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THE SCENT OF CLEAN

Home care fragrance technology is evolving—the future of fabric care begins on page 44.

Cleaning Product Ingredient Transparency Remains Paramount to Industry and Consumers

Plant-based Technologies, Partnerships & Advancements Introduced in 2024

Flavor Bites: Methyl Salicylate

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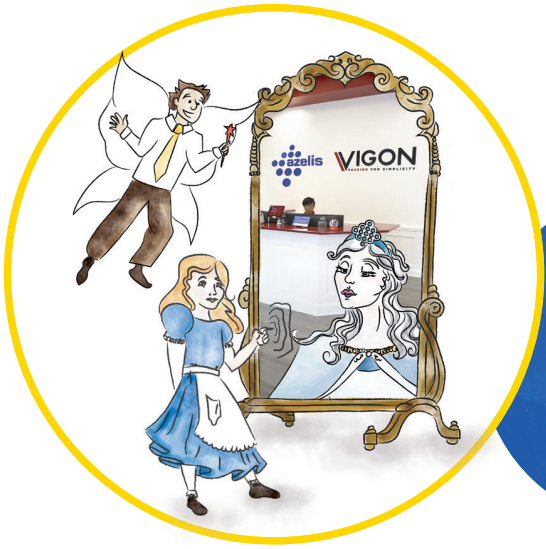
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ON THE COVER: Image by ABCreative at Adobe Stock

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Perfumer & Flavorist+ (ISSN 0272-2666) is published monthly by **Allured Business Media**.

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

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(9 AM-5 PM Central, Mon-Fri) | Fax: 1-847-291-4816
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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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Maximizing F&F Event Experience for Creators, Manufacturers & Suppliers



What does the next generation of F&F events look like to you? It's time to upgrade.

2024 hosted both the *World Perfumery Congress*, a long-standing event built for fragrance professionals across categories and job descriptions, as well as *Flavorcon*, a flavor-forward two-day conference/expo hall affair designed to inspire and connect tastemakers worldwide. As we plan for the next iterations of both events, we wanted to pause and take a poll amongst our readers, sponsors and attendees to ensure we are crafting the best possible version of our events designed with *you* and those you want to reach in mind.

As the F&F industry continues to evolve, the events we attend play a critical role in fostering innovation, networking, and knowledge-sharing. But what truly makes these gatherings valuable to you? We want to hear from the professionals at the heart of this vital industry.

What are you looking for in the events you attend? Whether it's insights into emerging trends, deeper networking opportunities, hands-on workshops, or even how virtual events can improve, your feedback is essential in shaping the future of industry gatherings.

Let us know what you value most so we can continue to support an event experience that meets your needs. Please feel free to share your thoughts in an email to myself Jenna Troyli (jtroyli@allured.com), and my colleague Paige Crist (pcrist@allured.com).

On The Road with *P&F+*

Perfumer & Flavorist+ will be traveling throughout the United States as well as abroad for industry events. Be sure to follow along on social media, LinkedIn as well as Instagram (@perfumer_flavorist) for exclusive coverage. You can find events in the industry on our website *https://www.perfumerflavorist.com/events/calendar*. See an event missing? Send us an email with the information and we can add it!



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Ingredients



Schinus Molle

Ernesto Ventós S.A.

https://www.ventos.com/en/producto/1369

The oil from Schinus molle, or "pink pepper," is derived from South American tree berries. It features a spicy, fresh aroma, making it suitable for different uses and pairing well with other essential oils. We also offer Schinus Molle Rectified which is more soluble.



Methyl Hexyl Ketone

MANE

https://www.mane.com/media/mane-at-flavourtalk-2024

Methyl Hexyl Ketone (CAS# 111-13-7) is a 100% EU Natural Molecule obtained from MANE's biotechnology expertise. It unfolds a robust cheesy profile accentuated by fatty undertones. This powerful molecule turns blend cheese into matured cheese. It serves as an interesting addition to a flavorless base, providing a vegan-friendly alternative to traditional cheese.

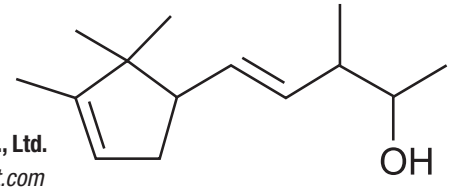


Himalide

Symrise AG

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

Himalide (CAS# 141773-73-1) now enriches Symrise's renewable perfumery ingredients. The olfactory characteristics range from musky, cedar wood, to dry powdery, slightly aromatic, and fruity. It imparts a very smooth and elegant character. Himalide works as an excellent material for rounding off amber notes and adding velvety to floral accords.



Muscosandrol

Hangzhou Grascent Co., Ltd.

www.hangzhougrascent.com

Muscosandrol, 3-Methyl-5-(2,2,3-trimethyl-3-cyclopenten-1-yl)-4- penten-2-ol (CAS# 67801-20-1) odor characteristics are described as sandalwood, musk aspect and powerful. Applications for Muscosandrol include fine fragrance, beauty care, soap, laundry care and household products.



Spilanthol

Penta International Corp.

www.pentamfg.com

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Images courtesy of the manufacturers



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Natural Lactones

FEMA 2796 Natural Gamma Octalactone, Chiral
FEMA 3091 Natural Gamma Undecalactone, Chiral
FEMA 2400 Natural Gamma Dodecalactone, Chiral
FEMA 2361 Natural Delta Decalactone, Chiral
FEMA 2401 Natural Delta Dodecalactone, Chiral
FEMA 3590 Natural Delta Tetradecalactone, Chiral

Natural Specialties

FEMA 2747 Natural Methional
FEMA 2720 Natural Methyl 3-Methylthiopropionate
FEMA 3310 Natural Methyl Thiobutyrate
FEMA 3343 Natural Ethyl 3-Methylthiopropionate

FEMA 3155 Natural 2-Ethyl-3-Methyl Pyrazine
FEMA 3919 Natural 2-Ethyl-6-Methyl Pyrazine
FEMA 3149 Natural 2-Ethyl-3(5 or 6)-Dimethyl Pyrazine
FEMA 4434 Natural 2-Ethyl-5,6-Dimethyl Pyrazine
FEMA 3208 Natural 2-Methyl-3-Methylthio Pyrazine
FEMA 3132 Natural 2-Methoxy-3-Isobutyl Pyrazine
FEMA 3358 Natural 2-Methoxy-3-Isopropyl Pyrazine
FEMA 3433 Natural 2-Methoxy-3-Secbutyl Pyrazine
FEMA 3964 Natural 2-Acetyl-3-Methyl Pyrazine
FEMA 3134 Natural 2-Isobutyl Thiazole
FEMA 3555 Natural 2-Isopropyl-4-Methyl Thiazole
FEMA 3680 Natural 2-Ethyl-4-Methyl Thiazole



Oud Oil

OQEMA

https://oqema.com/oudhoil/

Oud Oil (CAS# 958663-49-5) is an ancient oil derived from the agarwood tree and sourced from the tropical areas of Vietnam, Thailand and Cambodia. With a deep, woody and animalistic scent, the oil is used for religious ceremonies to fine fragrances. This makes it one of the most luxurious and desired oils on the planet.

Anisyl Formate

Avant Organics

avantorganics.com



Anisyl formate (FEMA# 2101, CAS# 122-91-8), a flavoring agent commonly used in the food and beverage industry, offers a distinctive and captivating taste profile. It imparts a sweet, floral, and slightly balsamic aroma reminiscent of anise, a popular spice often found in licorice and other confectionery. Its flavor profile is characterized by a delicate balance of sweetness and subtle spice, making it a versatile ingredient that can enhance a wide range of products. From baked goods and candies to beverages and desserts, anisyl formate adds a unique and enticing element to the taste experience. Its ability to create a pleasant and memorable sensory impression has made it a valued component in the flavor industry. One can say that its versatile profile can really enhance and uplift berry and vanilla flavors with a perfect layer of sweet and floral nuances. Avant Organics provides this material as EU Natural, Kosher, non-GMO and Halal. For your free sample please email info@avantorganics.com.



Tagetes Oils

Berjé Inc.

https://www.berjeinc.com/products/essential-oils/tagetes-oils/

Tagetes oil (FEMA# 3204, CAS# 137-00-8) imparts an exceptionally tangy, berry-like note with an underlying herbaceous aroma, complimented by additional citrus, green, and ionone-like undertones. In flavors, tagetes can add a robust mouthfeel by imparting a strikingly zesty, tart-like aspect to formulations.

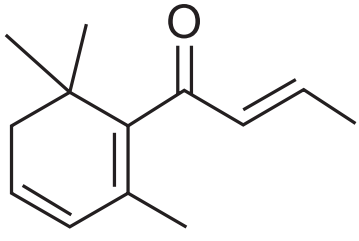


Yeast Extract

Sensient Flavors & Extracts

https://sensientflavorsandextracts.com/hvps-yeast-extract/

Yeast is at the core of our expertise! Yeast extracts are manufactured for flavor development, enhancing flavor for a range of applications in food manufacturing and the fermentation process. We offer baker's yeast extracts, brewer's yeast extracts and customized solutions to develop product-specific flavor profiles.



Damascenone β Natural

Vigon International, an Azelis Company

https://www.vigon.com/product/damascenone-beta-natural/

Damascenone β Natural (FEMA# 3420, CAS# 23696-85-7) has a complex and rich aroma profile. It is primarily characterized by a deep, sweet floral scent reminiscent of roses. It also carries fruity, berry-like undertones, with subtle hints of honey, woody, and slightly herbal nuances. These characteristics make it versatile in enhancing flavors and fragrances, often used in perfumery, as well as in flavor formulations for tobacco, wine, and berry profiles.

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The Estée Lauder Companies' New Research Project to Decode the Scent-Emotion Connection



Under the new research project, the Estée Lauder Companies seeks to decode the neurological connections between fragrance and emotion to drive fragrance product development, packaging innovation, the development of consumer experiences and marketing claims, and more.

The Estée Lauder Companies is teaming up with the TUD Dresden University of Technology's Smell & Taste Clinic, Department of Otorhinolaryngology, and its professor Thomas Hummel, MD, to study the correlation between scent and emotions, including nostalgia. The company's global R&D times will leverage the learnings from this project, including at its Paris-based atelier, a new fragrance-centric co-creation space opening in early 2025.

Consumers' Mood-centric Fragrance Habits

The focus on emotion is critical for consumer engagement; as previously reported, 80% of fragrance users leverage scents to boost their moods. This is particularly crucial for Gen Z shoppers.

A September 2023 report from DTC commerce specialist ESW noted, "Unlike previous generations, who often wore a signature scent consistently, Gen Z is more likely to choose fragrances based on how they feel on a particular day. This has led to a surge in demand for smaller, more affordable fragrances that can be easily mixed and matched to express different moods and emotions."

The Estée Lauder Companies' Latest Fragrance Research Project

Under the new research project, the Estée Lauder Companies seeks to decode the neurological connections between fragrance and emotion to drive fragrance product development, packaging innovation, the development of consumer experiences and marketing claims, and more.

The work will include an assessment of the neuropathways associated with scent, psychometric and physiological analyses, brain imaging studies, and more to assess the correlation between scent and emotions.

This work builds on its existing research into the functional benefits of fragrance.

"Scents have long been associated with emotions and have a powerful connection to wellness," says Sumit Bhasin, senior vice president, corporate fragrance R&D, product development and innovation, ELC. "As consumer interest in the functional benefits of fragrance continues to accelerate, we are thrilled to be the first prestige beauty company to partner with Dr. Hummel and leading academic institution the TUD Dresden University of Technology on neuroscience research that will provide us with deeper insights into how fragrance plays a role in evoking nostalgia."

