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wine, fruity*

FEMA 2874

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raspberry*

FEMA 2594

Ethyl Cinnamate

*basalmlc, berry, spicy,
sweet, cinnamon, floral*

FEMA 2430

2,6-Dimethyl-5-Heptenal

*melon, watermelon rind,
cucumber, waxy, floral*

FEMA 2389

Farnesol

woody, floral, plum

FEMA 2478

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The Natural Ingredients Designer

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ON THE COVER: Image by Anna Shvets at Pexels

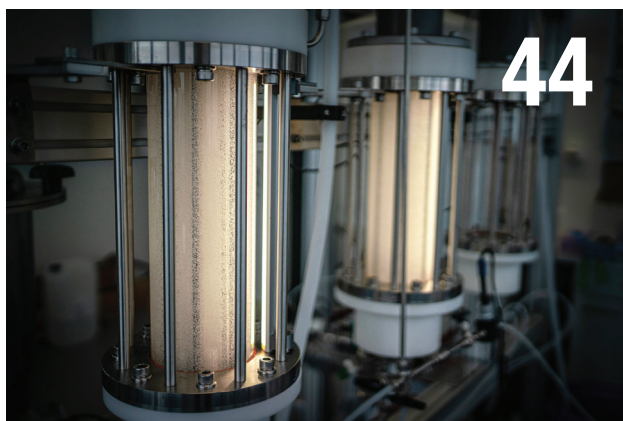
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Perfumer & Flavorist+ (ISSN 0272-2666) is published monthly by Allured Business Media - 336 Gundersen Drive, Suite D, Carol Stream, IL 60188-2403. Periodicals Postage paid at Carol Stream, IL and additional mailing offices.

POSTMASTER: Send address changes to PERFUMER & FLAVORIST+, Attn: Audience Development, 336 Gundersen Drive, Suite D, Carol Stream, IL 60188-2403. Give both the new and old addresses. Allow two months for change to become effective.

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Summer's Last Sip: What the Taste Trends Taught Us

Every launch seems designed to spark a conversation, a social post or a friendly dare as much as satisfy hunger.

By the time you're reading this, the sunscreen has been packed away in the northern hemisphere, the last roadside lemonade stand has closed and pumpkin has inevitably started elbowing its way onto every menu. But before we let summer 2026 disappear into the rearview mirror, it's worth asking: what did the season really tell us about where flavor is headed?

This year wasn't just about refreshing citrus or tropical escapes. Summer became a playground for sensory contrast.

First, brands leaned hard into heat-meets-refreshment, nostalgia wrapped in modern formats and collaborations that transformed familiar flavors into entirely new experiences. Blue Moon dared consumers to bite into a ghost pepper-coated orange before washing it down with beer. Pringles turned Buffalo Wild Wings' signature sauces into stackable crisps.

Celsius, meanwhile, bottled (technically, *canned*) the Amalfi Coast with a limoncello-inspired energy drink, while Rita's gave the Shirley Temple a pop-culture revival. Even Krispy Kreme proved that lemon bars, key lime pie, watermelon lemonade and cannoli can comfortably coexist in a single seasonal lineup.

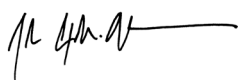
Look closer and a few themes emerge, it's clear that flavor is becoming increasingly experiential. Consumers don't just want "spicy"—they want the challenge. They don't just want lemon—they want limoncello, Amalfi and aperitivo culture. They don't just want indulgence—they want recognizable desserts reimagined across entirely different product categories.

Every launch seems designed to spark a conversation, a social post or a friendly dare as much as satisfy hunger.

For flavor chemists and product developers, that's an exciting challenge. Our work is no longer confined to building great taste. Increasingly, we're creating emotional cues, cultural references and multisensory moments that connect products to occasions, communities and memories. The flavor system is becoming part of the entertainment.

As the industry shifts toward football season, holiday innovation and the next wave of limited-time offerings, summer leaves behind an important reminder: consumers are rewarding boldness, contrast and creativity. The next breakout flavor may not come from discovering an entirely new ingredient—it may come from combining familiar tastes in unexpected ways or borrowing inspiration from another category altogether.

Summer may be over, but the ideas it generated will persist.




Consumers don't just want "spicy"—they want the challenge.



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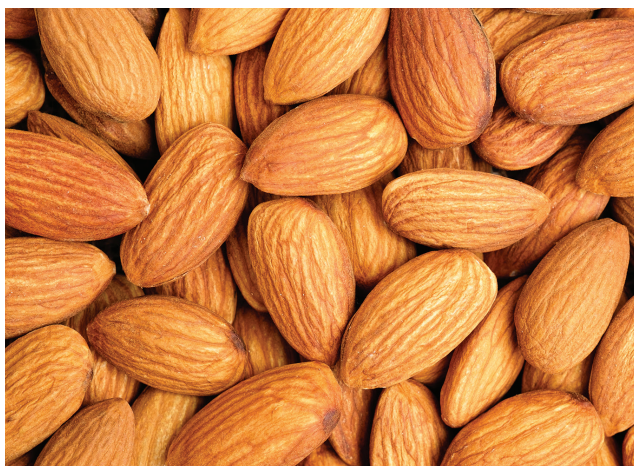
The organoleptic palette crafted for our flavourists is boundless. From universal tastes to those of a single land, we offer gustatory journeys to delight every palate. These sensory experiences spring from a blend of unexpected recipes and innovative solutions delivering authentic, unforgettable tastes, each a symphony of flavour, a feast for the senses.

Camille & Charlotte are the winners of the Capture What Moves photo competition held by MANE.

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Ingredients



Almond Spark: Turning Almond By-Products into Authentic, Creamy Aroma

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<https://www.linkedin.com/company/agrumaria/>

Almond Spark derives from by-products of plant-based almond beverage production. Produced using cold extraction to preserve the natural profile and all volatiles, this extract delivers authentic almond notes with a rich aromatic bouquet including sweet, creamy, and subtly roasted nuances.



Cocoa Hexenal with Deep Chocolate and Roasted Nut Notes

Avant Organics

www.avantorganics.com

Avant Organics presents cocoa hexenal (FEMA# 3199) for flavor and fragrance applications requiring rich cocoa, chocolate, aldehydic and nutty character. Cocoa hexenal delivers a distinctive gourmand profile with the warm impression of creamy cocoa, dark chocolate and roasted nut nuances. Its strong, diffusive character makes it well suited for use in chocolate, confectionery, coffee, dairy and other indulgent flavor systems, as well as select fragrance applications where a cocoa or gourmand facet is desired. This ingredient can help enhance chocolate depth, add richness to coffee profiles, and contribute creamy, sweet and nutty tonalities to finished creations. Avant Organics provides this material as EU natural, kosher, non-GMO and halal. For a free sample, please email info@avantorganics.com.



