across applications.

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BY **JENNIFER ZHOU**, Global Product Marketing, Senior Director, Flavors, ADM and **LISA LUCIA**, Global Category Manager, Citrus Oils, ADM

Across the food industry, solutions are needed to overcome challenges associated with environmental changes, while also keeping what's best for the planet in mind. This holds especially true for the citrus arena.

As the planet becomes hotter and drier, the citrus-producing regions of the world are struggling with unpredictable crops of core fruits, including orange, lemon, grapefruit, mandarin and lime. At the same time, citrus greening disease has spread rapidly, lessening the yields of already-challenged harvests in Brazil, Florida, Mexico and beyond. This persistent downward trend in forecasted volumes of many citrus crops – and thus the raw materials needed to create flavors from natural sources – is impacting global supply and procurement costs.

Even so, consumer demand for citrus flavors remains high in everything from sports drinks to savory cuisines and from baked goods to frozen yogurt. This puts significant pressure on the food and beverage industry to find reliable alternative solutions while continuing to provide authentic citrus flavors and sensory experiences.



Jennifer Zhou



Lisa Lucia

Technical Solutions

People consume citrus flavors every day and – unlike some other taste profiles – there are well-established expectations for a citrus-based sensory experience that is consistent across applications. For example, the taste of cherry can vary widely between energy drinks, confectionery, nutrition bars, pies and dairy products; but the fresh taste of an orange is so elemental that consumers expect a similar zesty, true-to-fruit flavor in every bite and sip. Achieving these authentic tastes in food and drink is largely dependent on the use of natural citrus raw materials such as citrus oil and citrus juice.

When there are fluctuations and shortages in the citrus market, flavorists and product developers are challenged to find alternative solutions. It is possible to re-create a sensory profile comparable to what exists in nature without being constrained by the fluctuations of global citrus supply. Flavor chemists may develop highly concentrated blends of aromatic compounds to recreate the taste of grapefruit or lemon-lime. However, capturing the true sensory experience of a citrus fruit relies on the combination of volatile and non-volatile compounds, including terpenes, carbonyls and sesquiterpenes.

Outside of the lab, it's important for companies to diversify their supply, sourcing from citrus groves in North America through Central and South America to Europe, South Africa and Asia. Having a supply partner that can strategically manage risk and leverage long-standing procurement partnerships and volumes helps ensure raw material stability and enables price competitiveness. A fully traceable supply also helps



Asian Citrus Psyllid (Diaphorina citri) on Key Lime citrus plant in Key Largo, Florida.

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brands address the growing consumer demand for transparency, while ensuring best growing practices are in place to help preserve the planet for future generations.



Outside of the lab, it's important for companies to diversify their supply, sourcing from citrus groves in North America through Central and South America to Europe, South Africa and Asia.

Consumer Preferences

While affordability is top of mind, consumers are highly sensitive to changes in taste profile, which is a key driver of repeat purchase and brand loyalty. From citrus peel oils to essence oils or water phases, a diverse raw material palette for flavorists helps cover regions and tonalities, as well as the qualities of perceived freshness and authenticity to meet consumers' expectations.

This is necessary to support the variety of taste profiles that are currently trending with consumers. Whether in North America, where consumers seek bold and vibrant citrus flavor experiences, or in Europe, where consumers lean into bright and uplifting citrus notes, delivering authenticity in both recognizable and more novel citrus profiles is crucial to encouraging trial and repeat purchase[a].

- **The Classics:** Traditional juicy flavors provide familiarity and comfort. These quintessential favorites include orange, lemon and lime, bringing sweet-tart refreshment to beverages, baked goods, frozen treats and more.
- **Exotic Varietals:** A sense of adventure and global exploration are expanding consumers' palates. Exciting citrus flavors such as bergamot orange, calamansi, Persian lime and pink grapefruit are sure to be popular in 2025.
- **Taste Sensations:** Among the basic tastes, bitterness is stepping into the limelight. Emerging flavors with higher levels of naringin and limonin compounds include grapefruit, bitter orange and finger lime. Hops are another flavor to watch, delivering a delightfully bitter yet citrusy profile in alcoholic and alcohol-free beverages.

What's Next for Citrus

Despite the unknowns and inconsistencies of the global marketplace, the industry is not giving up on citrus.

Although there is no known cure for citrus greening, some practices have been shown to be effective at managing the disease. Certain pesticides can have a positive impact on treating the disease effects, although growers need to pay heed to country regulations and other restrictions that can and do vary, affecting the regions to which they can import/export compliant crops.

Additionally, because of a recent oversupply of lemons grown in Argentina, some of those groves are now being replaced with orange trees to help relieve the pressure on the latter's supply. While it will be another four to five years before the new plantings reach fruit-bearing age, the Argentinian investment in orange crops will offer a future source of supply.

Last, but not least, there are continued scientific innovations underway that are ushering in a new era of citrus possibilities. At the University of Florida, the United States Department of Agriculture, Brazil's Fundecitrus and other institutions around the world, research is ongoing to find a treatment or cure for citrus greening disease. Scientists are also experimenting with developing new hybrids or citrus varieties that can resist infection.

With each of these advancements, in addition to ongoing consumer demand for naturally derived citrus flavors, it's clear these fruits are worth preserving and natural citrus flavors are here to stay.

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[a]ADM Outside Voice℠

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Senior technical director and chief global flavorist Zareena Valappil at ADM.

As the citrus industry grapples with unprecedented challenges, from citrus greening disease to climate change, the availability and pricing of citrus essential oils and juices are at an all-time high, disrupting flavor profiles that consumers know and love.

Manufacturers are seeking innovative ways to maintain product quality while managing costs. In this interview, senior technical director and chief global flavorist Zareena Valappil from ADM discusses how their CitrusFlex solutions offer a lifeline to brands navigating these obstacles.