"There is a unique opportunity for academia and industry to partner together to explore the power of scent," said professor Hummel. "We are proud to partner with a fragrance powerhouse like The Estée Lauder Companies with a proven commitment to science and the continuous advancement of innovation."

Image by Jevjenijs at Adobe Stock

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Agrumaria Reggina Welcomes Joel Longbons as General Manager for North America

Agrumaria Reggina has appointed Joel Longbons as general manager for North America within the company's new offices in Atlanta, Georgia. This appointment is said to be a pivotal moment in Agrumaria Reggina's international expansion journey, designed to further enhance its presence and capabilities within the American market.



Joel Longbons' appointment is said to be a pivotal moment in Agrumaria Reggina's international expansion journey, designed to further enhance its presence and capabilities within the American market.

With a distinguished career and a profound understanding of the North American market, Longbons is thought to be uniquely positioned to drive and develop Agrumaria Reggina's operations across the United States. The company shared that Longbons' extensive experience in navigating complex market dynamics and his strategic vision will be instrumental in optimizing Agrumaria Reggina's operations, tailoring offerings to meet the evolving needs of the company's local customers, and ultimately delivering exceptional value.

Felice Chirico, CEO and CCO of Agrumaria Reggina, commented, "We are delighted to welcome Joel Longbons to our team. His new role represents a critical milestone in our company's growth strategy, enabling us to strengthen our engagement with the American market. Joel's leadership and expertise come at a crucial time as we seek to address both the challenges and opportunities present in this dynamic region. We are confident that under Joel's guidance, our North American operations will not only thrive but set new benchmarks for success, further solidifying our position as an industry leader."

p&f+

Turpaz Acquires British Flavor Company F&E for £22 million

Turpaz Industries Ltd. (TRPZ) announced the purchase of 100% of the share capital of Flavors and Essences UK Limited (F&E), a British flavors company, for £22m from IFF, on September 1, 2024.

F&E was founded in 1998 and specializes in the development, production and marketing of flavor extracts for a variety of products. F&E is said to offer a wide customer base, mainly in the United Kingdom, and in other countries in Europe and Asia. It employs 50 people, including a sales team in Belgium responsible for sales outside Great Britain.



The acquisition of F&E is said to be Turpaz's eleventh acquisition since its issuance.

Karen Cohen Khazon, chairperson of the board and CEO of Turpaz, said, "The purchase of F&E is another significant strategic step for Turpaz, which expands our presence in Europe and strengthens our position in the global flavor market. Our entry into the British market, which is a major market in Europe with a population of over 70 million inhabitants, opens up new and significant growth opportunities for us. Turpaz will work to leverage the synergy between F&E and the group's companies, with the aim of expanding the product offering and strengthening the group's cross-selling capabilities."

The turnover of F&E in the first six months of 2024 is reported to amount to 6.6 million pounds ($8.3 million). The acquisition of F&E is said to be Turpaz's eleventh acquisition since its issuance.

p&f+

From top: courtesy of Agrumaria Reggina; Turpaz Industries

In Memoriam: Robert Bedoukian, Ph.D. of Bedoukian Research, Inc.

In late August 2024, Robert (Bob) Bedoukian, Ph.D., passed away after a valiant fight with cancer, surrounded by his family. Bob Bedoukian most recently served as the president of Bedoukian Research, Inc. His father Paul Bedoukian, Ph.D., founded the company in 1972.

In July 2022, the *Perfumer & Flavorist+* team visited the Bedoukian Research Center in Danbury, Connecticut and connected with Bob alongside his son and vice president of sales, David Bedoukian. The duo discussed celebrating 50 years in F&F[a], the company's humble beginnings and more.



In July 2022, the Perfumer & Flavorist+ team visited the Bedoukian Research Center in Danbury, Connecticut and connected with Bob (L) alongside his son and vice president of sales, David Bedoukian (R). The duo discussed celebrating 50 years in F&F, the company's humble beginnings and more.

Bedoukian shared the following:

"It is with the deepest sadness that we share the heartbreaking news of the passing of our colleague and friend, Robert (Bob) Bedoukian, Ph.D.. He passed away peacefully Friday evening after a valiant fight with cancer, surrounded by his family. This is an immense loss for all of us who had the privilege to know him and work with him and for our Industry who has lost a leader like no other.

Robert was a visionary who dedicated his life to his family, to his company and to the industry and inspired us all with passion, commitment, and kindness.

Bedoukian Research Inc., founded in 1972 provides complex organic products for the Flavor and Fragrance industry. Robert led the company starting in 1986, and true to his core, delivered high quality products to customers all over the world. Robert also founded BedoukianBio, a company that delivers semiochemical products following the Bedoukian tradition of production of complex organic molecules with high quality and service.

Robert served on the Board of Directors of the Research Institute for Fragrance Materials (RIFM) from 1989-2022, was chairman of the Board from 2005-2007, and interim Co-President from 2015-2016; Fragrance Creators Association (FCA, formerly FMA and IFRANA) since 1995; Ability Beyond as Vice Chair since 2014; and Regional Hospice since 2020.In addition to the Board memberships, in 2021, Robert created and chaired the Nuvance Research and Innovation Bedoukian Endowed Chair. He had been a member of the Armenian Museum of America Board of Trustees since 2002 and served on the Purdue Chemistry Advisory Committee since 2018. Robert was also a member of the Finance and Audit Committee at Ability Beyond and the Finance Committee at the First Church of Christ Congregational in Redding.

Robert was a recipient of numerous professional and civic awards including; The Eric Bruell Distinguished Service Award (2015); The Cecil Previdi Award for Entrepreneurial Business Achievement from the Greater Danbury Chamber of Commerce (2021); The Robert S. Young Humanitarian Award issued by Ability Beyond (2018). He was honored for community service by the Association of Religious Communities (2020) and a recipient of the Greater Danbury Good Scout Award (2021).

Robert was a dedicated chemist and chemical engineer who received his bachelor's degree in chemical engineering from Tufts University in 1970 and his Ph.D. in organic chemistry from Purdue University in 1975. He received the Purdue University College of Science Distinguished Alumni Award in 2013 for his outstanding achievements in chemistry and business.

Robert was a man who lived with the highest integrity, he provided leadership not only to Bedoukian Research, Inc. but to the community where he and his family live and impacted many lives. Robert's life and legacy will live on through his charitable work and spirit of giving."

p&f+

Courtesy of Jenna Troyli

[a]*https://www.perfumerflavorist.com/multimedia/audio/podcast/22223393/bedoukian-research-inc-podcast-two-sense-bedoukian-discusses-halfcentury-milestone-in-ff*

T. Hasegawa USA Inc. Acquires Abelei Flavors, Inc.



Tom Damiano, CEO, T. Hasegawa USA, Inc., states, "The acquisition of Abelei Flavors, Inc. expands our geographical footprint, technical capabilities and overall flavor portfolio so we can better serve our customers."

On September 3, 2024, T.Hasegawa USA Inc. acquired Abelei Flavors, Inc. The purchase is said to fit into T. Hasegawa USA, Inc.'s strategy is to broaden its flavor portfolio within North America.

Tom Damiano, CEO, of T. Hasegawa USA, Inc., states, "The acquisition of Abelei Flavors, Inc. expands our geographical footprint, technical capabilities and overall flavor portfolio so we can better serve our customers. We welcome their entire team, which is well known for their customer service excellence and aligns with our customer-centric focus."

"We couldn't find a more perfect partner in joining the T. Hasegawa USA, Inc. team in continued growth and expansion within the U.S. marketplace. The collaboration of resources, talent and innovation will be a tremendous recipe for success expanding upon our existing capabilities" says Shelley Henderson, vice president, Operations of Abelei Flavors, Inc. "We know that T. Hasegawa USA, Inc.'s leading-edge technology, flavor modulation, reaction & thermal processing will benefit our customers."

Marcia Arb, vice president, Finance & Operations of Abelei Flavors Inc., affirmed "The approach that T. Hasegawa USA brings to customer responsiveness and order fulfillment is remarkable. I know our customers will benefit from their expertise in supply chain management. The customer-first vision and culture that both companies share through quality, operations, technology & innovation will continue to provide world-class service and capabilities to our valued customers."

Courtesy of T. Hasegawa

PROFILE: LINDA SONG

Song shares, "I particularly enjoy the breadth of working from alcohol to various bases because the ideation, the process, and the materials are different."

Linda Song, Senior Perfumer

What led you to the fragrance industry?

Linda Song [LS]: While reading an article in the *NY Times* about a chemist patenting a molecule in the beauty industry, I became fascinated by the idea of applying my university degree to this field. Through my research, I discovered ISIPCA and pursued a master's degree there. This led me to join Givaudan as a perfumer's assistant and later attend Givaudan's prestigious perfumery school. None of this was part of a deliberate plan; instead, it was the result of a continuous search for opportunities, favorable timing, and the support of excellent mentors and advocates. I'm incredibly fortunate to be able to do what I love every day.

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

LS: In the United States, we have the opportunity to work in fine fragrance but also a lot of cross-category work, including lotions, shower gels and candles. I particularly enjoy the breadth of working from alcohol to various bases because the ideation, the process, and the materials are different. This variety feeds my creativity, allowing me to think about and utilize materials in innovative and unconventional ways.

When I first began as a perfumer, I eagerly took on any project that came my way because I was so enthusiastic about creating in any capacity. This often meant working on smaller projects in different formats, including those with stricter regulations. Even seasoned perfumers find that these constraints are valuable learning opportunities. As regulations evolve, the focus shifts from substituting past ingredients to adapting to the new guidelines.

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

LS: The global rise of niche fragrances. It doesn't originate from just one country, like the US or Europe, but increasingly from regions such as the Middle East and Asia. These areas are now setting new trends and shaping traditional markets.



Name: Linda Song

Title: Senior Perfumer, Givaudan

Location: New York, New York, United States

Any advice for people coming into perfumery?

LS: Don't give up. In the world of perfumery, a wide range of personalities exist and are accepted, but passion and persistence are the common threads that unite us all.

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

LS: The nature of projects is evolving due to the emergence of new industry players. A fresh wave of brands distinguishes itself from established ones, bringing excitement and challenge to consumers and competitors. As a perfumer, this shift enables me to explore my creativity more freely as the constraints have changed, the dialogue is more dynamic, and the approach has become increasingly authentic in the messaging and materials used, in addition to the transparency to the consumer.

p&f+

Courtesy of Givaudan

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The best level of addition of methyl salicylate to blackcurrant flavors is around 100 ppm.



BY JOHN WRIGHT
johnwrightflavorist@gmail.com

FLAVOR BITES:

Methyl Salicylate in Berry, Fruit, Alcoholic Drinks & Other Flavors

See how this flavorist's relationship with methyl salicylate while transitioning from Europe to the U.S.

I moved from London to New Jersey in 1995. It was a relatively easy transition between two cultures that have so much in common. The biggest shock was root beer. Similar rustic concoctions in the UK had made the transition from sassafras to aniseed, but root beer had become an evil, wintergreen-dominated, monstrosity.

It is simply a question of history and background, methyl salicylate in Europe has very unattractive medical associations, which do not apply in the U.S. Despite this logic, root beer revulsion left me with a distinct disinclination to use methyl salicylate in formulations, something I had to work to overcome.

The persistently moderate levels of methyl salicylate (FEMA# 2745, CAS# 119-36-8) in such a wide range of foods helped to slowly change my mind. At such levels methyl salicylate did not project an intrusive wintergreen note, rather it made a significantly positive contribution to rounding out the profile.

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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 a simple bouillon.

Berry Flavors

Blackberry: Berry flavors, as a category, all benefit from a moderate level of methyl salicylate, adding attractive complexity and rounding out the middle of the profile. Fifty ppm is a good place to start.