Elixiris Blends Orris and Cedarwood in a New Co-Distilled Signature

Mane

<https://www.mane.com/>

Obtained via an innovative process of co-distillation of orris roots and cedarwood, Elixiris reveals a unique profile blending soft, powdery floral notes and delicate violet nuances with a dry woody structure and ambery undertones. Distinctive and versatile, Elixiris brings balance, structure and longevity to your creations.



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Floralox Gives Rose a Modern Metallic Twist

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<https://www.symrise.com/scent-and-care/aroma-molecules/perfumery-ingredients/#Floralox>

Floralox introduces a refined rose signature with a metallic edge.

It enhances floral and fruity notes, recreating the rose oxide profile while boosting diffusion.

Rosy, green facets of rose, geranium and parsley make Floralox a modern essential. Recommended use levels range from traces up to 0.5%.



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Axxence USA

www.axxence.com

Natural Gamma Hexalactone (FEMA #2556, CAS #695-06-7) is valued for its smooth coconut, creamy, buttery and delicate peach character, making it a key ingredient in rich, indulgent flavor profiles. It enhances dairy, tropical fruit and confectionery applications with natural sweetness, soft mouthfeel and rounded complexity, delivering authentic creaminess and a lingering, velvety finish.



Blackcurrant in High Definition

Penta Fine Ingredients

<https://www.pentafineingredients.com/>

Natural 4-methoxy-2-methyl-2-butanethiol (FEMA# 3785; CAS# 94087-83-9) from Penta Fine Ingredients occurs naturally in blackcurrant (cassis) and olive oil. It delivers an intense blackcurrant character with sulfurous, floral rose, citrus, and melon nuances in extreme dilution. The flavor profile features blackcurrant, tropical fruit, waxy, and fatty notes. Recommended applications include cassis and blackcurrant flavors, tropical fruit profiles, sauvignon blanc-style wine flavors, and berry-forward beverages at ppb levels. In fragrance, it is well suited for tropical floral accords, wine-inspired creations, and naturalistic berry compositions.



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Cohere Beauty

<https://www.coherebeauty.com/blog/fragrance-at-a-crossroads-how-smart-brands-are-navigating-modern-fragrance-manufacturing/>

At Cohere Beauty, we understand every bottle is different, but our fill lines are built to handle it. We swap out grips, guides, and nozzles to match each bottle's shape and size, so whether it's round, square, or something totally unique, it gets filled accurately and moves right down the line. For truly unusual shapes like asymmetric bottles, sculptural designs, and white glove runs, lines often fall back to semi-manual fill-and-cap stations.



We Fill Weird.

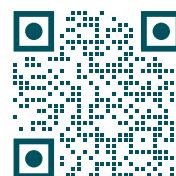
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SCAN TO LEARN MORE

FROM REJECTION TO RETAIL: HOW JAMIE Y. TAN TURNED PERSISTENCE INTO PERFUMERY

“Your individuality is what ultimately shapes your signature as a perfumer.”

Curiosity sparked by her mother’s miniature fragrance collection set Jamie Y. Tan, perfumer at Agilex Fragrances, on an unconventional career path. After overcoming repeated rejections to break into an industry with few visible entry points in Singapore, Tan worked her way from laboratory technician to perfumer, ultimately seeing her creations reach global retail shelves. In this Q&A, she discusses perseverance, the detective work behind fragrance development, balancing artistic vision with technical constraints, and why curiosity remains a perfumer’s most valuable raw material.

What led you to the fragrance industry?

Tan: My curiosity began with my mother’s miniature fragrance collection. I was fascinated by how a single scent could evoke memories and emotions. That early intrigue grew into a deeper fascination with the mystery of smell.

After many job applications and rejections, I eventually secured a position as a laboratory technician in the fragrance industry. From there, I gradually worked my way up to becoming a perfumer.

My time as a lab technician was pivotal—it was where my inquisitiveness truly took shape. I’m extremely grateful for the chance to learn from perfumers, hear their experiences, and understand their creative processes. Their stories inspired me and fueled my determination to one day stand where they stood.

Can you share a defining moment or breakthrough in your career as a perfumer?

Tan: One defining moment in my career was seeing a fragrance I had worked on for years finally reach the shelves of major retailers. In this industry, it’s common to pour countless hours into a creation without knowing when—or if—it will make it to market. So, witnessing



“[T]he beauty of being a perfumer lies in the ability to dream freely and create without stifling that artistic spirit,” says Agilex perfumer Jamie Y. Tan. “But balancing creativity with technical limitations—like regulatory restrictions and cost constraints—is an essential part of the craft.”

the culmination of that effort was both surreal and deeply rewarding.

Having the opportunity to contribute to a global brand still humbles me. It reminds me to stay grounded, grateful, and committed to my craft. Even now, I still catch myself having “pinch-me” moments.

What were some of the biggest challenges you faced when entering the perfume industry, and how did you overcome them?

Tan: One of the biggest challenges I faced entering the perfume industry was simply finding my way into it.

In Singapore, the fragrance field is not well-known, let alone a common career path. Unless you already know someone in the industry, the chances of even discovering these opportunities—much less securing one—are incredibly slim.

I faced a lot of rejection early on, but I learned that many “no’s” eventually lead to the one “yes” that matters. What helped me push through was staying persistent, trusting the process, and giving myself grace. I held on to the belief that with the right timing, the right opportunity would come.

Can you describe a time when a fragrance formulation didn’t turn out as expected? How did you address the issue?

Tan: It happens more often than we’d like to admit. In a fast-paced world constantly chasing new innovations, trends, and base formulations—often without full communication from clients—fragrance development can become quite challenging. When a formulation doesn’t turn out as expected, the first step is always to gather more clarity.

We work closely with our sales team to better understand the client’s needs, and partner with our technical team to troubleshoot together. From there, it becomes a process of careful adjustments, trials, and plenty of trial-and-error. It sometimes feels like being part of the CIA—piecing together clues until the mystery finally unravels. And when everything aligns and the fragrance works? It’s an absolute cloud-nine moment.

How do you find the right balance between artistic expression and the technical limitations of perfume formulation?

Tan: For me, the beauty of being a perfumer lies in the ability to dream freely and create without stifling that artistic spirit. But balancing creativity with technical limitations—like regulatory restrictions and cost constraints—is an essential part of the craft.

The key is truly knowing your raw material palette: how each ingredient behaves, how it interacts with others, and how to achieve the desired effect within realistic boundaries. When you understand your materials deeply, you can stay imaginative while still formulating responsibly and effectively.

Are there specific skills or knowledge areas you believe are crucial for a perfumer to master?