***Perfumer & Flavorist+* [*P&F+*]: What are some of the challenges the industry faces when working with citrus-based formulations in the current market climate?**

Zareena Valappil [ZV]: Citrus flavors depend on citrus essential oils for authenticity and a balanced profile. Unfortunately, the quality, availability and price of all types of citrus ingredients have been impacted from citrus greening, changes in the global climate, competition for real estate by other potentially more profitable crops (in relation to citrus), and geopolitical environments. With the scarcity of healthy citrus fruits, orange juice and citrus oil supply and quality are suffering, with pricing at the highest it's ever been.

With these challenges to face, manufacturers are faced with taking drastic measures to continue business as usual. For consumer packaged goods companies whose products rely on citrus raw materials, they are challenged with balancing the scales of taste and price. The combination of scarcity of citrus juice and citrus oils has companies looking for solutions to maintain margins even as they maintain taste – trying to remain profitable even while delivering the same great profiles that consumers expect from tried and true brands and products.



***P&F+*: How do CitrusFlex solutions help manufacturers with these challenges?**

ZV: Let's first address the orange juice situation. When orange juice is reduced in a product formulation, the overall experience loses not only flavor but also the sweetness, acidity, mouthfeel and color of the missing juice. CitrusFlex juice replacement solutions can add back the full sensory characteristics of orange juice, supported by flavor modulation technologies for a juicy mouthfeel. ADM takes a holistic approach with a full pantry of solutions ranging from all types of natural sweeteners, naturally derived colors, and TasteSpark™ mouthfeel flavor modulation technology – all these can be combined into a juice compound solution which can help ease and simplify the sourcing and manufacturing process for brands.

Images courtesy of ADM

Citrus essential oils are composed of both volatile and non-volatile components. Terpenes make up approximately 95% of the volatile components, while the other 5% of components are the characterizing components which drive the flavor profile of the citrus oil. Examples of the characterizing components are fractions such as aldehydes like octanal and decanal, and sesquiterpenes like nootkatone. Our CitrusFlex optimizers mimic the exact composition of the citrus oils, utilizing terpenes as a foundation and adding the aldehyde and sesquiterpene molecules from non-citrus natural sources, to build a complete profile but reducing dependency on citrus oils. As the largest processor of citrus essential oils, ADM maintains a strong position in terpenes along with having in-house capabilities for aroma chemicals which are two key strengths to help deliver the missing components when reducing citrus oils in flavor formulations. With this approach, we develop true-to-fruit profiles of citrus, mimicking the taste and function of a natural citrus oil.



***P&F+*:** What type of formulations are best suited for incorporating CitrusFlex solutions? Can you share any of your creations with the technology?

ZV: CitrusFlex juice replacer technology can be used in both lower juice containing beverages (in the range of 5-20% juice) where flavor modulation can help build back the flavor and taste, but can also be used in higher juice containing beverages (50-100% juice), for price stability while maintaining sensory profile. Filler juices that have lower cost and stable supply can partially replace orange juice but need to be supported by CitrusFlex flavor solutions to help maintain authenticity.

CitrusFlex flavor optimizer solutions apply to any citrus-flavored product to reduce the amount of citrus oil used in the flavor formulation. This technology is not solely limited to beverages and can be used in food applications such as confections (functional or traditional), sauces, marinades, and seasonings. Beyond 100% citrus oil replacement, it is also possible to do a 50/50 blend of the CitrusFlex optimizer with an FTNF, depending on regulatory and product requirements.

***P&F+*:** Looking ahead, how do you see the citrus market evolving, both in terms of raw material availability and flavor trends?

ZV: In terms of trends, we continue to see consumers around the world increasingly influenced to adopt a globalized taste palette, with travel and social media fueling the desire for exploration. Trends in global travel to Asian destinations have driven greater interest in citrus varietals that originate in that part of the world. Beyond the rise of Yuzu as an emerging mainstream flavor, other citrus fruits that will see a boost are profiles such as Assam Lemon, Honey Citron, Calamansi, Finger Lime and China Sugar Mandarin.

We also expect to see more interest in citrus fruits that originate in the Mediterranean as growers look at this part of the world as an alternative to traditional sourcing regions that are more affected by climate change and greening. We will also see the shift of citrus growers switching varieties of trees, from lemons where there is sufficient supply to oranges to balance out global shortages. In general, it takes seven years for a citrus tree to bear fruit – and in the meantime, CitrusFlex solutions can help stabilize manufacturers until larger industry solutions are found.

***P&F+*:** Do you foresee new technologies or innovations, beyond CitrusFlex, reshaping the citrus flavor industry in the near future?

ZV: In response to the volatility of the orange fruit market, we see growers starting to move towards giving more acreage to mandarin varieties which seem to be more robust or resilient to greening than other citrus varieties. With that, mandarin varieties will become more mainstream and perhaps mandarin juice could be used to replace a percentage of orange juice in formulation to help extend supply while still keeping true to similar citrus sensory qualities. Of course, it all depends on regulations and if there will be a change to the standard of identity of orange juice.

The emergence of new mandarin varieties bode well to further broaden consumer palettes (both overtly or imperceptibly) to new taste experiences that combine citrus fruits in unexpected ways to surprise and delight consumers.

The 2024 European Elections & Its Impact on The Flavor and Food Industries

From new competitiveness strategies to a stronger focus on agriculture and food security, how will these changes affect the European flavor sector?

BY JIMENA GÓMEZ DE LA FLOR, EFFA Communications and Public Affairs Director



Jimena Gómez de la Flor

L to R: Former prime minister of Italy, Mario Draghi, and the president of the European Commission, Ursula von Der Leyen, © European Union, 2024.

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In June 2024, more than 400 million voters from the 27 European Union Member States were called to vote in the European elections. Every five years, not only is a new European Parliament elected, but the result of this election also determines the direction of the European Commission, the executive body of the EU.

While the results[a] were marked by a noticeable increase in representation from right-wing and far-right parties, the traditional political groups, popular (EPP), socialist (S&D) and liberals (Renew), maintained the majority of the seats, and are expected to play a crucial role in shaping future EU legislation. This majority was key in the re-election of Ursula von der Leyen as President of the European Commission.

Following her re-election, President von der Leyen has presented her proposed college of commissioners[b] that now has to be approved by the European Parliament. The repartition of the portfolios, vice presidencies and mission letters to these Commissioners is an indication of the political guidelines that the UE is going to follow in the next five years.