Blackcurrant: This is even more true for blackcurrant flavors and the best level of addition to blackcurrant flavors is correspondingly higher, around 100 ppm.

Blueberry: The same 100 ppm level is also ideal for blueberry flavors, providing a significant counterbalance to linalool.

Loganberry: Loganberry flavors only need a more modest addition of methyl salicylate. Thirty ppm is ideal.

Raspberry: Thirty ppm is also a better level in most raspberry flavors, perhaps a little higher in black raspberry profiles.

Strawberry: All types of strawberry flavors gain significant authenticity from the addition of around 100 ppm of methyl salicylate.

Alcoholic Drink Flavors

Brandy: Methyl salicylate is not an obvious component of distilled spirit flavors, but a hint, 5 ppm, adds realism to brandy flavors.

Rum: Rum flavors, particularly dark rum flavors, can make use of a slightly higher level of this raw material, around 20 ppm.



Tequila is the one category where methyl salicylate really shines.

Tequila: Tequila is the one category where methyl salicylate really shines. One hundred ppm is the ideal level of addition.

Whisky: With all styles of whisky flavors we are back to a subtle effect. Start at 10 ppm.

Other Fruit Flavors

Acai: Acai flavors are currently in vogue and have an interesting profile. Methyl salicylate makes a good addition at around 50 ppm.

Apricot: Methyl salicylate is especially effective in apricot flavors, smoothing the obvious impact of

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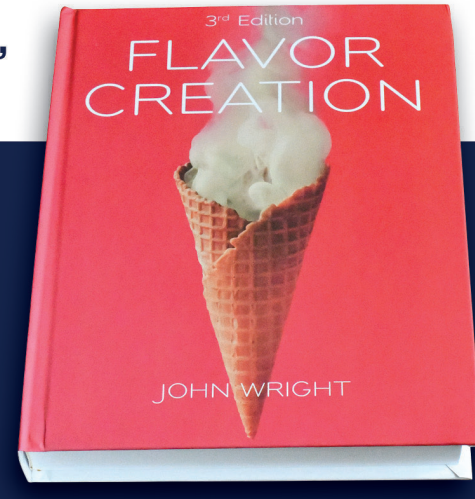


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gamma-decalactone. Levels vary, but 60 ppm is a reasonable place to start.

Cherry: The smoothing effect in cherry flavors obviously applies to benzaldehyde, but the ideal level of addition is similar, around 50 ppm.

Cranberry: Methyl salicylate is particularly useful in cranberry flavors, rounding out the profile very attractively. One hundred ppm is a good place to start.

Damson: Much more subtle levels are more appropriate for damson flavors. Levels can vary, but between 10 ppm and 20 ppm is a good starting point.

Fig: Similar levels apply equally to all styles of fig flavors. The effect is subtle but definitely noticeable.

Grape, Concord: Twenty ppm is also a good level in Concord grape flavors, in this case helping soften the anthranilate note.



Thirty ppm is a reasonable addition to honey flavors, a little less for very floral honey flavors.

Mandarin, Dancy: The usefulness of methyl salicylate in tangerine flavors also relates to the anthranilate note, but the level is very subtle, around 5 ppm.

Nectarine: Nectarine flavors can vary in profile and, in consequence, the ideal level of methyl salicylate is hard to pin down. Somewhere in the range between 20 ppm and 60 ppm should work.

Passionfruit: Methyl salicylate has a pleasant effect on the profile of passionfruit flavors, offsetting the tropical esters. Twenty ppm is ideal.

Peach: Higher levels are better in peach flavors. One hundred ppm rounds out the relatively high level of gamma-decalactone.

Plum: Plum flavors have a modest relationship to peach flavors, but the lactone note is less important. Twenty ppm of methyl salicylate is an effective level.

Sapodilla: Sapodilla flavors are interesting to work on. They can accommodate quite a lot of methyl salicylate, up to 200 ppm.

Watermelon: Levels f this ingredient in watermelon flavors can vary considerably, but 20 ppm is a reasonable starting point.

Other Flavors

Cream: Given my comments about root beer, it must seem very eccentric to add methyl salicylate to any dairy flavors. Eccentricity is laudable, so why not try a touch, at the lower end of single-digit ppm levels, in a fresh cream flavor? It is certainly interesting.

Cucumber: Similar levels are also worth trying in cucumber flavors, a profile that is desperately in need of some added complexity.

Ham: Meat flavors might seem to be about as unlikely a home for this raw material as dairy flavors. Nevertheless, 50 ppm is a welcome addition to ham flavors.

Honey: Adding methyl salicylate to honey flavors is not so much a stretch of the imagination. Thirty ppm is reasonable, perhaps a little less for very floral honey flavors.

Peppermint: Methyl salicylate is highly useful in peppermint flavors, helping bridge the gap between cheap arvensis and desirable piperita. One hundred ppm works well in peppermint flavors.

Root Beer: I have probably said enough about root beer flavors. This is the most obvious use of methyl salicylate and the levels of use reflect that, up to 10,000 ppm.

Tea: Tea flavors, as a general category, can all make good use of this ingredient. The lowest levels, around fifty ppm, work well in red tea flavors. One hundred ppm is ideal in black tea flavors. Styles of green tea flavors vary, but up to 200 ppm of methyl salicylate is not out of place.

Tomato: Thirty ppm of methyl salicylate enhances all tomato flavors but is most effective in fresh tomato styles.

Vanilla, Bean: It is hard to think of a flavor category that requires a more complex mixture of ingredients than vanilla bean flavors. Methyl salicylate is a useful member of that multitude at levels of addition around 10 ppm.

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Cleaning Product Ingredient Transparency Remains Paramount to Industry and Consumers

Discover current industry initiatives and efforts to achieve policies and regulations that support a person's right to know and understand meaningful information about the fragrance ingredients in their products.



Consumers want to know what is in cleaning products and how they work to instill more confidence in their effectiveness.

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By KRISTIN DINICOLANTONIO, senior director, Stakeholder Communications, American Cleaning Institute and Katie Cross, head of Programs Management & Policy Insights, Fragrance Creators Association

People have a right to know and understand. We know consumers want to know more about the ingredients in the cleaning products they use and keep in their homes. No matter where or how you buy a cleaning product, you should have access to consistent information, whether on the label, a website, or an app like SmartLabel[a].

Cleaning products are an essential part of keeping our public spaces and homes safe and clean. Consumers want to know what is in these products and how they work to instill more confidence in their effectiveness. Cleaning product brands are providing more information than ever about product ingredients to meet that need. They are committed to making cleaning product ingredient information easily accessible and understandable. As a compliment to those efforts, ACI offers consumers useful materials on understanding products[b].

We at the American Cleaning Institute support a national standard for cleaning product ingredient communication. Without a nationwide standard, some states have been working on their own solutions. In California, product manufacturers, legislators, environmental and public health advocates, and trade associations all came to the table to prioritize transparency and consistency for consumers. The result was the *Cleaning Product Right to Know Act of 2017*[c] and it is already working. Cleaning products currently adhere to these requirements. Instead of growing ad hoc regulations that vary by state, this

[a]SmartLabel is a registered trademark of Consumer Brands Association

[b]*https://www.cleaninginstitute.org/understanding-products*

[c]*https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB258*



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In a study sponsored by FCA and published in Cognitive Research: Principles and Implicationsd, market data in the United States showed that scented products represent 89% of laundry sales, 79% of surface cleaning sales, and 99% of dishwashing product sales, even when unscented versions are available.

model can be followed and later improved upon to create a strong national standard.

A key portion of the *Cleaning Product Right to Know Act of 2017* was related to fragrance ingredient disclosure. Fragrance plays an important role in cleaning products: it masks odors that would otherwise carry unpleasant smells that can render products unusable, and it encourages the product's proper use–people often know surfaces are clean based on the scent. The fragrance ingredients used in cleaning products are subject to layers of review and regulation. For decades, the fragrance industry has evaluated fragrance ingredients and provided guidelines for their use, committing to the safe use of fragrances in the products people use and love.



Each fragrance formulation in a cleaning product is a unique work of art.

And people enjoy fragranced cleaning products. In a study sponsored by FCA and published in *Cognitive Research: Principles and Implications*[d], market data in the United States showed that scented products represent 89% of laundry sales, 79% of surface cleaning sales, and 99% of dishwashing product sales, even when unscented versions are available. The study aimed to explain the attraction to scent in household products using a novel three-factor framework focusing on functional benefits (malodor mitigation), in-use experience benefits (efficacy), and emotional benefits (increase in confidence or mood). Using this framework, the study advanced the understanding of the essentiality of fragrance and consumer preference for scented household products.

Each fragrance formulation in a cleaning product is a unique work of art–a perfumer must formulate each scent with diverse ingredients as well as innovative technologies to ensure that they function properly in a product. For example, a fragrance for a laundry detergent must be proven effective throughout a wash cycle. The fragrance industry is also constantly evolving; as a multibillion-dollar industry, fragrance manufacturers employ new technologies and develop innovative solutions to responsibly grow the industry while ensuring that human, community and environmental needs are prioritized.

Because of the unique nature of fragrance, the formulations have historically been protected; this allows for industry competition and innovation and helps protect against counterfeit products coming into the market. However, the fragrance industry respects the needs of today's consumers and understands the importance of meaningful transparency. We have operationalized our consumer respect by empowering consumers with information so they can make choices about the products they use with confidence. Specifically, for example, FCA launched The Fragrance Conservatory[e] in 2020 to serve as the go-to resource for information about fragrances, their safety, history, and more. The Fragrance Conservatory's ingredient directory contains approximately 500 ingredient profiles and is constantly expanding. Anyone can visit the website to learn more about ingredients that make up their favorite scents.

FCA worked with ACI and others as the *Cleaning Product Right to Know Act of 2017* was negotiated in California, prioritizing a final product that provides individuals with access to and understanding of information on the ingredients in the products they use every day. This law was a good start, and FCA looks forward to continuing discussions at all levels to achieve policies and regulations that support a person's right to know and understand meaningful information about the fragrance ingredients in their products.

[d]*https://cognitiveresearchjournal.springeropen.com/articles/10.1186/s41235-022-00378-6*

[e]*https://fragranceconservatory.com/*

p&f+

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Nonanal, Natural
FEMA 2782
citrus, fruity, fatty

p-Cymene, Natural
FEMA 2356
woody, earthy, citrus

Neryl Acetate, Natural
FEMA 2773
fruity with citrus and raspberry notes

Ethyl Butyrate ex Orange, Natural
FEMA 2427
orange, sweet, pineapple

Decanal (C10), Natural
FEMA 2362
floral, orange peel, fatty

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Bringing A New Era of Taste & Flavor to Plant-based Foods with Yeast-based Ingredients

The Global Head of Customer Innovation at Biospringer by Lesaffre discusses how fermentation-based solutions can hit the mark with flavorists.

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Jatin Sharma, Global Head of Customer Innovation at Biospringer by Lesaffre

Especially when it comes to plant-based diets, consumer food trends are constantly redefining what we put on our plates. Biospringer by Lesaffre focuses on the major challenges in food taste and health. We offer our food and beverage customers a wide range of solutions **designed to modulate the taste and organoleptic properties** of products. What's more, ingredients derived from yeast fermentation offer brands the opportunity to meet the demands of an **increasingly ethical and health-conscious consumer base**.

Perfumer & Flavorist+ (*P&F+*) caught up with **Jatin Sharma**, Global Head of Customer Innovation at Biospringer by Lesaffre to discuss how fermentation-based solutions can hit the mark with flavorists, especially in the field of **alt-protein innovation**.