Tan: The ability to smell with precision and distinguish subtle nuances between different materials is vital for any perfumer. But beyond that, curiosity and courage play a big role. Being bold enough to explore unfamiliar raw materials and experiment with unexpected combinations can lead to surprising and beautiful results. Above all, staying true to your own creative identity is essential.

Your individuality is what ultimately shapes your signature as a perfumer. I believe patience and persistence goes a long way. I’ll admit—I’m still working on my patience. Thankfully, this field gives me plenty of practice. 

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alpha-Terpineol is not essential in most cheese flavors. The exception is Parmesan cheese profiles, where a modest addition—around 100 ppm—adds authenticity.



■ BY JOHN WRIGHT
johnwrightflavorist@gmail.com

Beyond Lilac and Pine: Unlocking Alpha-Terpineol's Hidden Power Across Flavor Categories

Often dismissed as simply “floral and pine,” high-purity alpha-terpineol is actually a precision flavor tool.

Describing the profile of alpha-terpineol (para-menth-1-en-8-ol, FEMA# 3045, CAS# 98-55-5, COE# 62, DG Sante# 02.014) as a combination of floral lilac and pine is more than a little misleading. Purity is key. The pure chemical is predominantly floral, with the less attractive pine note essentially minimized. In many (but not all) flavor profiles the extra cost of high purity is money well spent because the pine note in crude raw materials clashes with the overall profile and limits the acceptable dose rate.

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

Berry Flavor Booster

- **Blackberry:** Modest levels, around 100 ppm, of alpha-terpineol help to build out the profile of blackberry flavors and add authenticity.
- **Blackcurrant:** The effect of this raw material in blackcurrant flavors is very similar, but the level of addition can be a little higher, around 200 ppm.
- **Blueberry:** Blueberry flavors are a very different proposition. Levels of alpha-terpineol can range up to 2,000 ppm. Similar levels work in the closely related.
- **Cloudberry:** Cloudberry is an interesting and unusual fruit. alpha-Terpeneol has a subtle effect at around 50 ppm.
- **Cranberry, fresh:** The contribution of this raw material is much more central to cranberry flavors, especially in profiles accentuating freshness. Five hundred ppm is a good place to start.
- **Lingonberry:** Here the effect is to add a deep floral note to the “center” of lingonberry flavors. Levels vary, but eighty ppm is typical.
- **Raspberry:** Different levels of addition can be used successfully in raspberry flavors, but should generally range from fifty to 100 ppm.
- **Strawberry:** Similar levels work well in strawberry flavors, with higher additions working best in the, floral oriented, wild strawberry category.



Cloudberry is an interesting and unusual fruit. alpha-Terpeneol has a subtle effect at around 50 ppm.

The Fruit Flavor Fix

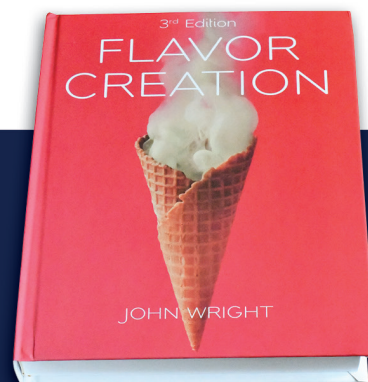
- **Acerola:** One hundred ppm of alpha-terpineol enhances acerola flavors and noticeably boosts realism.
- **Apricot, fresh:** The deep floral note of alpha-terpineol works well in tandem with linalool, especially in flavors aiming for a fresh profile. Five hundred ppm works well.

- **Cherimoya:** The effect of this ingredient in cherimoya flavors is subtle, with an ideal level of addition in the region of 100 ppm.
- **Guava:** alpha-Terpeneol makes an important floral contribution to guava flavors. One thousand ppm and more can be very effective.
- **Kiwi:** The delicate character of kiwi flavors is deepened by the soft floral impact of alpha-terpineol. One hundred ppm is ideal.
- **Kumquat:** High levels of this raw material, even up to 2,000 ppm, play a central role in the profile of kumquat flavors.

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CATCHING UP: FEMA'S INTERIM GRAS 32 AND INTERIM GRAS 33 FLAVORING SUBSTANCE LISTS

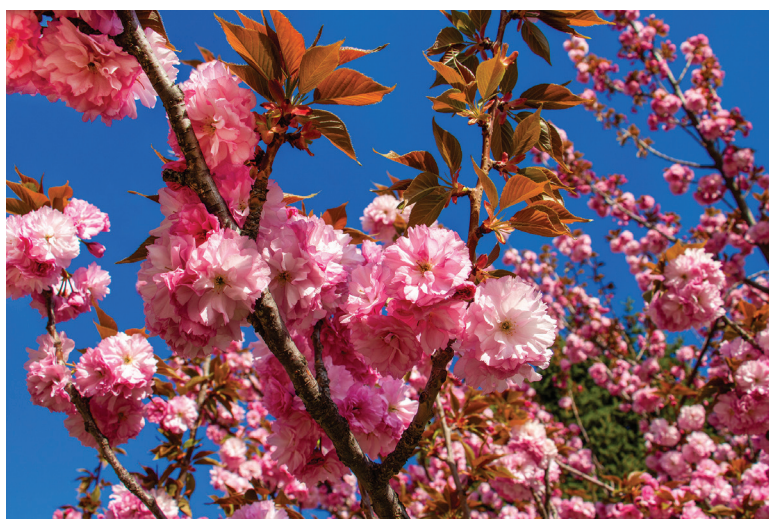
The FEMA GRAS program serves as an important scientific resource for flavor manufacturers, food companies and regulators by providing independent expert evaluations of flavoring substances based on publicly available safety data.

The Flavor and Extract Manufacturers Association (FEMA) has published its Interim GRAS 32 and Interim GRAS 33 lists^a, providing the latest updates to its evaluation of flavoring substances that are considered “generally recognized as safe” (GRAS) for their intended use in food flavorings.

The interim lists include flavor ingredients reviewed by the FEMA Expert Panel under the GRAS program established in accordance with the 1958 Food Additives Amendment to the Federal Food, Drug and Cosmetic Act. The substances will be incorporated into the association's 32nd and 33rd GRAS publications, which document the panel's ongoing scientific assessments of flavoring ingredients used by the food industry.