The next Commission's work will also draw on political reports published this year, in particular, two of them can be very relevant for the flavour and for the food industries: The Draghi report[c], commissioned by Von der Leyen to former European Central Bank President to look for a way forward for EU's competitiveness and the Strategic Dialogue on the Future of EU Agriculture[d], with the farmer's protest in several European capitals (including Brussels) having a big impact.

A Shift in Priorities

All this marks a turning point in EU politics. From what we can see so far, compared to the previous political term 2019 – 2024, there is a shift in the EU political priorities, and what is more important, one that resonates with the flavour industry priorities in four key areas:

1. A stronger emphasis on competitiveness, with dedicated support for SMEs:

The so-called 'Draghi's report': The future of European competitiveness – A competitiveness strategy for Europe was referred to in all of the Commissioner's mission letters, and its findings will contribute to the Commission's work on a new plan for Europe's sustainable prosperity and competitiveness. The main focus of this report is how to improve Europe's competitiveness, and a focus is set on the regulatory and administrative burdens that many European companies face, which are especially challenging for SMEs. EFFA, through its 12 National Associations, represents over 300 SMEs in Europe, which are deeply impacted by any European legislative change.

2. A greater focus on agriculture and farmers' needs, also in relation to food security:

The nomination of Christophe Hansen as Commissioner for Agriculture & Food and Olivér Várhelyi as Commissioner for Health & Animal Welfare marks a significant shift in the EU's approach to these sectors. The two designated Commissioners still have to undergo the European Parliament hearings, but what's interesting is that previously, the health and food portfolios were combined, while now food is coupled with agriculture. In their mission letters there is no mention to the 'Farm to Fork Strategy', which was the previous Commission main focus when it came to the food sector and the EU Green Deal, and instead we can find several references to the Strategic Dialogue on Sustainable Agriculture, with a key mention to 'food sovereignty' and again, dedicated attention to SME's through a newly created 'SME and competitiveness check'.



Jimena Gomez during the Public Affairs presentation of the EFFA General Assembly 2024.

[a] *https://www.results.elections.europa.eu/en/*

[b] *https://commission.europa.eu/about-european-commission/towards-new-commission-2024-2029/commissioners-designate-2024-2029_en*

[c] *https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en*

[d] *https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/agriculture-and-green-deal/strategic-dialogue-future-eu-agriculture_en*

3. Ongoing efforts to make healthy choices more accessible and easier for consumers

The Strategic Dialogue on the future of EU agriculture, gave great attention to making *"the healthy and sustainable choice, the easy one"* as well as *"helping consumers to embrace the transition towards plant-based products"* and *"to create enabling food environments where balanced, sustainable healthy diets are available, accessible, affordable, and attractive"*. The flavour industry can play a crucial role in achieving these objectives by enabling the food and drink industry to make health-conscious and sustainable products that also taste great. The flavour industry is committed to helping consumers embrace healthier lifestyles without sacrificing taste.

4. The introduction of an industrial strategy to complement the Green Deal, while maintaining a focus on decarbonisation.

The Commission refers now to a new "Clean Industrial Deal", which will also be based on Draghi's report. We are witnessing a move from an exclusive focus on the 'Green Deal' to a broader approach that can integrate an 'Industrial Deal' alongside it. This was the main call of the Antwerp Declaration, of which EFFA is signatory, together with more than 1000 organisations.

Strengthening Partnerships for Long-Term Success: EFFA's Strategic Vision

In the past few months, and as a key strategy for the coming years, EFFA has been strengthening its networks, joining different coalitions, having meetings with the European Parliament and European Commission, and strengthening the National Associations network, in order to be part of this shift and put forward to the EU institutions how the flavour industry can be an ally in achieving the EU objectives. Having held four key meetings with recently elected members of the European Parliament, the discussions have reaffirmed shared priorities between the flavour industry and EU policymakers.

As we look ahead to the 2024–2029 legislative term, the alignment between EFFA's objectives and the EU's strategic priorities could not be more evident. Healthy and sustainable food choices, food innovation, and food security are just a few of the areas where the flavour industry, in partnership with its stakeholders, has a vital role to play. To fully realize this potential, it is crucial that we remain committed to a long-term vision—one that is rooted in partnership.

A key priority is to ensure that EFFA's core messages are fully aligned with the EU's strategic goals. This alignment is essential to maintaining the association's influence and success in policy discussions, particularly as the European Commission and Parliament advance their legislative agendas for the 2024–2029 term.

By aligning its advocacy with EU priorities, EFFA aims to solidify the flavour industry's role as a key ally for EU policymakers and contribute to the industry's long-term sustainability.

p&f+

Brussels, October 4, 2024

Jimena Gómez de la Flor, EFFA Communications and Public Affairs Director

Since September 1st 2024, Jimena Gomez de la Flor has been serving as the Communications & Public Affairs Director of the European Flavour Association (EFFA). Jimena joined EFFA in 2015 as the Communications Director. Her new role is a key part of the EFFA strategic vision to strengthen the EFFA advocacy and Public Affairs pillar while increasing the visibility of both the flavour industry and the association in Europe.



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Behind A Perfumer's Pairing of Music Compositions with Fine Fragrances

Chiraz Mouradian shares his inspiration and creation process behind the multimedia project he shared at *World Perfumery Congress* 2024.

BY CHIRAZ MOURADIAN, perfumer, Lebermuth



Chiraz Mouradian



After speaking with ASP president James Krivda, perfumer Chiraz Mouradian began conceptualizing pairing three fragrances with three pieces of music.

From top: courtesy of Chiraz Mouradian; image © Peter Wynn Thompson

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On June 26, 2024, at *World Perfumery Congress* 2024 (*WPC*) in Geneva, Switzerland, I presented my project pairing three music compositions with three fine fragrances under distinct concepts.