***P&F+*: For plant-based alternatives such as meat substitutes or cheese analogs, what are some of the common challenges?**

Jatin Sharma [JS]: Biospringer by Lesaffre has long been recognized as a **key player** in flavor solutions, working with flavor houses to develop innovative solutions based on **natural fermented ingredients**. Looking at consumer and market insights, all indicators show that plant-based food and beverage launches are on the rise, although some segments are more innovative than others: + 18% CAGR from July 2019 to June 2024 according to Innova Market Insights. Innovation in this sector remains strongest in Europe, followed by the U.S./Canada and Asia, and the **dairy category** has been the most dynamic in terms of NPD in recent months. All consumer research in recent years has shown that **taste is one of the primary reasons** for both repeat consumption and initial resistance to plant-based foods and beverages, especially for flexitarian diets. Flavor houses are part of this dynamic



Biospringer by Lesaffre is innovating how the company supports its flavorists' customers by listening to them, understanding their needs, and their pain points, and helping them identify the right solutions.

Images courtesy of Biospringer by Lesaffre

and face new challenges in flavor creation: a short list of ingredients that are well accepted by customers, sustainable, cost-effective, powerful in mimicking traditional flavors, and easy to integrate into their formulation processes. They know the potential of our yeast-based ingredients, and **we are constantly innovating** to develop products that are in line with our customers' needs.



All consumer research in recent years has shown that taste is one of the primary reasons for both repeat consumption and initial resistance to plant-based foods and beverages, especially for flexitarian diets.

***P&F+*: What kind of solution have you developed in the recent past?**

JS: We have a very broad portfolio of products from Springer® Reveal to Springer Proteissimo®, and our customers are spoilt for choice when it comes to finding the right solution to their formulation challenges: revealing an aromatic profile, adding umami or kokumi, creating specific notes, enriching the nutritional profile, masking or blocking undesirable notes or **triggering the reaction for the development of meaty or cheesy flavors**. First, we're innovating how we support our flavorists' customers by listening to them, understanding their needs, and their pain points, and helping them identify the right solutions. **Customer needs are at the center of our innovation** and that is how we've developed our latest solutions. Our **Springer® Precursor range** is a perfect example. Our latest inclusion, **Springer® Precursor 401**, uses the **Maillard reaction as a source of meat flavor**. It was designed with our Flavorist customer needs in mind, and since it's been launched, we've received some great feedback. This type of solution can even be used directly by food producers, but under very specific conditions, since the **Maillard reaction is the key to obtaining the desired aromatic notes**. We are also pursuing the development of masking solutions with our **Springer® Mask range**, which has been scientifically proven to block unwanted tastes such as bitterness and mask many other off-notes. The integration of these new solutions in desired applications requires a high level of technical expertise. **Our global network** of research and development, sensory and culinary experts remain available to support and answer our customer needs and help them **throughout the adoption process**.

***P&F+*: How do you focus your innovation efforts to make sure that you are as close as possible to the expectations of the flavor houses?**

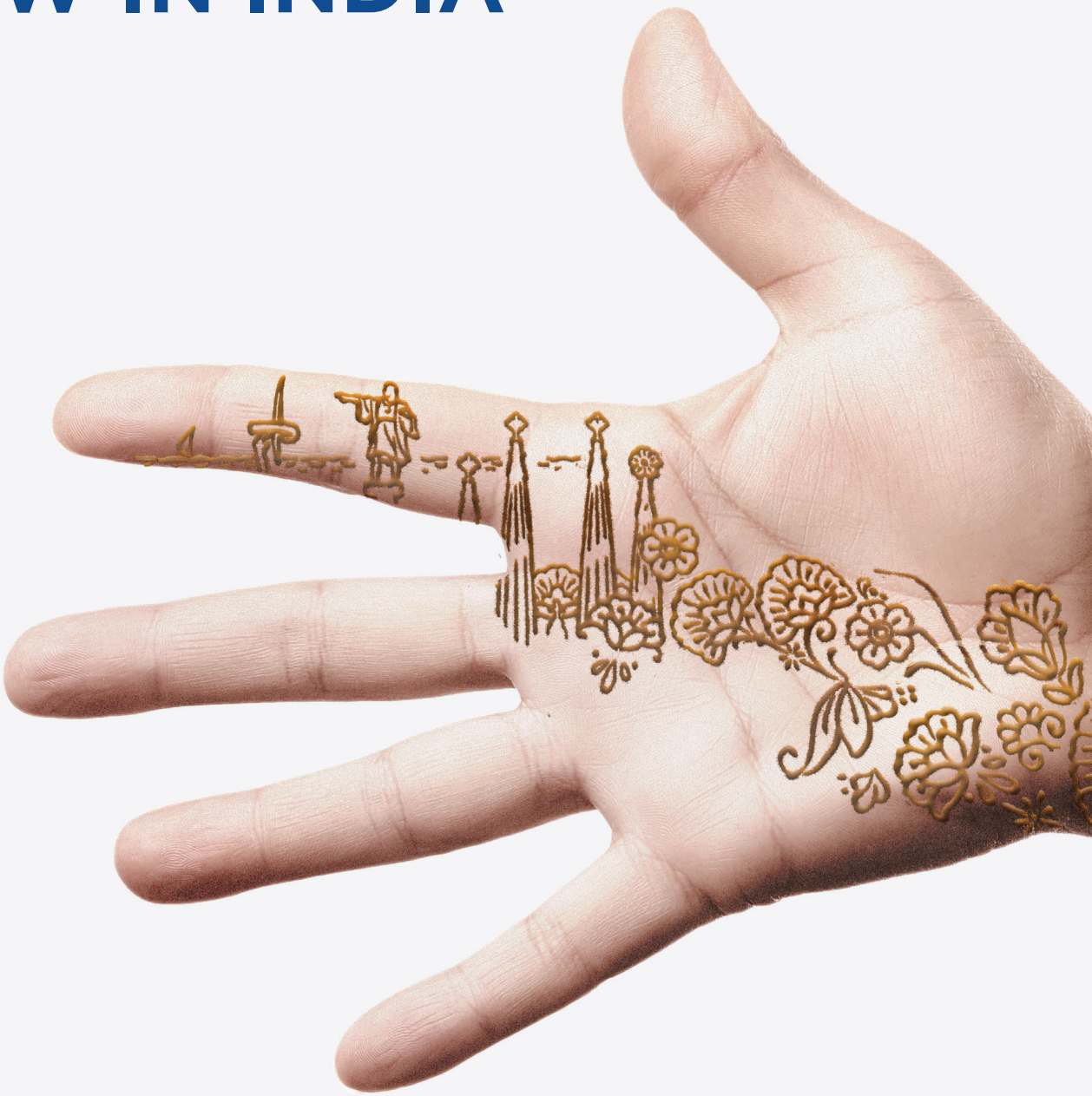
JS: With Lesaffre, Biospringer has a **long history of expertise in fermentation and yeast extracts.** We benefit from the strength of a global group that specializes in different market segments and applications. At the same time, we are members of expert networks in various fields. In the plant-based segment, for example, we're a member of the Bridge2food network and recently joined the Nizo consortium to **challenge the taste and texture of plant-based foods**. In order to remain at the center of customer-driven innovation, we are also working with startups and have an R&D program with universities. All in all, Biospringer by Lesaffre works with **all the players in the plant-based value chain**. This is the key to identifying issues and guiding our innovation approach in the short and long term.

***P&F+*: If we look three years ahead, what innovation would Biospringer by Lesaffre offer the market?**

JS: Biospringer by Lesaffre is already undergoing a revolution with the integration of DSM. Making this merger a success is a major challenge not only for us but also for our customers. If I were to look forward three years, I would imagine **increasingly effective- taste, texture, nutrition, flavor and sustainable solutions** to support the transition to a **diet based on less animal protein**. As a business unit of Lesaffre, we're part of a more virtuous food system for the next generation. There's still a lot of work to be done. Fermentation-based ingredients have yet to reveal their full potential, and not just in terms of taste.

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The androgynous bottle is inspired by Samā', a sacred whirling dance of the whirling dervishes listed as intangible cultural heritage of humanity.

Images courtesy of Pierre Bénard Ségu

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Behind the Scenes of an Independent Perfumer's Crowdfunded Scent Launch

The perfumer discusses the artistic project, building a soliflore fragrance as well as the nuances of its creation.

In the November 2022 issue[a] of *Perfumer & Flavorist*+ (*P&F*+) independent perfumer Pierre Bénard penned a love letter of sorts to tuberose for our "Perfumer Notes" column. Two years later, Bénard returns to discuss his recent project involving a crowdfunded campaign to launch *Lilith, Sombre Héroïne* through his French brand OZPARFUM. The fragrance is shaped like a soliflore (a single floral aroma) around a heart of tuberose, which is said to be the perfumer's signature flower.

P&F+ connected with Bénard to discuss the creation of *Lilith, Sombre Héroïne*, the significance of tuberose and other utilized notes as well as how this perfume differs from what's currently on the market.

P&F+: **Congratulations on the launch of your artistic project** *Lilith, Sombre Héroïne!* Can you share what inspired you to create this project?

Pierre Bénard [PB]: I am very honored by your interest in *Lilith, Sombre Héroïne*. Right from the start, a black case whose mysterious opening is in the shape of a flower (*Hana* in Japanese) reveals a bottle that evokes the shape of a spinning top and, like the playful art object, arouses the irrepressible desire to grab it.

This androgynous bottle is inspired by Samāʹ, a sacred whirling dance of the whirling dervishes listed as intangible cultural heritage of humanity. Like a poem by Baudelaire, the bottle was also a source of inspiration for the composition of a musical worka in which the Italian Bel Canto soprano Veronica Granatiero[b] honored me with her vocalizations. Like wisps of perfume carried by the air, her voices escape from a bottle that is opened.

A model of the brand, this bottle registered under the name *Apocalypse* reflects the spirit of peace and freedom of *Lilith, Sombre Héroïne*. Through this personal olfactory creation, the wish is to celebrate femininity, particularly the women who accompany me.

Lilith is a woman who dares to be herself. She is free, loving and in love.

Naturally, the essence of my inspiration for *Lilith, Sombre Héroïne* is found in the essence of the tuberose flower.

P&F+: Can you share the significance of tuberose in this project?

PB: Absolutely! *Lilith* is shaped like a soliflore, literally a single flower. This name is given to a division of the classification of floral perfumes.

If I had to represent an image of this artist's proof, I would photograph a vase, also called a soliflore, in which a single stem of this plant would be dipped. Arranged



The fragrance is shaped like a soliflore around a heart of tuberose, which is said to be the Bénard's signature flower.

[a]*https://www.perfumerflavorist.com/fragrance/ingredients/article/22525394/perfumer-pierre-bnard-shares-how-to-formulate-with-tuberose*

[b]*https://crescendiartists.com/portfolio/veronica-granatiero/*

on a desk, a young perfumer, whose art is to bring the scent of flowers to life, would take the path of this flower, holding his head, pen in hand, in front of a blank page.

Often unsuspected, tuberose is less popular than traditional perfumery flowers, such as centifolia rose and grandiflorum jasmine. However, its essence has all these floral facets but it is a difficult exercise to master. Untamable, it can be tamed like a sculptor who models it, the perfumer can make it more docile without losing its magic or revealing its mysteries.

For me, tuberose is unique; she is my spearhead. She is the beating and loving heart of this composition. He gives life to *Lilith*. He irrigates her cool head. Her suave and maternal wake is a balm to this heart.

***P&F+*: What are some of the technologies that were used to create this scent?**

PB: Obviously, the main tool used to create *Lilith* was my sense of smell, via the nose, an appendage with tunnels, to create the link with the extra-corporeal environment. Feeding my olfactory memory, my olfactory learning ensured the analysis and choice of the highest quality raw materials. In order to understand the essence of the flower, my brain was the go-between its volatile molecules and my thoughts.