Interim GRAS 32 (dated June 2026) also includes several revisions to previous GRAS publications. The FEMA Expert Panel removed propyl paraben (FEMA 2951) and 2-phenylphenol (FEMA 3959) from the FEMA GRAS list after determining there was little evidence that either substance is used for the technical effect of flavoring. In addition, the publication updates botanical identities and nomenclature for several existing FEMA GRAS ingredients. The scope of FEMA 2046 (Almonds Bitter Oil) was expanded to include *Prunus armeniaca* and *Prunus persica* in addition to *Prunus amygdalus* var. *amara*. FEMA 3089 was renamed from Turpentine steam distilled to Pine resin oil, while the botanical scope of FEMA 3105 (Vanilla extract) and FEMA 3106 (Vanilla oleoresin) was expanded to include *Vanilla pompona* alongside *V. planifolia* and *V. tahitensis*.

Additional nomenclature and identity updates include renaming FEMA 4878 from *Cordyceps sinensis* fermentation product to mushroom mycelia fermentation product and changing FEMA 4949 from *Corynebacterium ammoniagenes* fermentation product to *Corynebacterium stationis* cell free fermentation broth, accompanied by an updated compositional description. FEMA 4964 also received a revised identity



FEMA# 5044 sakura flower extract (*Prunus serrulata* flower extract; *Cerasus serrulata* flower extract) is among the materials included in FEMA's Interim GRAS 32 list.

description for its *Corynebacterium glutamicum* cell free fermentation product. Together, the updates reflect FEMA's ongoing efforts to maintain accurate ingredient identities and ensure the GRAS inventory remains aligned with current scientific understanding and commercial use.

The interim lists include flavor ingredients that have been reviewed by the FEMA Expert Panel under the GRAS program established in accordance with the 1958 Food Additives Amendment to the Federal Food, Drug and Cosmetic Act. The substances included will be incorporated into the association's 32nd and 33rd GRAS publications, which document the panel's ongoing scientific assessments of flavoring ingredients used by the food industry.

The FEMA GRAS program serves as an important scientific resource for flavor manufacturers, food companies and regulators by providing independent expert evaluations of flavoring substances based on publicly available safety data. The release of the interim lists reflects the program's continuing efforts to update the industry's inventory of flavor ingredients recognized as safe under their intended conditions of use.

^a<https://www.femaflavor.org/fema-gras>

Materials Featured on Interim GRAS 32 (dated June 2026)

*NOTE: Associated numbers and primary names in bold;
synonyms italicized.*

5030 4-(*l*-Menthoxyl)-2-methyl-2-butanol

5035 **Brazzein**

5038 (±)-Hexahydro-6a,7-dimethyl-2,5-methano-2H-cyclopenta[b]furan

5040 *Eucalyptus citriodora* oil

5042 Heat-treated Glucosylated Steviol Glycosides 35% with Steviol Glycosides 10%

5044 **Sakura flower extract**

- *Prunus serrulata* flower extract
- *Cerasus serrulata* flower extract

5045 **Sakura flower distillate**

- *Prunus serrulata* flower distillate
- *Cerasus serrulata* flower distillate

5046 **Sakura leaf distillate**

- *Oshima zakura* cherry leaf distillate
- *Prunus speciosa* leaf distillate
- *Cerasus speciosa* leaf distillate

5047 **Sansho pepper extract Japanese pepper extract**

- *Chopinamu* extract
- *Fagara piperita* L. extract
- *Sanshou* pepper extract
- *Sansyo* pepper extract
- *Kona-zanshō* extract

5048 **Sansho pepper distillate Japanese pepper distillate**

- *Chopinamu* distillate
- *Fagara piperita* L. distillate
- *Sanshou* pepper distillate
- *Sansyo* pepper distillate
- *Kona-zanshō* distillate

5050 1-(*tert*-Butyl)-N-(4-methoxyphenyl)cyclohexane-1-carboxamide

5054 **Rosemary extract, rosmarinic acid 80%**

5060 **Rosemary extract, rosmarinic acid 15%**

5061 **Juniperberry oil terpeneless** (*Juniperus communis* L.)

5062 **Celery seed oleoresin** (*Apium graveolens* L.)

5063 **Cherry Bark Wild Distillate** (*Prunus serotina* Ehrh.)

5064 **Cumin oleoresin** (*Cuminum cyminum* L.)

5066 4-(4-Methylpent-3-en-1-yl)thiophen-2(5H)-one

5067 **alpha-Bisabolene**

- (E)-alpha-bisabolene

- trans-alpha-bisabolene

- 1-Methyl-4-[(2E)-6-methyl-2,5-heptadien-2-yl]cyclohexene

- 4-(1,5-Dimethyl-1,4-hexadienyl)-1-methyl cyclohexene

- 6-Methyl-2-(4-methylcyclohex-3-enyl)hept-2,5-diene

- Cyclohexene, 4-(1,5-dimethyl-1,4-hexadienyl)-1-methyl

- Cyclohexene, 4-[(1E)-1,5-dimethyl-1,4-hexadien-1-yl]-1-methyl

5069 **Rebaudioside M 70%**

5072 **Heat-treated Glucosylated Steviol Glycosides 15% with Steviol Glycosides 5%**

5073 **Corynebacterium glutamicum Fermentation product**

5074 **Enzymatically modified rebaudioside A 85%**

5077 **alpha-Humulene**

- (±)-α-Humulene

5081 **Corynebacterium glutamicum Fermentation savory product**

5082 **Corynebacterium stationis Fermentation product**

Materials Featured on Interim GRAS 33 (dated May 2026)

*NOTE: Associated numbers and primary names in bold;
synonyms italicized.*

5088 **beta-Sinensal fermentation product**

5089 **Fermented tomato powder**

5090 **Mortierella alpina biomass**

5093 **Heat-treated glucosylated steviol glycosides 18% with steviol glycosides 6%**

5094 **Mixture of fatty acid ethyl esters**

5096 **2S-Hesperidin**

5099 **Polysorbate 65**

- Tween 65
- Sorbimacrogol tristearate
- Sorbitan, trioctadecanoate, poly(oxy-1,2-ethanediyl) derivatives
- Sorbitan, tristearate, polyoxyethylene derivatives
- Polyoxyethylene sorbitan tristearate
- Polyoxyethylene 1,4-sorbitan-tristearate
- PEG-20 sorbitan tristearate

5100 **Stevia rebaudiana extract, rebaudioside A 75%**

5102 **Glucosyl naringin Lemna gibba extract**

- Gibbous duckweed extract
- Inflated duckweed extract

- **Lime:** Lime flavors do not require the same high level of alpha-terpineol purity because they naturally embrace pine notes. Levels of addition vary dramatically, from 10,000 ppm in flavors with a distilled lime oil profile down to a tenth of that level in fresh lime fruit profile flavors.
- **Lychee:** Lychee flavors have a dominant rose note. A hint, as little as 20 ppm, of alpha-terpineol adds subtle, but useful, complexity.
- **Nectarine:** Nectarine flavors share some common features with peach and apricot flavors. In this context the importance of linalool links to a useful addition of alpha-terpineol in the region of 500 ppm.
- **Peach:** Linalool plays an important part again, but rather less than in apricot flavors. The ideal level of addition of alpha-terpineol is around 200 ppm.
- **Pear:** Adding a floral hint to pear flavors can be achieved very effectively using the formate esters of a number of rose tinted terpene alcohols. This effect can be nicely enhanced by 50 ppm of alpha-terpineol.
- **Plum:** Plum flavors can make good use of alpha-terpineol. Levels vary, but 500 ppm works well.
- **Pomegranate:** Pomegranate is a subtle, but extremely attractive flavor. It blends equally well with sweet and savory partners. Fifty ppm of this ingredient adds a faint floral aspect to the profile.
- **Soursop:** alpha-Terpineol rounds out soursop flavors. One hundred ppm is effective and higher levels can give interesting, if more abstract, effects.