The Encounter

It all started last January at the American Society Perfumer's (ASP) Annual Dinner in New York, where I was introduced as an apprentice member. During my trip, I had lunch with James Krivda, ASP's president. We discussed life, career, and culture, and when I mentioned being a musician, he proposed a multimedia project combining music and fragrance for the ASP booth at the upcoming *WPC*. Though five months seemed short, the opportunity was a fun challenge, so I accepted. I began conceptualizing pairing three fragrances with three pieces of music.

Fragrance Inspirations

To fully immerse the audience in the experience, I selected distinctly different themes. The initial concept focused on a progression from slow to fast, ending in chaos. Gradually, I crafted stories around each theme.

The first theme embodies slowness and calmness, characterized by tenderness, softness, and a milky, musky, healing, and sunny aura. I drew inspiration from a personal memory of a Sunday morning during the first snowfall.

The second concept revolves around speed and energy. As spring was making its presence felt, I found inspiration while driving with the windows down, blasting SRV, and breathing in the crisp air. The idea was to capture the essence of a bike ride on Highway 61—a blues tale in motion.

The third concept embraced chaos and it was actually suggested by my wife. I'm obsessed with the show T*he Walking Dead*, and with that inspiration, I decided *to* create a night of survival in a post-apocalyptic zombie world.

Slow Morning

When I began working on Slow Morning, I knew immediately I wanted to create a fragrance centered around a milk note. I crafted the milk note using a touch of sulfurol, ensuring it wasn't overly gourmand. I paired it with a delicate solar tiare beginning with a green note of hexenyl *cis*-3 salicylate. This was slightly creamy, thanks to dodecalactone delta over a gentle base of sandalwood, musk, and orris. Ethylene brassylate sustained



Chiraz Mouradian crafted three fragrances for the WPC presentation: Slow Morning, Highway 61 and Night Shadow, all with vastly different inspirations.

the milk's sweetness, while cashmeran diffused the solar floral note. Lemon terpenes added a freshness to the pear, soon giving way to an opaque, shiny coconut note. The effect I aimed for was a comforting cloud of solar milk—a slow morning opening to our souls.

This inspiration struck me during a snowy weekend a few months ago. As I watched the intensely white snow blanket the radiant landscape, I picked up my guitar, captivated by the hypnotic moment. Sitting by the large living room window, I began playing C major

Click above to listen to this exclusive podcast.

Image courtesy of Chiraz Mouradian



American Society of Perfumers' president James Krivda (pictured) welcoming attendees to the society's World Perfumery Congress booth.

and D major chords with open strings, producing an ethereal, suspended sound reminiscent of the C Lydian mode, which I hadn't explored before. The melody I sang over was calm and otherworldly. I recorded it, sensing its potential for further development. When I revisited this concept, I expanded the melody with a hip-hop beat and added a chorus effect to the guitar for a lo-fi vibe. I also composed a second part that transitions into more jazz-style soloing, using a classic jazz chord progression of 2-5-1 in C major (Dm7-G13-Cmaj7-C6).

The song modulates from the celestial, dreamy C Lydian of the first part, capturing the blurred, ethereal sensation of waking up, to the second part in C major, which is brighter and more grounded, evoking the emotion of being fully awake and aware as a new day unfolds.

Highway 61

The second concept revolved around a bike ride from the Midwest to the South with a leather jacket. I aimed to capture this journey in a fragrance, crafting a fresh leather scent infused with elements of the ride. I created a fougère featuring a fresh leather note. The bergamot of the South complemented by the stemone cypress of the North, married beautifully with the cool air created by aldehyde C11 and cardamom CO2. To evoke the springtime muguet of the Midwest, I used the fresh floral note of biomuguet paired with Calone, which provided a watery sillage reminiscent of Lake Michigan and the New Orleans coast. For the leather note, I combined Habanolide, Methyl Gamma Ionone Extra, Kephalis, and Norlimbanol, resulting in a lasting and satisfying scent.

I was deeply inspired by SRV and sought to recreate the vibe of songs like "Tightrope" or Jimi Hendrix's "Voodoo Child." I wanted something that sounded both aggressive and fluid, so I composed a classic 12-bar blues in A minor with a mix of composed and improvised A minor pentatonic and Dorian solos. The first and second parts of the song adhere to a traditional blues sound, while the third introduces a psychedelic element to capture the hypnotic feel of the road. I played using the

Image by Peter Wynn Thompson

first and second positions of the pickups on a Fender Stratocaster to add depth and bass.

Lastly, I decided to integrate the sound of a bike into the song. By sliding on the fretboard with a saturated tone, I mimicked a bike speeding. It added a touch of movement to the composition.

Night Shadows

The third concept was to craft a plum scent that evokes the image of dried blood on clothes after a night of survival in a zombie apocalypse. I aimed to avoid convention and instead played with the saturation of raw materials to recreate an atmosphere of stress, chaos, and destruction. To achieve this, I envisioned an oud built with a lot of patchouli, Cypriol, and Gurjun balsam to stay true to its balsamic and raw character. I played with the animalic notes of lily with ylang oil, indole, and para-cresyl acetate. To deepen the darkness, I added castoreum absolute and Muscenone for a leather and fecal note. The gunshot smoke is constructed with redistilled Cade and Olibanum resinoid.

The heart of the plum note is damascenone, at its maximum IFRA limit allowed, it's linked to the leather and oud with safraleine. The top note consists of bergamot, fir needle, and mandarin oil, creating an initial fuel-like effect. For a "burn them all" vibe. For the music, I immediately thought of metal in B Phrygian to give a dark, oriental sound. I began with an intro that gradually builds in power, mirroring the chaotic experience of surviving the night in the wild, where nothing makes sense and zombies are everywhere.

I started slow at 85 bpm, increasing to 135, then 150 for a blackout and a final explosive session. In the second part, a heavy, saturated guitar riff is layered with a Middle Eastern, Armenian-inspired melody that evokes someone running for his life. The third part is pure extreme stress, with rapid guitar strumming to create a sound of intense battle, followed by silence. Just when it seems to end, a final shot rang out.

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MANE INTRODUCES NEW LEADERSHIP ALIGNING WITH LONG-STANDING COMPANY VALUES

P&F+ connects with the new president of Mane Americas as well as the president of Fragrance Mane USA.