However, the analytical method of multiple headspace extraction on the living flower also allowed me to process the olfactory data of the plant. The selection of extracts of this flower from new techniques proposed by natural ingredient companies was the examination. And then, this tuberose was adorned with other equally precious technical materials.

As an example, I can mention a vanillin from an enzymatic process whose precursor ferulic acid comes from rice bran. She symbolizes the oshiroi and the cosmetic powders that geikos and maikos use. *Lilith* is a modern geisha.

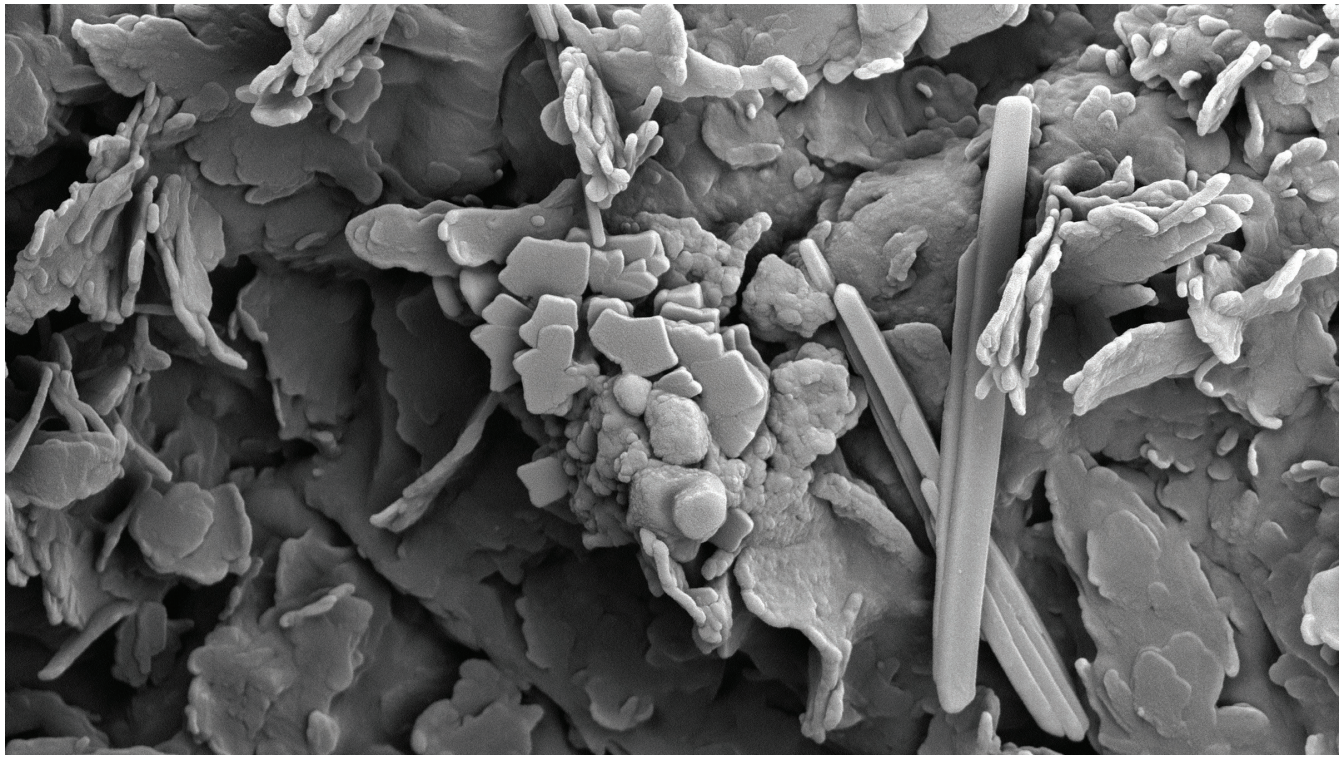
I am a music lover, I like practicing arts, and music sometimes, and creating links with artists. In the perfume or music industry, to transcribe the scores of these composers, perfumers, or musicians use computer-assisted tools.



Bénard shares, "A model of the brand, this bottle registered under the name Apocalypse reflects the spirit of peace and freedom of Lilith, Sombre Héroïne."

These technologies on ingredients could be similar to effect plugins found in computer-assisted music software, such as filters that allow you to isolate certain sound frequencies, such as fractional distillation, which allows you to isolate and enrich certain molecules of essential oils. The purified or enriched ingredient is offered new functionalities without modifying its source code. Technology plays an increasingly important role in the creation of perfumes. It optimizes the composition of the perfume. It strengthens the talent and expertise of perfumers.

But for the futuristic science of perfumery, I think rather of an artificial intelligence capable of teleporting scents and perfumes rather than replacing the human brain, because it is more complex, for olfactory



Bénard shares, "A cardamom crystal, a reflection of narcissus and this heart of tuberose suggest olfactorily the myth of Medusa."

creation. The smell is, it seems to me, this sense that connects us to our reality.

***P&F+*: Can you touch on some of the notes within *Lilith, Sombre Héroïne*?**

PB: Yes! Moreover, this answer will reveal a part of *Lilith*'s mystery; that of her head space intimately linked to her heart, petrifying with emotion.

A cardamom crystal, a reflection of narcissus and this heart of tuberose suggest olfactorily the myth of Medusa. This crystal is a simple accord between two materials of Indian production; between a fraction of cardamom, a cold spice, and menthol, a molecule that gives a tactile and icy grip. An effect that bites your skin like the solenoglyph hooks of this gorgon. It expresses the coldness of a free woman, mistress of her life who thanks to the absolute of narcissus will deposit on the skin a halo of poetry.

This extract of narcissus brings a green reflection to the crystalline accord; a hybrid nuance, vegetal and

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animal. It supports the green note of the heart of the tuberose, formerly called Indian hyacinth.

A heart that gives life to this hermaphrodite icon, human and animal, evil and beneficial: the Medusa. *Lilith* is apotropaic like an olfactory amulet that protects the one who adorns himself with it.

For an even more immersive olfactory experience of the spirit of this perfume, a dose is contained in a breakable ampoule. It is equipped with a stethoscopic roll-on that will allow you to nakedly perfume your skin and the areas of your pulsations.

***P&F+*: What makes this scent different than what's on the market?**

PB: Led by Trent Reznor, Nine Inch Nails is an independent band that particularly inspires me for its audacity and depth. It is known for pushing artistic boundaries and a unique melodic signature.

When the EP "Not the Actual Events" was released in 2016, the public had the opportunity to subsequently receive a "physical element," an envelope with rather unusual contents: photos and texts, but above all a strange black powder that dirty skin and clothes upon opening.

Lilith, Sombre Héroïne like the bottle named *Apocalypse* where it is contained are personal designs. The first editions of the bottle, during the crowdfunding campaign, in Limoge's porcelain biscuit were delivered covered with a matte Japanese Musou acrylic paint (the blackest water-soluble acrylic paint in the world with a light absorption rate of 99.905%).

The purchaser of this UFO (Unidentified Fragrance Object) was supposed to reveal (in ancient Greek ἀποκάλυψις (apokálupsis) - to discover, to reveal) the white and naked fragility of the biscuit by delicately washing the dark paint, for some as one bathes a newborn under a trickle of water, for others as a garment slide on the skin of a body that is undressing. The user becomes a stakeholder in the artistic process with this direct and personal interaction.

A tactile play of chiaroscuro that is revealed olfactorily in the composition of *Lilith, Sombre Héroïne,* and that can be discovered thanks to a roll-on sample in a breakable ampoule. These multi-sensory experiences appeal to the senses as much as the intellect and invite us to go beyond the product itself, "From matter to spirit."

In this quest for aesthetics, sometimes with provocation but above all poetry, the brand's philosophy is to position perfume as a work of the mind.

***P&F+*: How can it best be utilized?**

PB: Here is the best I wish for her. Previously, you have seen that many intense sensory and emotional experiences are available to users who wish to discover the brand and the perfume. Through this OZPARFUM (*https://www.osmoart.com/ozparfum/*) label: an artistic approach; that carries the message and the expression of my own ideal of independent, authentic perfumery and cultural exceptions.

Perfumes with total artistic freedom for both the creator and the one who consumes it. *Lilith* is not a consumer perfume but an alternative.

The rare raw materials that design it are dedicated to exceptional moments, moments of expression, of declaration…

They are linked to unique moments of intimacy, alone or with others

They are linked to moments when one takes the time to perfume oneself or to perfume.

Time, like perfume: an invisible and volatile sumptuousness.



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Eternis CEO Wilfrid Gambade on Growth Strategy, Sustainability, and the Future of Aroma Chemicals

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Gambade shares his insights on what attracted him to the company, Eternis' ambitious growth strategy and how sustainability is at the heart of its operations.

In this exclusive interview, Perfumer & Flavorist+ connects with Wilfrid Gambade, the newly appointed CEO of Eternis. With a rich career spanning major chemical corporations and private equity, Gambade brings fresh energy and vision to Eternis. He shares his insights on what attracted him to the company, Eternis' ambitious growth strategy and how sustainability is at the heart of its operations.

***P&F+*: You recently joined Eternis as CEO. What attracted you to Eternis and what is your vision for its future?**

Wilfrid Gambade [WG]: Having worked in big corporates throughout the chemical industry for the majority of my career (Ciba Specialties chemical, Huntsman, DSM) and more recently with private equity (IGM Resins), I wanted to return to an area of the industry that I touched at DSM and loved, Aroma and Personal Care!

After meeting with Rajen Mariwala, the owner of Eternis, I was inspired by his vision for the business and his values. It was clear that Rajen and I shared very similar values on safety, sustainability and people. His desire to continue the ambitious growth journey that, the business has been on for over 20 years, has been infectious.

It didn't take me long to realize that I wanted to work for one of the most well-known companies in the aroma chemical industry.



Wilfrid Gambade, the newly appointed CEO of Eternis

***P&F+*: Eternis has published its inaugural corporate sustainability report. Could you share some key highlights with us?**

WG: It's important to note that the report was issued just after I joined and had been in development for several months. Rajen has been a pioneer in sustainability for 15 years and has been driving the business to continually improve because it's the right thing to do! Moving from coal-fired boilers to biomass briquettes, putting water stewardship at the heart of design, insisting on zero water discharge from the Indian facilities and investing in a solar farm are just some of the activities that have taken place.

With sustainability already high on the agenda, Eternis' first corporate sustainability report was full of great progress. Our Ecovadis scores are gold and silver for the UK and India respectively and 65% of our electricity globally comes from renewable sources. We have also completed life cycle analysis (LCA) for more than 90% of our products.

This year we are working hard to develop a decarbonization plan aligned with the Science Based Target Initiative (SBTi) to deliver on our goal of a 30% reduction in our GHG intensity by 2030 and Net Zero by 2050. We are also engaging with our suppliers to help them on their own journey and therefore enable us to meet our customers ambitions. We are offering our customers lower carbon and circular carbon options for several of our products, using ISCC+ to ensure the integrity of the claims.



This year Eternis is working hard to develop a decarbonization plan aligned with the SBTi to meet the company's goal of a 30% reduction in its GHG intensity by 2030 and Net Zero by 2050.

Images courtesy of Eternis

At the same time, we continue to work on our internal processes to reduce our GHG emissions and we have some exciting innovations in development including burning waste hydrogen from our processes and working on biotech solutions to generate value from waste streams.



With sustainability already high on the agenda, Eternis' first corporate sustainability report was full of great progress.

***P&F+*: What are some of the current missions Eternis is currently undertaking?**

WG: I very quickly understood that Eternis has a very strong DNA, which has made the business so successful over the years. We are 'Eternally Agile and Forever Customer Centric' and this DNA will help drive the next phase of business growth. We will continue to invest and grow in our core market of Aroma chemicals whilst developing a second leg to our business in an adjacent market. We will build on the strong brand that has been developed over many years of customer centricity.