One hundred ppm of alpha-terpineol enhances acerola flavors and noticeably boosts realism.

Bringing Floral Flavors Into Full Bloom

- **Elderflower:** The entire floral category emphasizes the need for the purest grade of alpha-terpineol available. The impact of a gorgeous lilac note in the overall profile of elderflower is important. Levels vary, but 100 ppm is a good place to start.
- **Kewra:** Kewra flavors are much more aggressive than elderflower flavors and the ideal level of addition of alpha-terpineol at 500 ppm reflects this.
- **Lavender:** Linalol and linalyl acetate define the powerful floral impact of lavender flavors. Three hundred ppm of alpha-terpineol adds depth and complexity.
- **Magnolia:** Magnolia flavors have experienced a rise in popularity in recent years. Five hundred ppm of this raw material adds realism.



The entire floral category emphasizes the need for the purest grade of alpha-terpineol available. The impact of a gorgeous lilac note in the overall profile of elderflower is important. Levels vary, but 100 ppm is a good place to start.

- **Neroli:** Neroli, or orange flower, flavors are the most obvious home for pure alpha-terpineol. Levels up to 2,000 ppm are perfect.

From Parmesan to Coffee: Alpha-Terpeneol's Unexpected Versatility

- **Cheese, Parmesan:** alpha-Terpeneol is not essential in most cheese flavors. The exception is Parmesan cheese profiles, where a modest addition—around 100 ppm—adds authenticity.
- **Cocoa:** Cocoa and, to a lesser extent, chocolate flavors, often need a reasonable level of complexity. alpha-Terpeneol is helpful in cocoa flavors at 300 ppm and around 100 ppm in chocolate flavors.
- **Coffee:** Coffee flavors often need something extra to counteract the overpowering sulfur and maple notes. alpha-Terpeneol makes a worthwhile contribution at around 600 ppm.
- **Grenadine:** alpha-Terpeneol is helpful in pomegranate flavors, so it is logical that it should also work in at least some of the very diverse array of grenadine profile. Levels need to be tailored to the flavor, but range from 50 ppm up.
- **Peppers:** Bell and jalapeno peppers are similar in some respects, in the context of this article they both



alpha-Terpeneol is helpful in pomegranate flavors, so it is logical that it should also work in at least some of the very diverse array of grenadine profile. Levels need to be tailored to the flavor, but range from 50 ppm up.

benefit from a modest addition of alpha-terpineol. One hundred ppm is a cautious starting point.

- **Tea:** alpha-Terpeneol might not seem an obvious addition to the world of tea flavors, but it is surprisingly effective. The same dose rate, 500 ppm, works equally well in green and black tea profiles.
- **Tomato, cooked:** Fifty ppm of alpha-terpineol adds realism to all tomato flavor profiles. It is probably most useful in cooked and dried tomato flavors. 



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THE GLOBAL INGREDIENT TOUR: THE LATEST FLAVOR & FRAGRANCE INNOVATIONS FROM LONDON TO GRASSE TO CALIFORNIA



The Perfumer & Flavorist+ team sampling ingredients at the World Perfumery Congress in Monterey, California; from left: Jeb Gleason-Allured, group publisher, and Mitch Fox, brand development manager.

The *Perfumer & Flavorist+* team has been traveling the world to smell and taste the latest flavor and fragrance ingredients, from FlavourTalk in London in March to SIMPPAR in Grasse in May to the World Perfumery Congress in Monterey, California, in June.

The following collection of reports highlights some of the most notable ingredients presented at these events, revealing how suppliers are balancing authenticity, sustainability, technical performance and sensory creativity in an increasingly competitive marketplace. 

NOTE: Ingredient availability and regulatory status may vary by region. Not all materials featured in this roundup are commercially available in every market. Readers should consult respective suppliers to confirm regional availability, approved uses and any applicable regulatory restrictions before formulation or commercialization.

Natural Flavor Ingredients

FEMA 3136

2,3-Diethyl Pyrazine Natural

FEMA 3154

2-Ethyl-5-Methyl Pyrazine Natural

FEMA 3155

2-Ethyl-3-Methyl Pyrazine Natural

FEMA 3208

2-Methylthio-(3or5or6)-Methyl Pyrazine Natural

FEMA 3271

2,3-Dimethyl Pyrazine Natural

FEMA 3306

6,7-Dihydro-5-Methyl-5H Cyclopentapyrazine Natural

FEMA 33272-Acetyl-3,5-Dimethyl Pyrazine
Natural**FEMA 3919**

2-Ethyl-6-Methyl Pyrazine Natural

FEMA 3964

2-Acetyl-3-Methyl Pyrazine Natural

FEMA 4434

5-Ethyl-2,3-Dimethyl Pyrazine Natural



Bestally is a pioneer dedicated to developing natural flavor specialties and providing values to our partners since 2003. We focus on sustainable business which includes stable quality, fair prices and continuous supply. We devote ourselves to consistent ESG investment as our social responsibilities.

FRUIT FORWARD: THE MATERIALS REDEFINING REALISM IN FLAVOR & FRAGRANCE

Mane's Antillone combines vibrant pineapple, pear and apple notes with fleshy green nuances to create a fresh, authentic fruity profile that enhances both flavors and fragrances with exceptional juiciness and realism.

Image by Anna Shvets at Pexels

Fruit is getting a high-tech makeover. Across SIMPPAR, the World Perfumery Congress and FlavourTalk, suppliers unveiled a new generation of fruity ingredients designed to deliver greater realism, impact and sustainability—from biotech-derived molecules that recreate nature’s most elusive aromas to advanced extracts capturing the complexity of freshly harvested fruit.

As consumers seek more authentic, indulgent and globally inspired sensory experiences, the next generation of fruity ingredients is delivering not just sweetness and freshness, but texture, complexity and emotional connection, bringing the taste and scent of nature closer than ever.