Trouiller shares, "At Mane, we are proud to be the largest family-owned company in the Flavours and Fragrances industry, ranking fifth globally and standing as the number one French company in the sector."

Images courtesy of Mane

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In July 2024, Mane has announced the retirement of Michel Mane, from the position of president of Mane Americas region. The company has since appointed Stephanie Trouiller, who has been with the company for over 20 years to take over the role.

The company has also appointed Andreas Steiner, who has joined as president of Fragrance Mane USA.

Perfumer & Flavorist+ connects with Trouiller and Steiner to discuss their industry journeys prior to their new positions and perspectives for the future.

Can you share your journey in the F&F industry and how it has prepared you for this new position? Additionally, what are your perspectives on the future of the industry?

Stephanie Trouiller [ST]: I began my journey in 1994, graduating from the Institut Universitaire Technologique de Chimie in Orléans. I then pursued advanced studies in Flavours and Fragrances, and later earned an engineering degree in Agro-Food. My career started at Danone, where I developed my expertise in flavor creation. In 2002, I joined Mane in Mexico, where I worked my way up through various roles, including R&D manager and business director. After taking a five-year break to focus on my family, I returned to Mane as general manager in 2019. Since then, I've been leading the company to achieve significant growth and operational excellence. In June 2020, I extended my responsibilities to LATAM region, taking on the role of regional strategic business sirector, overseeing both flavors and fragrances and driving strategic initiatives across the region. Since July 1, 2024, I have had the great honor of succeeding Michel Mane as president of Mane Americas.



Stephanie Trouiller

The objective is to ensure continuity of our mission the region, foster a dynamic spirit and passion for our partners within the teams and, drive the ongoing growth of our business across the Americas.

What traditions or practices does Mane uphold to maintain its family-oriented culture?

ST: Being part of a family business is a great opportunity. Mane is a company with solid roots, established in a dynamic of progress, with a strong mission to grow fast and transmit. We are a community of talents linked by a passion for excellence and a dedication to our customers, operating with a strong family culture, driven by ethics, inclusivity, and adaptability.

Our financial independence gives us the freedom to make bold choices, to invest in our business and our



Mane USA offers a wide array of training and development programs for employees to remain effective in their roles and ultimately contribute to the success and growth of the organization.

people, to ensure that we continue to move forward. This is the true essence of corporate social responsibility.

In what ways does Mane's family culture differentiate it from other companies in the industry?

ST: At Mane, we are proud to be the largest family-owned company in the Flavors and Fragrances industry, ranking fifth globally and standing as the number one French company in the sector. Our success is built on what we call "The Mane Way," which is guided by three core principles.

Firstly, we operate with a strong family culture. We view every employee as part of our extended family, and we take pride in fostering a sense of belonging and unity. We also deeply respect and appreciate local cultures, which strengthens our global presence.

Secondly, we're passionate about meeting our customers' needs. Our clients and their end consumers are at the core of our business. We have a customer-centric approach, supported by a network of experts and specialized task forces, both locally and globally, to ensure we're always in tune with their needs. We have built our growth on a "Glocal" strategy: a global presence combined with local expertise, French savoir-faire, respect, and appreciation of local cultures.

Lastly, we maintain the highest ethical standards. At Mane, protecting people and resources is fundamental to who we are. This commitment is reflected in our leadership, our adherence to a strict Code of Ethics, and our responsibility to build a sustainable future.

What are the core values that Mane stands by, and how are they reflected in the company's actions?

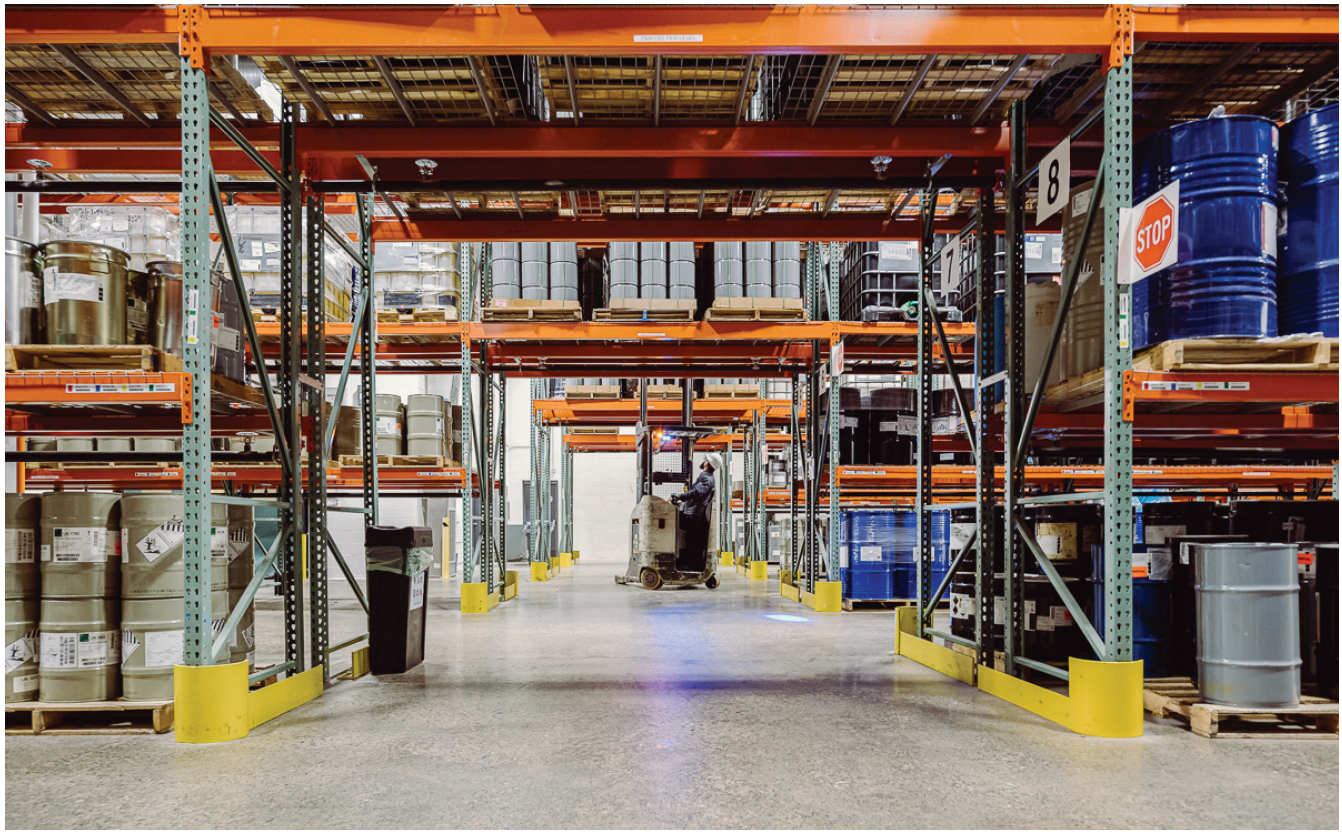
ST: At Mane, our core values are deeply rooted in our governance and the way we operate. We prioritize care, candor, loyalty, and faithfulness in all our decisions, always aligning with the long-term best interests of the company, our employees, and all stakeholders.