Our R&D and engineering teams are working on a new range of products that will be a diversification from the F&F industry but will be complementary. We have also committed more resources to our M&A agenda following our successful acquisitions.

Finally, with the increasing volatility in global supply chains, we believe Eternis is perfectly placed to support our customers and industry partners to diversify the risks by exploiting the agility and quality in our operations, further enhancing our position as an OEM manufacturer of choice.

With these activities, we aim to further accelerate our growth and the global footprint of the business.

***P&F+*: Eternis boasts being India's largest exporter of aroma chemicals. Does Eternis have plans to expand its production capacity or enter new markets in the coming years? What regions or sectors are you targeting for growth?**

WG: We are building an increasingly international organization with members of both sales and executive teams in France, Netherlands, Spain and India. We have recently appointed, Achim Daub formerly President of Scent and Care of Symrise in the US to our board of directors and a senior US based sales person will join in early 2025.

Our manufacturing footprint has also grown significantly over recent years. The purchase of Tennants Fine Chemicals Ltd. in 2021 added a UK factory and in 2023 we broke ground on our latest and largest facility in India, adding another 30 acres to our portfolio in Pune. We now have 4 manufacturing plants in India and 1 in the UK. We also have an R&D facility in India supporting our improvement & new product agenda.

We have a logistic hub in Singapore and FTZ-enabled warehouse facilities in New Jersey and the Netherlands to ensure we effectively and efficiently meet our customers' needs around the globe.

It is important that we keep this rhythm of expansion in the coming years. We will also continue our global reach and international development. Looking at the sustainability impact of a global business and lowering carbon foot-print we are looking at expanding our manufacturing footprint in regions like EMEA and North America

***P&F+*: What is Eternis' long-term vision for its ingredient portfolio, and how does it align with global trends in sustainability, consumer safety, and innovation?**

WG: There are five key growth drivers in our strategic vision.

1. The first is "excellence in our Core". To build a strong future, we can't forget what has got us where we are today: a ruthless focus on cost, continuous improvement, customer service, and agility.

2. Secondly, we are investing time in developing new products that are biodegradable and hitting sustainable criteria.

3. The third pillar is sustainability. We believe we are well advanced for a company of our size and we continue to push hard to improve and make meaningful reductions in our manufacturing emissions, whilst working with our suppliers to do the same. In parallel, we are identifying suppliers with lower carbon footprints to immediately impact our product carbon footprints.

4. The fourth pillar is India for the world, we believe India is ideally placed to solve supply chain issues that are impacted by geo-political issues

5. Finally, our M&A program is focused on targets that evolve our portfolio to meet the future needs of our customers.

With these focus areas, we truly believe we will meet the challenges of the future as we have managed to grow and thrive over the last 20 years.

Plant-based Technologies, Partnerships & Advancements Introduced in 2024

How companies are tackling flavor challenges in plant-based alternatives and responding to vegan trends across application categories.



BY JENNA TROYLI, Managing Editor, *Perfumer & Flavorist+*



The global vegan flavor market is anticipated to reach $11,078.2 million in 2024, and it is expected to exhibit steady growth with a CAGR of 5.2% until 2034.

Image by raquel at Adobe Stock

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The global vegan flavor market is anticipated to reach $11,078.2 million in 2024, and it is expected to exhibit steady growth with a CAGR of 5.2% until 2034, according to a recent report from Fact.MR[a]. Projections suggest that the market will reach a valuation of $18,324.3 million by 2034.

Key drivers of this growth include the heightened awareness of the health advantages associated with plant-based diets, as consumers perceive vegan flavors as healthier alternatives.

In the 2024 Leaders & Newsmakers issue[b], Jose Manuel Mateos, general manager, Scentium shared, "Technical challenges like improving the functionality and processability of butter, as well as mimicking its smell, taste, and mouthfeel, have been dealt with successfully. Today, a new generation of plant-based foods, such as meat and fish alternatives, is striving to improve its bite, texture, appearance, and consumer acceptance. As many studies reveal, perfecting taste and aroma is key to these products' success and consolidation."

P&F+ compiled a list of the recent headlines dedicated to the partnerships and ingredient technology launches within the plant-based market segment.

Ingredient Technology

In April 2024, Mane announced its mission to meet consumers' sensory expectations and versatile use of plant-based cheese alternatives with the development of additional flavor profiles based on popular types of cheese.

The comprehensive range created by Mane's R&D team is said to include mozzarella, Emmental, cheddar, gouda, blue cheese, goat cheese, raclette cheese, Italian cheese and Greek cheese, as well as cream cheese and melted cheese profiles.

Mouthfeel

In terms of mouthfeel in plant-based applications among others, T. Hasegawa created EmulsiTRACT[c] a proprietary fat mimetic technology that is designed to create a thick, creamy sensation by combining edible fats and oils with components that enhance other flavors.

[a] *https://www.factmr.com/report/vegan-flavor-market*

[b] *https://perfumerflavorist.texterity.com/perfumerflavorist/library/document/july_2024*

[c] EmulsiTRACT is a trademark of T. Hasegawa



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This year Mane announced its mission to meet consumers' sensory expectations and versatile use of plant-based cheese alternatives with the development of additional flavor profiles based on popular types of cheese.



This year Mane announced its mission to meet consumers' sensory expectations and versatile use of plant-based cheese alternatives with the development of additional flavor profiles based on popular types of cheese.

T. Hasegawa Co. Ltd. president and COO, Takao Umino, alongside T. Hasegawa USA, Inc., chief executive officer, Tom Damiano shared in the 2024 Leaders & Newsmakers issue, "This technology has a particle size close to traditional dairy milk, which provides functionality, thickness and richness to product lines where milk fat or fat replacers are often sought after to create a better-augmented texture. A significant feature of EmulsiTRACT is that this unique natural flavor modifier can limit the dependency on palm oil and other edible oils where supply chain challenges are still a concern. EmulsiTRACT is also very effective in the development of plant-based protein products – a category that has continued to grow each year. EmulsiTRACT is a versatile technology with a wide range of applications across many categories such as dairy, sauces/dressings, beverages, savory, alternative protein/dairy, baked goods and more."

ADM's TasteSpark[d] flavor modulation technology is also designed to pinpoint taste challenges. In the Leaders & Newsmakers issue, Marie Wright president of Creation, Design and Development and chief global flavorist, ADM explained, "Through the introduction of our proprietary solutions and technologies, including our TasteSpark flavor modulation technology, we play a pivotal role in optimizing taste challenges from functional applications. This includes supporting low- and no-sugar offerings by building back mouthfeel and texture. We also leverage this technology to mask off-notes in high-protein and high-fiber applications. We use this technology in combination with our wide range of naturally derived flavors to bring intrigue, freshness in taste, authenticity, decadence and delight to foods that meet the needs of every consumer, from better-for-you

[d]TasteSpark is a trademark of ADM

Image by gstockstudio at Adobe Stock

beverages to plant-based dairy and meat, condiments, baked goods and confectionery."

Partnerships

In March 2024, Agrumaria Reggina partnered with Policom, an innovator in plant-based product development, for the launch of Nutrition Venture. The collaboration is designed to introduce a "groundbreaking range of plant-based products from nuts" to meet the growing demand for sustainable and nutritious food and beverage options including plant-based pastes, all-in-one compounds and ingredients.

Through this initiative, Agrumaria Reggina will distribute Policom's B2B portfolio, geared toward producers with ingredients and solutions that facilitate the creation of effective plant-based applications.

While not technically a partnership, ADM's acquisition of Revela Foods, a Wisconsin-based flavor developer and manufacturer with a strong focus on cheese and dairy flavor tonalities, is designed to open a range of innovative possibilities to advance flavor capabilities in dairy, plant-based alternative dairy and savory product development.

Looking Ahead

As the plant-based segment continues to evolve, we're sure to see more solutions make their way to the market to address mouthfeel and off-notes yet to be addressed. Consumers are looking for healthy alternatives without compromise, and the flavor industry is working tirelessly to deliver.

p&f+





While sustainable solutions are among the top consumer demands in fabric care products, the sensorial and well-being benefits of fragrance cannot be overlooked.

Image by JenkoAtaman at Adobe Stock

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The Future of Fabric Care: How Purchasing Trends and Scent Tech are Shaping the Industry

Understand consumer purchasing drivers per peer-reviewed research as well as innovative scent and sustainability technology launches in the fabric care market.

The global laundry care market size[a] is estimated to grow by $21.6 billion from 2024-2028, according to Technavio. The market research platform reported that the laundry care market is responding to growing environmental concerns by promoting eco-friendly products. While sustainable solutions are among the top consumer demands in fabric care products, the sensorial and well-being benefits of fragrance cannot be overlooked.

This article outlines consumer purchasing drivers per peer-reviewed research as well as innovative scent and sustainability technology launches in the fabric care market.

Sustainability

In April 2024, Unilever's Dirt Is Good brand developed Wonder Wash—a detergent designed for a 15-minute cycle—using robotics and AI. According to Unilever, a change in consumer habits has meant that while clothing still picks up invisible grease and grime, 70%[b] of the clothing we wash now contains no visible stains. Instead, it is soiled with invisible sweat, dust and odor-causing body oils. As a result, 78%[c] of washing machine owners choose a cycle that lasts less than 30 minutes at least once a week. This, coupled with the rise of washing machines with cycle settings as short as 15 minutes, has created a new consumer need.

Unilever scientists have developed a blend of fast-acting ingredients, which activate as soon as the cycle begins. With 35 patents pending, the innovation is set to create a new category of laundry products.

Eduardo Campanella, business group president, of Unilever Home Care, said, "Until now, laundry detergents have not kept pace with changing consumer behaviors. By harnessing people's enthusiasm for short cycles for everyday stains, we're opening up the potential for a new category of short-cycle products within the laundry. This breakthrough in fast-acting cleaning will come to consumers around the world under Dirt Is Good, one of Unilever's 30 Power Brands—where we're



[a]*https://www.prnewswire.com/news-releases/laundry-care-market-size-is-set-to-grow-by-usd-21-6-billion-from-2024-2028--product-innovation-and-portfolio-extension-boost-the-market-technavio-302164731.html*

[b]Handbook for Cleaning/Decontamination of Surfaces, B.1.I Laundry Cleaning of Textiles (Elsevier, 2007)Purchasing Drivers

[c]Toluna H&A Quick Wash Behaviours UK, FR, BR (Nov 22); TK, TH, VN, ANZ (Jun 23), n=1500 per markets

really focusing our investment and bringing through bigger and better innovations. As part of Unilever Home Care's Clean Future Strategy, not only is this about delivering an unmissably superior laundry experience but also reducing environmental impact by encouraging the use of shorter, energy-saving cycles. Using over a century in detergent development, we've overcome a real technical challenge to offer outstanding performance even in the shortest timeframe and the difficult washing conditions of the short cycle."

Purchasing Drivers

In a peer-reviewed paper published in *Cognitive Research Principles and Implications*[d], Procter & Gamble (P&G) representatives as well as scholars alongside Fragrance Creators Association's president and CEO Farah K. Ahmed proposed three factors to explain why people are attracted to scented household products.

P&G outlined the three factors including functional benefits (mitigating malodor, covering product base odor, freshening air and fabrics), in-use experience benefits (signaling cleanliness, reinforcing efficacy, experiencing pleasant use of the product) and emotional benefits (increasing confidence, boosting mood, generating nostalgia).