NOTE: Ingredient availability and regulatory status may vary by region. Not all materials featured in this roundup are commercially available in every market. Readers should consult respective suppliers to confirm regional availability, approved uses and any applicable regulatory restrictions before formulation or commercialization.

Pineapple Perfected: The Next Generation of Tropical Notes

A Biotech-Derived Molecule Delivering True-to-Nature Fruity Impact

Mane has introduced Antillone, a 100% natural, biotechnology-derived aroma molecule designed to deliver intensely juicy, true-to-fruit character across both flavor and fragrance applications.

Originally identified in select pineapple varieties from Costa Rica and Mauritius, Antillone was recreated and scaled through Mane’s nearly four decades of biotechnology expertise. Produced from natural fatty acids using a patented fermentation process, the ketone is classified as 100% natural under ISO 9235, offering a sustainable alternative to traditional sourcing.

Antillone combines vibrant pineapple, pear and apple notes with fleshy green nuances to create a fresh, authentic fruity profile that enhances both flavors and fragrances with exceptional juiciness and realism.

The launch underscores Mane’s continued investment in biotechnology as a tool for expanding the creative palette with high-performance, nature-inspired ingredients that combine sensory authenticity with scalable, sustainable production.

A Tropical Pineapple Flavor Built for Bright Impact

At FlavourTalk 2026, O’Laughlin presented its juicy pineapple flavor (tropical ester) was designed around



O’Laughlin’s juicy pineapple flavor (tropical ester) was designed around a ripe fruit core with a soft, sweet finish, delivering a bright, candy-like pineapple character tailored for tropical beverages and syrups.

a ripe fruit core with a soft, sweet finish, delivering a bright, candy-like pineapple character tailored for tropical beverages and syrups.

Its structure combines ethyl butyrate for an immediate juicy lift, isoamyl butyrate for layered tropical depth, and geranyl acetate to introduce a subtle floral sweetness that rounds and smooths the profile.

Canned, Caramelly, Juicy: FTNF Pineapple

At Austria Juice’s presentation at FlavourTalk 2026, its pineapple FTNF was showcased in a fruit gum application at a 2% dosage.

The profile delivered a rounded, cooked-fruit character, combining canned pineapple richness with soft caramelly undertones, lifted by juicy sweetness and a gentle honeyed nuance.

The result highlighted how FTNF pineapple fractions can push beyond bright top notes into deeper, more indulgent tropical fruit interpretations with confectionery relevance.

Melonpop, a Single Molecule Delivering Hyper-Realistic Melon Flavor

Osmo is expanding the possibilities of next-generation scent and flavor creation with Melonpop, a breakthrough molecule designed to deliver an ultra-realistic melon profile with complexity, diffusion and stability.

Inspired by the richness of Cavaillon cantaloupe, Melonpop captures layers of juicy fruit, fresh green nuances and creamy melon character—all through a single molecule.

Osmo says the innovation demonstrates how advanced molecular design can help formulators achieve more impact with less material, enabling more sustainable fragrance and flavor creations without compromising performance.

With its combination of authenticity, strength and efficiency, Melonpop highlights a growing industry shift



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toward precision-designed molecules that unlock new levels of sensory realism.

Bottling the Future of Fruit With Pomarina

At SIMPPAR, International Flavors & Fragrances Inc. (IFF) unveiled Pomarina. Positioned as part of IFF's broader drive to accelerate innovation from lab to market, the launch reflects an integrated R&D, operations and perfumery approach.

Pomarina is designed to deliver a vivid fruity freshness profile, characterized by apple, pear, banana, strawberry and fig nuances. Built for high impact at low dosage, the material enhances both top and heart notes while extending brightness and longevity.

The material has an allergen-free profile and stability across applications, including water-based systems, positioning it as a versatile tool for perfumers seeking clean, modern fruity signatures.

Fresh-Picked Realism: Apple Firad

dsm-firmenich's Apple Firad is a natural fruit extract designed to deliver the crisp, watery freshness and authentic juiciness of a freshly picked apple.

Sourced from *Malus domestica* apples grown in Poland and China, Apple Firad features a vibrant green, fruity and gourmand profile with a refreshing watery character. The ingredient provides a high-fidelity natural apple top note, making it a versatile tool for fruity accords across both fine fragrance and functional fragrance applications.



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Olfactively, Cerezoate delivers a vibrant, juicy, ethereal fruit profile centered on natural black cherry, extended by facets of pineapple, apple, blueberry and strawberry.

Created using dsm-firmenich's exclusive cold concentration process, Apple Firad preserves the volatile compounds and complete olfactive profile of fresh fruit biomass, offering a natural alternative for realistic fruit effects.

With its bright, stimulating character, Apple Firad brings a crisp bite of nature to modern fragrance compositions for both feminine and masculine creations.

A Regulatory-Safe Shortcut to Modern Cherry and Red Fruit Accords

As IFRA restrictions continue to compress the traditional cherry palette—especially around benzaldehyde, the historical backbone of cherry and almond

accords—perfumers are increasingly forced to rebuild cherry character using a narrower, more constrained material set.

Within this context, Cerezoate (CAS# 1617-23-8; ethyl 2-methyl-3-pentenoate; BRI# 512) from Bedoukian is emerging as a strategically important alternative for constructing modern fruity cherry effects without heavy reliance on restricted aldehydes.

Olfactively, Cerezoate delivers a vibrant, juicy, ethereal fruit profile centered on natural black cherry, extended by facets of pineapple, apple, blueberry and strawberry. This makes it particularly effective for realistic red fruit construction, where it functions less as a single-note cherry and more as a structural enhancer for multi-berry accords. Its short but impactful tenacity anchors it firmly in the top-note space, where it delivers immediate lift and diffusion.

Functionally, the material is highly versatile across both fragrance and flavor applications. In perfumery, it is used at trace levels up to 1% in air care, shampoos, dish detergents, fabric care and related personal care systems, offering strong performance in low-dose fruity enhancement.

In flavor systems, it contributes authentic cherry and berry nuances at 1–10 ppm, extending into apple, strawberry, and tropical profiles. Its full IFRA compliance (51st Amendment) and broad pH stability (3–9) further position it as a practical tool for formulators navigating tighter regulatory constraints while maintaining expressive, modern fruit signatures.

Fruity Depth with an Earthy Twist

Payan Bertrand's Raspberry Leaf Absolute Extra (CAS# 84929-76-0) is a distinctive botanical ingredient that delivers layers of dry, hay-like and delicate red fruit nuances. The flavor profile unfolds with vegetal, candied and dried fruit notes reminiscent of raisins, tamarind, dates and fruit paste, creating a complex bridge between fruity and earthy taste experiences.