Teamwork is central to our success, driven by the principles of respect, trust, cooperation, and communication.

Moreover, we foster a culture of leadership excellence. This commitment drives our responsibility to build a sustainable company that will thrive for generations to come.

Can you describe the Training and Development Programs available to Mane employees?

ST: Mane is offering international training programs to ensure the development of our future leaders and the enhancement of connectivity within our organizations.



Trouiller shares, "We partner with selected producers to create conscious value chains for our natural ingredients, including economic, social, and environmental commitments."

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Mane USA is also proud to offer a wide array of training and development programs for employees to remain effective in their roles and ultimately contribute to the success and growth of the organization. It is our belief that fostering a culture of learning and career advancement promotes innovation and creativity within the organization, which leads to a generation of fresh perspectives and innovative solutions to business challenges. Our many programs are designed to enhance employees' skill gaps, leadership, and growth opportunities for the future. Some of our key programs include:

- An Annual Formal Mentoring Program
- Lunch and Learn Forums set in a casual environment to offer insights into different department structures and ways of working to educate an understanding of the business.
- Fragrance, Management, and Leadership Training
- Workshops to raise public awareness of climate change.
- And even French lessons

What partnerships or collaborations does Mane have to enhance its CSR impact?

ST: More than ever, we believe that operating businesses in a sustainable manner is an imperative. Sustainability is the cornerstone of a bright, desirable future, and so it is the cornerstone of our business practices. At Mane we are genuinely committed to protecting biodiversity, flighting climate change, embracing diversity, promoting equity, ensuring transparency and human rights' respect along our value chain. We know that embracing sustainability fosters innovation, resilience, and long-term successes.

Through international certifications and partnerships all around the world, we strive to ensure sustainable development and to fight against global warming. We partner with selected producers to create conscious value chains for our natural ingredients, including economic, social, and environmental commitments.

We aim to contribute to society, particularly within the communities in which we do business, to promote their development. We work collaboratively with local authorities and NGOs to carry out multiple environmental and social initiatives related to education, medical health and hygiene, equity, etc.

Can you share your journey in the F&F industry and how it has prepared you for this new position?

Andreas Steiner [AS]: I hold a BS and an MBA in Business Sciences & Economics from the Technical University of Berlin. Throughout my career in the fragrance industry, I have gained extensive experience and built a solid track record for driving success and innovation. In my new role as head of the Fragrance Division in North America, I am responsible for setting the strategic direction, improving operational efficiency, and leading growth initiatives. I will be working closely with the executive team to foster innovation, enhance customer satisfaction, and ensure sustainable, profitable growth.



Andreas Steiner

Before joining Mane, I spent over two decades at Symrise, where I held several senior leadership roles. Most recently, I served as SVP of Consumer Fragrances & Oral Care North America, where I was responsible for the division's P&L and led a multidisciplinary team across various areas.

I also served as SVP of Business Integration at Symrise, successfully managing multiple acquisitions and integrations. Additionally, as president of Fragrance and Aroma Chemicals LATAM, I oversaw operations across Latin America, driving growth and innovation in markets like Mexico, Brazil, Colombia, and Argentina, and Germany and the Middle East in prior roles. My extensive international experience has given me a deep understanding of the global fragrance market, and I'm excited to bring that expertise to this new role at Mane.

Additionally, what are your perspectives on the future of the industry?

AS: The fragrance industry is in a state of constant evolution, always on the lookout for new trends and innovations that can captivate the senses and elevate olfactory experiences. The integration of technology into perfumery is creating exciting new possibilities, ushering in an era where the boundaries of sensory perception are being expanded. We are also seeing a growing demand for emotional fragrances, which perfectly illustrates how technology and creative innovation come together to meet the ever-changing needs of consumers.

In today's world, where sustainability and environmental awareness are more critical than ever, the fragrance industry is fully embracing eco-friendly and sustainable practices. This includes everything from using natural, sustainable ingredients to adopting resource-efficient production methods. The future of perfumery is undoubtedly being shaped by this environmentally conscious approach.

Moreover, the industry is becoming increasingly digital. Online platforms are creating new spaces for exchange, inspiration, and discovery. From virtual communities where fragrance enthusiasts share their

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Steiner shares, "Customer centricity is at the heart of our core values as we listen to consumer's pain points and how best to address them with fragrance innovation solutions."

experiences to innovative online boutiques and distribution models, the digital world is playing a significant role in shaping the future of perfumery.

Can you provide examples of recent innovations developed by Mane that have significantly impacted the market?

AS: With nature as our **inspiration and foundation**, we interpret its endless elements to **define our vision of natural fragrances**, using both **biotechnologies and new synthetic molecules**. The resulting olfactory creations enrich our palette of ingredients and provide Mane with its consistent competitive edge.