Fragrance Technology Innovations

P&G's research is echoed by the following home care technology launches that have debuted in the last 11 months. One of which made its debut in May 2024, with Symrise's launch of detergent fragrances utilizing SuperBloom[e] and the water-based air freshener solution SymAqua[f]. SuperBloom is described as a unique fragrance collection providing an intense and long-lasting fragrance experience. SymAqua is said to be a natural and convenient fragrance solution for air fresheners.

René Hemeier VP of Fragrances Africa, Middle East & Turkey at Symrise shares, "[..] SuperBloom and SymAqua promise and build on [Symrise's] expectations to deliver high performing fragrances that elevate the end consumer's sensory experience in the realm of home care with primary focus on Fabric and Air Care. The performative, convenient, and easy-to-use technology highlights our commitment to identifying the needs of a very dynamic market environment and our dedication to provide[ing] innovative future-proof solutions for the same. Consumers in the [Middle East] Region love blooming, intense, and long-lasting fragrances and Symrise feels proud to deliver."

At the beginning of 2024, I took a trip to Orlando, Florida to attend my very first American Cleaning Institute Convention. I was one of 1,300 attendees who explored the latest technologies the cleaning industry

[d]*https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8972642/*

[e]SuperBloom is a registered trademarks of Symrise



Symrise's SuperBloom is described as a unique fragrance collection providing an intense and long-lasting fragrance experience while SymAqua is said to be a natural and convenient fragrance solution for air fresheners.



Unilever's Dirt Is Good brand developed Wonder Wash—a detergent designed for a 15-minute cycle—using robotics and artificial intelligence.

[f]SymAqua is a registered trademarks of Symrise

From top: images courtesy of Unilever; Symrise

has to offer. During my exploration, I visited two interactive exhibits hosted by dsm-firmenich and Givaudan, both showcasing innovative scent technologies as it relates to laundry care.

1. dsm-firmenich's Sensorium: I was walked through the multi-faceted immersive experience by perfumer Sabine de Tscharner who broke down the capabilities of dsm-firmenich's lineup of innovative fragrance technologies including HaloScent[g], PopScent[h] and explained the influence of the company's EcoScent Compass[i].

- PopScent is designed to utilize core-shell polymeric capsules containing fragrances that are deposited and retained on surfaces such as clothes, skin and hair during product use. Upon drying, the capsules are said to become brittle and break (due to naturally occurring physical forces, such as movement, rubbing, combing, etc.), releasing the fragrance. de Tscharner also discussed the reinvented PopScent range which features a "new generation" of freshness with PopScent Eco Max, utilizing the company's first capsule made exclusively with 100% biodegradable ingredients.
- In terms of Haloscent, I was able to experience the new generation of biodegradable profragrances that is said to deliver a new experience by releasing not only one but two perfume molecules over time, creating a halo effect designed to enable the entire fragrance to last longer for a more rounded olfactive experience.



Haloscent is described as a biodegradable profragrance that is said to deliver a new experience by releasing not only one but two perfume molecules over time, creating a halo effect designed to enable the entire fragrance to last longer for a more rounded olfactive experience.

2. Givaudan House: Throughout this exhibit, Givaudan highlighted recently debuted home care, personal care and laundry care ingredient technologies inspired by #CleanTok (A TikTok phrase that users search in order to find a list of videos for deep cleaning inspiration, tips, and before-and-after clips.)

The head screen in the Givaudan House read, "A clean space promotes mental clarity and well-being, backed by a portfolio of well-being technologies."

[g]HaloScent is a registered trademark of dsm-firmenich
[h]PopScent is a registered trademark of dsm-firmenich
[i]EcoScent Compass is a registered trademark of dsm-firmenich

Image courtesy of dsm-firmenich

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Also showcased was the recently debuted (January 2024), Scentaurus[j] Vanilla technology as the extension of its fragrance precursor collection. Scentaurus Vanilla is a non-coloring, elegant vanilla note, specifically designed for liquid detergents. Naturally activated by oxygen, this high-performing new precursor delivers a wave of freshness and a long-lasting powdery, creamy vanilla effect.

Scentaurus Vanilla is designed to increase creative possibilities and differentiation in the market with unique precursor combinations. These precursors are said to maximize a fragrance's long-lastingness across many applications, allowing for the exploration of new olfactive territories and delayed impact.

Givaudan's internal research discovered that 69% of consumers express their desire for fragrances to be long-lived because it "makes them feel fresh all day," Givaudan's range of fragrance precursors are designed to create memorable moments and evoke positive emotions, offering consumers an experience of everlasting freshness.

Scentaurus Vanilla is a biodegradable molecule according to OECD guidelines and was developed according to the Principles of Green Chemistry, using Givaudan's proprietary FiveCarbon Path[k] and a Safe-by-Design approach.

Givaudan perfumer Nadia Geyken said, "Scentaurus Vanilla reminds me of the sweet and wholesome smell of cocoa and vanilla! It is nostalgia's gentle dance! In a detergent fragrance, it brings softness and powdery facets without coloration - what a revolution!"

Looking Forward

Rafael Trujillo, R&D vice president, Victor Mills Society and master perfumer at P&G and a co-author in the above-mentioned peer-reviewed paper shared, "Scent and fragrance play a huge role in consumer purchasing behaviors. Perhaps, if we can learn more about what people prefer, and *why* they prefer those elements, we can create even better experiences and products that deliver superior performance."

p&f+

[j]Scentaurus is a trademark of Givaudan

[k]FiveCarbon Path is a trademark of Givaudan

Statement of Ownership, Management and Circulation
(Act of August 12, 1970); Section 3685, Title 39, United States Code)

1. *Publication title:* Perfumer & Flavorist+
2. *Publication number:* 444110
3. *Filing date:* October 2024
4. *Issue frequency:* Monthly
5. *Number of issues published annually:* 12
6. *Annual subscription price:* Free
7. *Complete mailing address of known office of publication:* 336 Gundersen Drive, Suite D, Carol Stream, IL 60188-2403
8. *Complete mailing address of headquarters or general business offices of publishers:* Same
9. *Full names and complete mailing addresses of Publisher, Editor and Managing Editor. Publisher:* Allured Business Media, 336 Gundersen Drive, Suite D, Carol Stream, IL 60188-2403; *Editor & Managing Editor:* Jenna Troyli, 336 Gundersen Drive, Suite D, Carol Stream, IL 60188-2403
10. *Owner:* Allured Business Media, 336 Gundersen Drive, Suite D, Carol Stream, IL 60188-2403; Janet Ludwig, Jeb Gleason-Allured, George Fox
11. *Known bondholders, mortgages and other security holders owning or holding 1 percent or more of the total amount of bonds, mortgages or other securities:* None
12. *Tax Status (For completion by nonprofit organizations authorized to mail at special rates). The purpose, function and nonprofit status of this organization and the exempt status for federal income tax purposes:* Not applicable
13. *Publication title:* Perfumer & Flavorist+ *Magazine*
14. *Issue date for circulation data below:* September 2024
15. Extent and nature of circulation

	Average number of copies each issue during preceding 12 months	Number of copies of single issue published nearest to filing date
A. *Total number of copies (net press run):*	2,516	2,384
B. *Paid and/or Requested circulation:*		
1. *Mailed outside county*	2,185	2,220
2. *Mailed inside county*	0	0
3. *Distribution outside the mail*	7	3
4. *Distribution by other classes mailed through the USPS*	0	0
C. *Total paid and/or requested distribution*	2,192	2,223
D. *Nonrequested distribution*		
1. *Outside county*	2	1
2. *Inside county*	0	0
3. *Distribution by other classes mailed through the USPS*	0	0
4. *Distribution outside the mail*	250	100
E. *Total nonrequested distribution*	252	101
F. *Total distribution*	2,444	2,324
G. *Copies not distributed*	73	60
H. *Total*	2,517	2,384
I. *Percent paid and/or requested circulation*	89.69%	95.65%

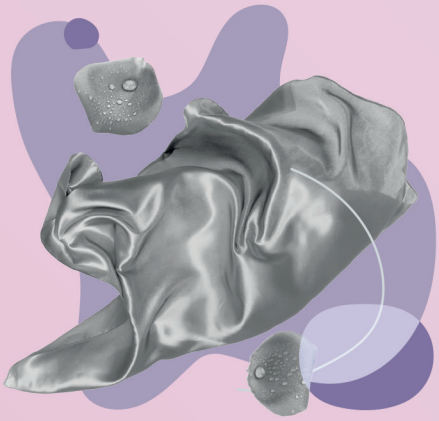
16. *Publication of this Statement of Ownership:* Will be printed in the November 2024 issue of this publication.
17. *Signature and title of editor, publisher, business manager or owner:* Samantha Attebery, Audience Development Manager
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Onestolide

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Home Care Scent Trends Shifting Toward Gourmand Notes & Natural Escapism

An industry expert weighs in on evolving consumer demands, the growth of AI, and emerging technologies in the home care segment.

Image courtesy of Aera

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Let's talk home care. In *Perfumer & Flavorist+* (*P&F+*)'s September 2024 issue, regular columnist Amy Marks-McGee penned "Forward Thinking: 4 Trends Leading Innovation in Air Care," discussing the influence of sustainability, gourmand scents and interactive marketing in air care. Wanting to build on these insights, *P&F+* connected with Sandra Barvaux, VP Fragrance and Brand Partnerships for Prolitec & Aera to discuss evolving consumer demands, the growth of AI, and emerging technologies in the home care segment.

What scent profiles are consumers currently gravitating toward in home care products?

Sandra Barvaux [SB]: As the seasons change, consumers are transitioning from fresh, summery fragrances to warm, cozy scents that embrace the comforting essence of autumn. Recently, Pumpkin Spice and similar scents have re-emerged in home fragrance offerings, signaling the end of summer and the return of woolly jumpers, roaring fires, and apple pie baking. In a few weeks, we'll shift to holiday favorites, filling our homes with the scents of majestic fir trees, peppermint bark, and holiday baking.

What are the trending ingredients or notes in home care fragrances this year?

SB: As consumers continue to seek joy in their everyday lives, we're seeing delicious scents appearing in many applications. Whether it's new vanilla twists or culinary-inspired ingredients like caramel, praline, tonka, or warm, rich woods, your home can be transformed into a palace of delights. Others seek experiences that evoke the outdoors, gravitating toward fragrances that offer a sense of natural escapism. Wild florals, berries, and cool aromatics are clearly present in the new offerings.

Are there any emerging ingredients or technologies that are shaping the future of home care fragrances?

SB: Consumers want to be reassured that the scents they choose for their homes will have the desired effect. They are increasingly seeking fragrances with performance benefits. Scents featuring advanced malodor control technology, which effectively eliminates unpleasant odors and leaves behind a clean, refreshing scent, are highly sought after by air care buyers. Aera's sales of the "Great for Pets" and "Good Riddance" scents, which utilize OdorOut[b] technology, exemplify the ongoing demand for such products.

[a]*https://perfumerflavorist.texterity.com/perfumerflavorist/library/item/september_2024/4212945/*

[b]OdorOut is a trademark of Aera



Sandra Barvaux, VP of Fragrance and Brand Partnerships for Prolitec & Aera.

On another front of the air care market, scents that promote wellness with fragrance technology to elicit desired emotions are gaining equal traction.

The trend towards sustainable and eco-friendly fragrances is continuing to gain significant momentum. Consumers are increasingly prioritizing products that are not only delightful but also environmentally responsible.

Can you touch on how Aera technologies have evolved to meet consumer needs/wants from this type of equipment?

SB: Consumers are seeking diffusers that provide clean, long-lasting scents. Aera's patented technology offers the most efficient and controllable way to fragrance your home. It disperses invisible fragrance molecules that are safe for everyone, including pets, and leave no residue. This technology uniquely releases all fragrance notes—top, middle, and base—simultaneously, rather than in their natural order of volatility that one will typically experience when scenting with more traditional slow-release fragrance technologies such as reeds, liquid electricals, aromatherapy diffusers. This ensures a truly long-lasting scent that remains consistent (no fading, no character change) over time. Additionally, the Aera diffuser comes with an App that allows you to set schedules to conserve fragrance, save money, and easily adjust settings or track the remaining fragrance levels in the capsule.