Recommended for use in nonalcoholic beverages, flavored teas, fruit candies, dried fruit profiles, grape flavors and tobacco applications, the ingredient offers formulators a versatile tool for adding natural depth, authenticity and sophisticated fruit character to a wide range of products.

Jujube: The 4,000-Year-Old Superfruit Ready for Its Modern Debut

Ancient in heritage yet largely undiscovered by Western consumers, jujube (*Ziziphus jujuba* Mill.), often called the "Chinese date," is emerging as a

compelling ingredient for next-generation food and beverage innovation.

Delivering natural date-like sweetness alongside caramel, roasted, honeyed and mellow fruity notes, jujube extract from Aromaplant (seen at FlavourTalk 2026) offers formulators a versatile flavor foundation for beverages, confectionery, gummies and nutrition bars.

Beyond its sensory appeal, the fruit is naturally rich in polyphenols, flavonoids and essential minerals, with documented antioxidant activity and recognition as a promising superfruit candidate in scientific literature.

Combining clean-label appeal, natural origin credentials and more than 4,000 years of traditional use, jujube is well positioned to bridge the gap between wellness-driven formulation and consumer demand for authentic, globally inspired ingredients.

Strawberry Reimagined: Two New Extracts Capture the Sweet Spot Between Nature and Indulgence

dsm-firmenich's strawberry SFE is a natural supercritical fluid extract that delivers the authentic aroma of ripe strawberries with a rich gourmand twist.

Sourced from *Fragaria ananassa* strawberries grown in Poland, the ingredient captures a vibrant red-fruity, jam-like and appetizing profile through low-temperature supercritical fluid extraction (SFE), preserving the raw material's natural olfactive identity.

Designed for fruity and gourmand fragrance creations, Strawberry SFE adds a juicy strawberry effect to accords and can also enhance floral compositions with a natural red-fruit, "jammy" dimension.

The ingredient reflects dsm-firmenich's focus on advanced extraction technologies and responsible sourcing, with Polish strawberries harvested by hand under strict agricultural practices focused on reduced pesticide use and water conservation.

Meanwhile, Misitano & Stracuzzi's strawberry extract 150x is a highly concentrated ethanolic extract derived from the water phase of multi-origin strawberries, delivering an authentic and intensely flavorful strawberry profile.

Capturing the candy-like sweetness, juicy red fruit character and subtle caramellic nuances of ripe strawberries, the extract provides exceptional flavor impact across a wide range of applications.

Recommended at use levels of 80–1,000 ppm, it is particularly well suited for fruit-based beverages, RTD drinks, confectionery and dairy products such as yogurt, where it enhances natural fruit authenticity and indulgent appeal.



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Sourced from *Fragaria ananassa* strawberries grown in Poland, dsm-firmenich's strawberry SFE delivers the authentic aroma of ripe strawberries with a rich gourmand twist.



Misitano & Stracuzzi's strawberry extract 150x captures the candy-like sweetness, juicy red fruit character and subtle caramellic nuances of ripe strawberries; it is well suited for fruit-based beverages, RTD drinks, confectionery and dairy products such as yogurt.



Derived from *Solanum quitoense*, Destilla's lulo distillate combines bright citrus notes with delicate floral nuances, honeyed sweetness, juicy lychee, passionfruit accents and a distinctive peely freshness.

A Tropical Citrus Twist for Next-Generation Beverages

Derived from *Solanum quitoense*, Destilla's lulo distillate captures the vibrant character of one of South America's most intriguing fruits. Its sensory profile combines bright citrus notes with delicate floral nuances, honeyed sweetness, juicy lychee, passionfruit accents and a distinctive peely freshness.

Driven by key aromatic components including methyl acetate and linalool, the distillate delivers an exotic, natural fruit signature at low use levels (0.2-0.5%). Particularly well suited for beverages and dairy applications, it adds tropical complexity, freshness, and premium differentiation to modern flavor creations.

A Creamy, Tropical Power Note for Guava, Mango and Exotic Fruit Accords

Guavanate (methyl *cis*-5-octenoate, CAS# 41654-15-3) is a Bedoukian Research aroma ingredient known for its distinctive tropical fruit profile. It delivers a sweet, exotic, and slightly woody odor with a creamy dry-down, contributing juicy guava- and mango-like nuances in fragrance applications.

In perfumery, it is used at trace levels up to 2% to add depth and realism to fruity-floral and tropical accords, often enhancing guava, mango and coconut facets with a soft, creamy texture. In flavor systems, it imparts an exotic, slightly musty tropical character reminiscent of pink guava and creamy mango, and is effective across a wide range of fruit profiles including durian, longan, citrus, melon, apple, banana, and pineapple, as well as creamy dairy and coconut notes at very low use levels (1-10 ppm).



Bedoukian's Guavanate imparts an exotic, slightly musty tropical character go flavors, reminiscent of pink guava and creamy mango.

Banana Extract 50x: Tropical Ripeness in High Definition

Misitano & Stracuzzi's banana extract 50x is a concentrated ethanolic extract derived from the water phase of Costa Rican bananas, capturing the fruit's naturally sweet, ripe character with delicate floral and fruity nuances.

Offering a more authentic and nuanced banana profile than conventional flavor ingredients, it delivers tropical freshness and juicy fruit appeal across a broad range of applications.

Recommended at use levels of 80-1,000 ppm, the extract is ideal for fruit-based beverages, RTDs, functional drinks, confectionery, dairy products and even fragrance applications, where it imparts a true-to-fruit banana signature with exceptional efficiency.



Misitano & Stracuzzi's banana extract 50x is a concentrated ethanolic extract derived from the water phase of Costa Rican bananas, capturing the fruit's naturally sweet, ripe character with delicate floral and fruity nuances.

Juicy, Seedy, Leafy: Blackcurrant Heart Brings Depth

At Austria Juice's presentation at FlavourTalk 2026, its blackcurrant heart and fraction was showcased in a fruit gum application at just 0.3% dosage.

Despite the low inclusion level, it delivered a strikingly layered profile—juicy and seedy up front, evolving into leafy, exotic, and smooth berry nuances, with a subtle earthy undertone.

The result highlighted how fractionated blackcurrant systems can move beyond simple fruitiness into more complex, green-berry realism.

Tropical Brightness, Green Crispness: Clean Fruit Impact

At FlavourTalk 2026, O'Laughlin's green apple/pear flavor (fresh crisp) emphasized clarity and snap, delivering a refreshing green profile with juicy fruit body and a clean, natural finish.

Isoamyl acetate provided the signature fresh apple juiciness, *cis*-3-hexenyl acetate added a freshly cut fruit crispness, and linalool contributed smoothness and airy freshness.