Our advanced research is driven by sincere emotion. Fundamental research programs develop molecules that contribute to the singularity of our fragrances. We are driven by a desire to consistently surpass ourselves, developing new, unprecedented aroma molecules. As a result, over the past five years, we have developed and numerous patented molecules such as Physcool[a], an internationally commercialized proprietary, natural cooling agent. We are committed to maintaining our stance at the forefront of innovation by creating two unprecedented captives each year. As caring for the environment is of utmost concern to us, we also heavily invest in research programs that focus on green chemistry processes.

Our Olfactometry lab reflects our continuous dedication to better serving our customers through use of Innovation. By gaining greater understanding of the raw materials we use, we can apply this knowledge to explore unchartered creative territories to go even further in responding to our customers' needs and desires.

How does Mane stay ahead of industry trends and emerging technologies to drive innovation?

AS: Our R&D teams are committed to providing superior performance in terms of long-lasting hold, malodor counteraction, and more to every fragrance solution we develop for our clients and their consumers. Throughout it all, we strive to create the highest degree of sensoriality, and ensure the utmost attention to safety and sustainability. Our Green Motion[b] tool, which integrates the 12 principles of Green Chemistry, drives our R&D

[a]Physcool is a registered trademark of Mane

[b]Green Motion is a trademark of Mane

and team of perfumers to develop new solutions with a consistently more eco-friendly approach.

Our cutting-edge captives program was strategically developed to add value to our palette with high impact and a low carbon footprint.

Mane's specialties and accords are highly atypical in their creative signatures and unique and out of the box. Ranging from traditional extractions to biotechnologically obtained molecules, through our **innovative Jungle Essence**[c] **extracts**, our manufacturing processes are inimitable. In a constant quest for **excellence**, our teams tirelessly travel the world, collecting raw **materials and forging partnerships** with remote communities. In this way, we can **secure sourcing, diminish supply chains, circumvent price fluctuations, and offer you premium ingredients options**. The secret to our vast success is present in our exclusive portfolio, enabling us to formulate technically performing sophisticated compounds derived from only optimal quality, specialty ingredients. The combination of our **craftsmanship, know-how, process mastery and technological team support**, have all contributed to Mane's position as a worldwide leader in its sector.

Last but not least, our WellMotion[d] program, based on a unique blend of subjective and objective tests, offers a complete and exhaustive analysis of the emotions that a fragrance brings. Our unique scientific approach enables us to design formulas totally fitting to a customer brief through innovative formulation guidelines.

Can you describe how Mane's value propositions differentiate it from competitors?

AS: Fragrance preferences are **deeply influenced by our culture and individual experiences**. Understanding consumer preferences, as well as uncovering their unfulfilled needs and desires, are essential to our success. Mane optimizes sensory and consumer insight to support our customers in their quest to consistently innovate and design successful products. **Exceptional ingredients, outstanding technology, and targeted consumer insights** are hallmarks of our creations. They nourish our teams' creativity and inspire them to design visionary fragrances that will become tomorrow's classics.

In addition to being extremely agile, we apply our customer-centric approach to our client's opportunities. We listen to their challenges and white space, then answer with concrete data driven rationale, clearly defined business solutions, backed by consumer's insights on how best to grow their business at retail. We have a strong track record in becoming ONE with our clients.

Can you provide examples of how Mane's differentiations have led to market success?

AS: Customer centricity is at the heart of our core values as we listen to consumer's pain points and how best to address them with fragrance innovation solutions.

Our fragrance solutions are extensively researched with our trend forecasting team and our strong understanding of the olfactive and retail market landscape. And that's only the beginning of our partnership for success. Our work is then validated with industry sales data and consumer's insights to confirm intent to purchase, all the while ensuring that our SKU recommendations are incremental to their brand's portfolios.

In addition, we go the extra mile, offering 100% turnkey solutions to full branding capabilities through our in-house design studio. Examples utilizing this partnership approach have resulted in incremental business opportunities and allowed Mane to obtain core listings at several major companies, creating a win-win partnership with our clients.

p&f+

[c]Jungle Essence is a trademark of Mane
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Flavorcon 2024 Highlights: Organoleptic Panel, Expert Sessions, and Expo Insights at Atlantic City Event

Here's what you missed at flavor's favorite event in Atlantic City this October.

BY JENNA TROYLI, managing editor, *Perfumer & Flavorist+*



Flavorcon 2024 conference sessions ranged from confectionery to swicy (sweet and spicy) and everything in between.

Images by Peter Wynn Thompson

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Flavorcon 2024 hosted 347 attendees at the Harrah's Resort and Casino in Atlantic City, New Jersey October 8-9. The event kicked off with a Live Pre-*Flavorcon* Organoleptic Panel hosting 35 curious noses.

You can find images from the panel, speaker conference sessions, expo hall exploration and well as flavor specialists from around the world connecting at the Poolside Opening Cocktail reception by visiting *https://peterwynnthompson.passgallery.com/-flavorcon2024/gallery*.

Attendees have access to all speaker presentation slides by accessing their *Flavorcon* app.



"Navigating Regulations & Rising Prices in Citrus Oils Panel" panel featuring (L to R) Kurt Nordman (Citromax), Richard C. Pisano Jr. (Citrus and Allied Essences Ltd.) and Pia Henzi (MTI Miritz Citrus Intercontinental LLC), moderated by Jenna Troyli.

Live Organoleptic Panel Recap

On October 7, *Flavorcon* 2024 kicked off with a pre-event Live Organoleptic Panel. We tapped moderators to take 35 attendees on a guided tour through a lineup of organoleptic materials.

Moderators were paired into teams of two: independent flavorist and "Flavor Bites" columnist, John Wright/PepsiCo junior flavorist Giuseppe Bongiorno and Bell Flavor & Fragrances principal flavorist, Cyndie Lipka/junior flavorist Michael Morrison.

Wright and Bongiorno reviewed:

- *cis*-3-Hexenyl acetate
- γ-Decalactone
- δ-Decalactone
- Osmanthus absolute
- Blackcurrant buds absolute
- Antillone
- Methyl dihydrojasmonate
- Elderflower absolute

Lipka and Morrison reviewed:

- γ-Valerolactone Natural
- Rosehip Extract
- 1,1-Diethoxy-3-Methylbutane
- Kabosu Oil
- Cinnamyl Isovalerate, Natural
- Magnolia Flower Oil, P&N



NotCo's Francisco Calvero and Cindy Sigler, Ph.D., at the pre-Flavorcon Organoleptic Panel.