How do regional differences impact scent preferences in the home care segment?

SB: At a high level, we see consistent scent preferences across regions with the same families

Image courtesy of Aera



Aera collaborated with Apartment Therapy to create a collection of fragrances that draws from the architectural elegance synonymous with the brand and transports you to a distinct place, evoking its structure and ambiance.

over-indexing in terms of consumer choice (ex. floral and warmer type scents) and fresher types perform well across the board.

How are brands using scent to differentiate their home care products in a crowded market?

SB: Ambient scenting brands often differentiate themselves with the use of fragrance technologies offering augmented fragrance performance, brand partnerships & collaborations that align with their brand values and audiences and most uniquely their interpretation of the olfactory trends. As a recent example, Aera collaborated with Apartment Therapy, the leading independent home site, designed to inspire anyone to live a more beautiful and happy life at home with millions of followers. We created a limited edition of Mini Diffusers (Forest Green and Terracotta) and a collection of fragrances that draws from the architectural elegance synonymous with the brand and transports you to a distinct place, evoking its structure and ambiance: Brooklyn Brownstone, Tuscan Villa and English Cottage.

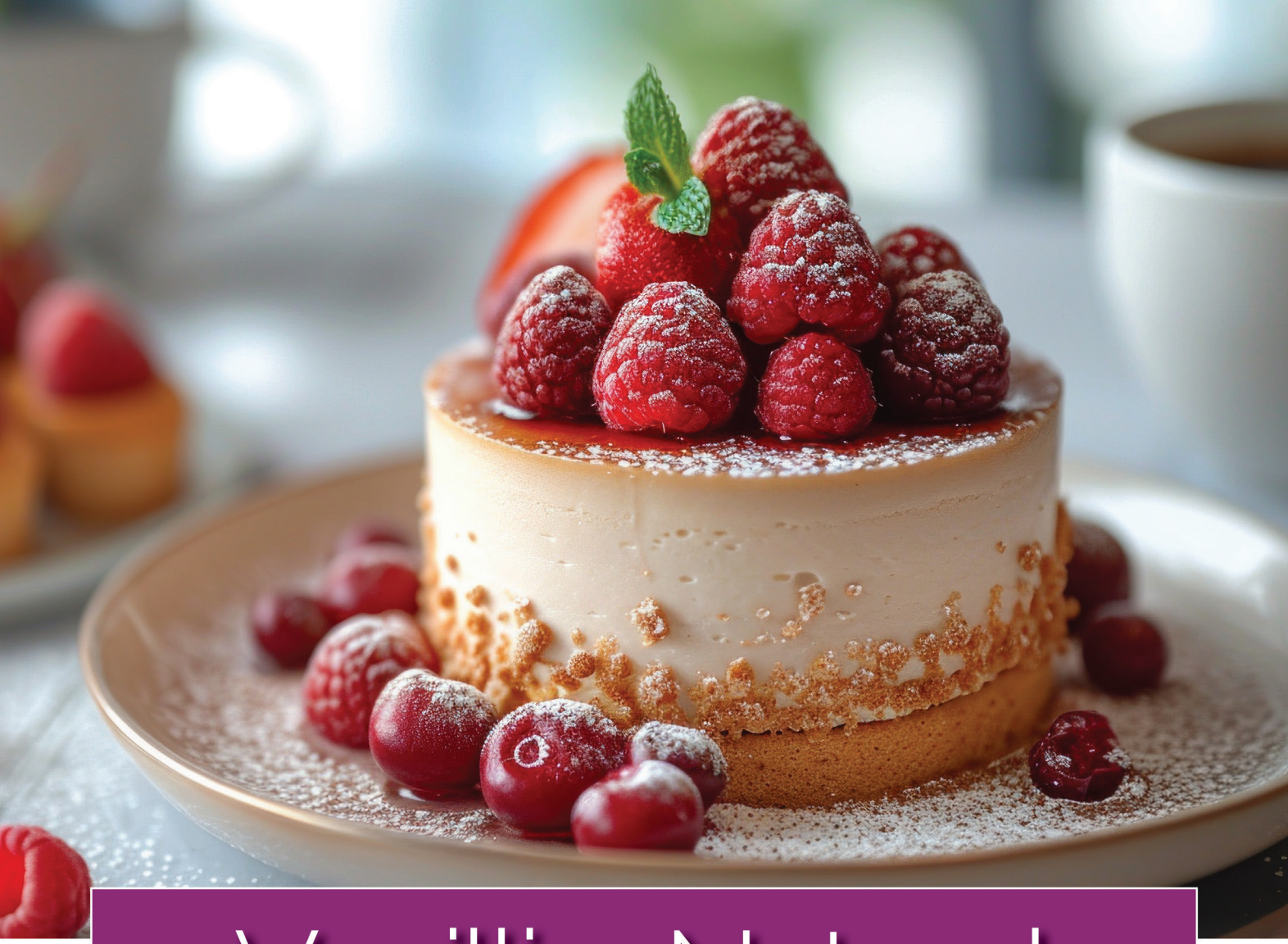
How do you see the home care scent market evolving in the next 5-10 years?

SB: I see the home care scent market evolve in multiple ways. The growth of artificial intelligence will facilitate the task for consumers in choosing fragrances that suit their tastes, enabling the creation of personalized scent profiles based on individual preferences and mood. The development of high-tech durable in-home diffusers will allow greater control over scent intensity and duration but also be further integrated in the smart home systems creating cohesive and responsive environments. As a counterbalance to the growing impact of technology use in our everyday lives and with the ability that scent has to evoke memories and create a sense of connection, its use will become more popular and help our emotional well-being, connecting ourselves with others and supporting our mental health. Prioritizing sustainability and transparency will continue to drive consumer trust and loyalty. This includes not only eco-friendly ingredients and packaging but also ethical sourcing and production practices.

Are there any under-the-radar trends or ingredients that you believe will soon become mainstream in-home care scents?

SB: As new technologies stemming from biotechnology or the stimulation of the creative power of perfumers leveraging the advancements of AI, I believe we will see the rise of new scent ingredients or combinations. This will enable brands such as Aera to bring intriguing and exciting new scent offerings to our customers. p&f+

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RIFM 58th Annual Meeting Notes:

Highlighting Achievements & Honoring the Late Dr. Robert Bedoukian

The evening event focused on RIFM's ground-breaking research and NGRA programs and highlighted the storied careers of scientists.



RIFM celebrated the publication of its peer-reviewed safety assessments covering over 2,000 fragrance-producing ingredients in the scientific literature.

Images courtesy of RIFM

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The Research Institute for Fragrance Materials (RIFM) 58th Annual Meeting, held in mid-September 2024, drew fragrance safety stakeholders worldwide. The evening event focused on the Institute's groundbreaking research and next-generation risk assessment (NGRA) programs and highlighted the storied careers of scientists whose legacies will drive future innovation for years to come.

As RIFM nears completion of its sixth decade of performing the science supporting the safe use of fragrances the Institute has a wealth of stories to share and many recent successes to celebrate. One of those stories is the enormous impact of the life and work of the late Robert H. Bedoukian, Ph.D., who passed away earlier this month surrounded by his loving family.

Dr. Robert H. Bedoukian Excellence in Science Award

Robert Bedoukian led Bedoukian Research from 1986 to 2024, where he championed innovation and the science supporting the safe use of fragrance. During the event, RIFM Board Chair Robert Weinstein, Ph.D., passionately described Robet Bedoukian's enduring legacy and announced that beginning next year, the RIFM Board of Directors Excellence in Science Award will be renamed the Dr. Robert H. Bedoukian Excellence in Science Award to honor the late Robert Bedoukian's tireless commitment to human health and environmental protection, and RIFM's mission to build international trust in and acceptance of the safe use of fragrance materials.

RIFM president Anne Marie Api, Ph.D., Fellow ATS, reflected on the impact of Robert Bedoukian's life's work, "Over the last decade, Bob collaborated with RIFM on the investigation and development of numerous novel risk assessment techniques," she explained. "His many contributions include critical work on the Dermal Sensitization Threshold (DST) and the dermal sensitization Quantitative Risk Assessment (QRA) for fragrance ingredients, as well as probabilistic modeling techniques for consumer exposure, and he was the lead author of several ground-breaking peer-reviewed research papers that continue to inform how we evaluate fragrance safety.

"The Dr. Robert H. Bedoukian Excellence in Science Award is a fitting tribute to Dr. Bedoukian's tireless commitment to human health and environmental protection, and we hope the Award may play a role in ensuring his devotion to stewardship and the highest scientific standards will be remembered and honored by future generations," Api concluded.



Beginning 2025, the RIFM Board of Directors Excellence in Science Award will be renamed the Dr. Robert H. Bedoukian Excellence in Science Award to honor the late Robert Bedoukian.

2024 Excellence in Science Award Recipient

In addition to Robert Bedoukian's legacy, the event honored Robert James Safford, BSc, MPhil, who devoted more than half a century to the science supporting the safe use of fragrance ingredients, with the 2024 Excellence in Science Award. After receiving the award, Safford gave an inspiring presentation on some of his collaborative work with RIFM that defined how scientists help to ensure the safe enjoyment of fragrance without risk for skin sensitization.

RIFM Milestones

The evening further highlighted RIFM's longstanding leadership in the science supporting the safe use of fragrance as Api encouraged all to help the Institute celebrate a major milestone—just days before the event, RIFM had published peer-reviewed safety assessments covering over 2,000 fragrance-producing ingredients in the scientific literature. (The approximately 3,000 fragrance-producing ingredients in current use have all been evaluated; those not yet published await peer-review.)

"In addition to its 2,000th assessment," Api explained, "RIFM published several papers showing potential for cutting-edge animal-free new approach methods (NAMs) and one of its most important studies ever: the 'low-exposure' article, which provides scientific evidence for just how low our exposure to fragrance across all products truly is. The lead author, RIFM senior scientist Isabelle Lee, Ph.D., heads our Skin Sensitization research and safety assessment efforts."

Api presented Lee with the 2024 RIFM President's Award for Lee's outstanding work on the low-exposure article and the significant communications efforts to help ensure its message reached the broader scientific community and fragrance safety stakeholders worldwide.

Roundtable Discussion

Lee was one of half a dozen RIFM staff and scientists who participated in two roundtable discussions during the event named, "What We Know About Exposure – and Why It Matters," featuring Lee with principal scientist and photo safety lead Gretchen Ritacco, MS, and Marketing & Communications specialist Olive Chon, and "The Real-World Value of RIFM Data," featuring director of Scientific Operations Danielle Botelho, Ph.D., director of Technical Information and Services Christen Sachse-Vasquez, and principal scientist and environmental lead Aurelia Lapczynski.



Robert James Safford, BSc, MPhil, was honored with the 2024 Excellence in Science Award.



L to R: The "What We Know About Exposure – and Why It Matters" session featured Marketing & Communications specialist Olive Chon, principal scientist and photo safety lead Gretchen Ritacco, MS, senior scientist Isabelle Lee, Ph.D., and president Anne Marie Api, Ph.D.

"The roundtable discussions allowed some of RIFM's staff to provide direct insights into the critical and ground-breaking work they perform daily to deliver on RIFM's mission to build international trust in and acceptance of the safe use of fragrance materials. It was also an opportunity for attendees to ask questions directly to our science and other staff members, which led to generative conversations that spilled over into the rest of the evening," Api concluded.

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- NATURAL PHYTOL
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