The full evaluation of the materials reviewed by Lipka and Morrison, stay tuned for the January 2025 issue of *Perfumer & Flavorist+*!

Speaker Sessions

Flavorcon 2024 conference sessions ranged from confectionery to swicy (sweet and spicy) and everything in between. I am so thankful to have hosted two British Society of Flavourist members (one of which is the current president, Andrea Albertino, as well as the immediate past president, Trevor Groome).

I also had the honor of taking the stage to moderate three discussions, touching on the topics of artificial intelligence, the state of the citrus industry and even a fireside

chat with industry stalwart John Wright. It was such a privilege to share the stage with industry experts who were so open to sharing their insights with our eager-to-learn attendees.

Again, all conference session slides can be found on the *Flavorcon* app (*www.flavorcon.com*). Unfortunately, there are not slides for the panel discussions!

Highlights from the Expo Hall

Arora Aromatics Pvt Ltd.: Arora showcased its core list of ingredients mint oils and derivatives, *cis*-3-hexenyl alcohol and esters and some essential oils native to India such as Davana and Lemongrass.

Cherry Marketing Institute: The company highlighted U.S.-grown tart cherry juice concentrate. It's 100% tart cherries and is used in the ingredient space in a number of applications.

Enterprise Food Products, LLC: Enterprise Food Products, celebrating its 25th Anniversary, introduced a new ingredient during the show- EFP-007-BOOST, a highly caramelized non-carrier powder. Caramelized sugar experts showcased key benefits, including Cocoa Enhancement/Reduction and Sodium Enhancement/Reduction, through tasting demonstrations.

Farbest Brands: Farbest Brands showcased Beyond Acacia, a new granular gum acacia produced by Farbest partner, Alland & Robert. This versatile product is a hydrocolloid for use in liquid beverage emulsions and flavor encapsulations. The granular form allows for improved processing time and cost savings. Lastly, Beyond Acacia is produced with a low-carbon manufacturing process and is available as non-GMO Project Verified or NOP Certified Organic.

Farbest also introduced Joe Rios as technical sales manager after joining Farbest Brands in 2023 and comes with over 20 years of experience in hydrocolloids. He brings a strong technical understanding of flavors and food ingredients to help aid customers in achieving their desired results.

IFEAT: The IFEAT 2024 Conference (*https://conference.ifeat.org/*) is taking place in Bangkok from November 10-14, 2024. IFEAT returns to Asia to celebrate 47 years of IFEAT. The annual gathering of the IFEAT community from across the global essential oils, flavor and fragrance industry.

- IFEAT (The International Federation of Essential Oils and Aroma Trades) announced the launch of a new website and learning platform for its flagship educational program, ICATS (International Centre for Aroma Trade Studies). *https://ifeat.org/2024/09/september-sale-to-celebrate-icats-platform-and-website-launch/*



British Society of Flavourists honorary president Andrea Albertino presenting "Have you ever thought about using these components in a chocolate flavor?"

- IFEAT-EFEO: The EU's new chemical classification rules could unfairly label natural plant extracts like essential oils as hazardous, even if they're safe when used as a whole.The IFEAT-EFEO platform is gathering scientific evidence to prove that essential oils, as a whole, are often safer than their components. This will help ensure that these valuable natural products can continue to be used safely. *https://linktr.ee/ifeat77*

M&U International: At *Flavorcon*, M&U International's primary objective was to spotlight two key product lines: *cis*-3 and Dairy Additives. Over the past few years, the availability of *cis*-3 materials has posed some challenges, leading to increased costs. However, M&U has worked diligently to secure reliable sources, enabling us to not only stabilize supply but also bring prices back to a fair market level.

M&U is among the few companies still offering essential products like diacetyl and acetyl propionyl, which are critical to the dairy flavors industry and are difficult to replace.

Since its founding in 2010, M&U has experienced consistent growth. To support M&U's expanding business, the company has opened a new warehouse in Walnutport, Pennsylvania, in 2021. While converting the building to meet the code presented some challenges, it is now fully operational. With two fully equipped warehouses, the company has doubled its stock and shipping capacity, allowing the company to offer quicker lead times—just one of the many advantages M&U provides.



Treatt: Samples on view at the Treatt booth included:

- 6-methyl-5-hepten-2-yl acetate - dosed 0.4ppm in Mandarin oil.
- Pineapple, Guava, Orange Sparkling Water – showcasing Treatt's Pineapple Treattarome, Guava Treattarome, TreattClear Orange and Sugar Treattarome 9806 as a reduced sugar beverage.
- Orange, Honey & Lavender Iced Tea – showcasing TrueTaste Black Tea High Clarity, Lavender Treattarome, Honey Treattarome 9804 and TreattZest Orange
- Peach Treattarome
- 2,6-dimethyl-5-hepten-1-ol - dosed 1 ppm in Watermelon Treattarome
- TreattZest Lemon & TreattZest Lime & Sugar Treattarome 9811 as a reduced-sugar beverage
- Orange, Honey & Lavender Iced Tea – showcasing the company's TrueTaste Black Tea High Clarity, Lavender Treattarome, Honey Treattarome 9804 and TreattZest Orange
- Peach Treattarome

In June 2024 Treatt welcomed David Shannon as CEO. Shannon brings a wealth of experience and a strong track record of success in our industry. Shannon has extensive global experience in selling specialty ingredients in the B2B environment for the Flavor and Fragrance and Personal Care industries. Shannon's visionary leadership will be invaluable as the company continues to grow and innovate.

In September of 2024, Treatt was delighted to announce that Paul Kollesoff will join Treatt in the newly created position of director of Strategy and Corporate Development.

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4 Dedrick Place, West Caldwell, NJ 07006
Phone: (973) 740-2300 ■ Fax: (973) 740-1839
E-Mail: sales@pentamfg.com ■ Web: www.pentamfg.com

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