Capturing the Golden Plum at Peak Ripeness

Derived from *Prunus domestica* subsp. *syriaca*, Destilla's mirabelle distillate delivers the authentic character of sun-ripened mirabelle plums with a rich, juicy, fruit-typical profile and a subtle waxy nuance that enhances natural realism.

Key aromatic components including gamma-dodecylactone, damascenone and nonanal contribute layers of ripe stone fruit sweetness, floral-fruity depth, and fresh orchard brightness.

Recommended at use levels of 0.2-0.5%, the distillate is ideally suited for beverage and dairy applications, bringing premium fruit authenticity and sophisticated complexity to modern flavor formulations.

Rich Dried Fruit Nuances

Payan Bertrand's Carrot Process E is a flavor ingredient that delivers a remarkably complex profile spanning



Destilla's mirabelle distillate delivers the authentic character of sun-ripened mirabelle plums with a rich, juicy, fruit-typical profile and a subtle waxy nuance that enhances natural realism.

apricot, plum, fig, peach, melon, date and hazelnut notes layered with earthy and mushroom-like facets.

The ingredient's rich dried-fruit character makes it a versatile tool for formulators seeking depth and authenticity across a range of applications.

Recommended uses include dried fruit profiles, chicken seasonings, energy drinks, soft drinks, ice cream and dairy products, where it can contribute natural sweetness, body and nuanced fruity complexity while enhancing overall flavor impact.

Berry, Tropical Fruity-Floral Aroma Ingredient

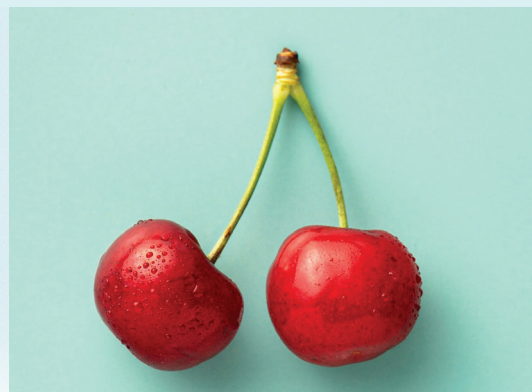
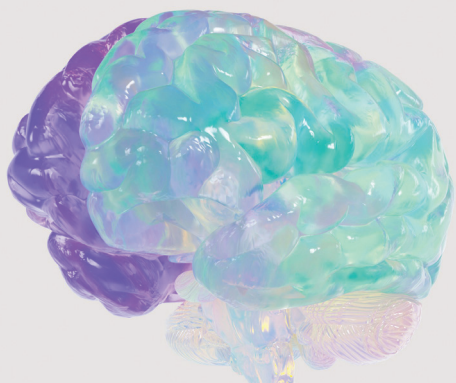
Millipore Sigma's prenyl isobutyrate (FEMA# 4206, FLAVIS# 09.695, CAS# 76649-23-5) delivers an explosion of berry, tropical fruit, floral and sweet nuances, making it a versatile building block for bright, juicy flavor and fragrance creations.

Listed as , the ingredient is designed to add vibrant tropical top notes while enhancing freshness and natural fruit character across a wide range of formulations. Available in both FG and kosher grades, it complies with EU Regulations 1334/2008 and 178/2002 as well as FDA 21 CFR 117 requirements.

With no known allergens, prenyl isobutyrate is well suited for applications seeking an uplifting burst of juicy fruit accented by a soft floral finish. 

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A close-up, artistic photograph of a woman with dark hair, her eyes closed, smelling a large bouquet of white and pink flowers. The image is softly blurred, with a warm, golden light on the left and a cooler, blue light on the right, creating a dreamy atmosphere. The woman's face is partially obscured by the flowers and the soft focus.

DISRUPTING THE BOUQUET: **NEW FLORAL FRAGRANCE MATERIALS**

Redefining rose, jasmine, muguet and more with emerging technologies.

Today's breakthroughs are delivering greater diffusion, longer-lasting impact, richer textures and entirely new interpretations of beloved floral notes.

From molecular innovation to advanced extraction technologies, the next generation of floral ingredients is pushing beyond traditional beauty and perfumery signatures. Today's breakthroughs are delivering greater diffusion, longer-lasting impact, richer textures and entirely new interpretations of beloved floral notes—from regulatory-ready rose alternatives and radiant jasmine boosters to biotech-enabled orris, muguet and heliotrope creations.

This roundup explores the disruptive ingredients expanding the perfumer's palette, blending cutting-edge chemistry, sustainability and sensory artistry to reinvent the world's most iconic floral families.

NOTE: Ingredient availability and regulatory status may vary by region. Not all materials featured in this roundup are commercially available in every market. Readers should consult respective suppliers to confirm regional availability, approved uses and any applicable regulatory restrictions before formulation or commercialization.

Reinventing Rose: Bringing Depth, Lift and Longevity to a Classic Note

Patina has unveiled Spectrone, a patent-pending captive molecule designed to deliver the radiant, ambery lift of rose ketones through a new structural approach.

Featuring a sophisticated profile of humid damascone, fine rose, green spice, cedar and carrot seed nuances, Spectrone creates a vibrant centifolia rose character with earthy-musty depth and an ambery rose-oxide effect.

Designed to extend or replace traditional rose ketone materials, Spectrone offers perfumers a versatile tool for rose, fruity and woody-amber compositions. According to Patina, its distinct molecular structure may help navigate some of the regulatory limitations associated with classical ketones.

With a predicted substantivity of 30 hours at 10% on blotter, Spectrone combines floral elegance, modern chemistry and lasting performance to expand the possibilities of contemporary rose perfumery.

Patina has also introduced Rosalia, a patent-pending captive molecule designed to bring a modern, sophisticated interpretation of rose through a blend of floral elegance, spice and woody warmth.

Rosalia combines the clean, smooth character of a rose acetate with a refined silky woody depth, enhanced by unexpected chocolate and musky nuances that add richness and intrigue. The result is a nuanced rose signature that reveals greater complexity over time.



Patina's Rosalia is a patent-pending captive molecule designed to bring a modern, sophisticated interpretation of rose through a blend of floral elegance, spice and woody warmth.

With a predicted substantivity of 40 hours at 10% on blotter, Rosalia offers perfumers a long-lasting tool for creating contemporary rose compositions with added texture, sensuality and depth.

The launch reflects Patina's continued focus on developing distinctive captive molecules that expand classic fragrance families with new sensory dimensions.

A Next-Generation Muguet Molecule with Powdery Floral Elegance

dsm-firmenich has expanded its floral ingredient palette with Josenol, a delicate synthetic molecule designed to bring fresh muguet character, powdery softness and long-lasting elegance to fragrance compositions.

Josenol features a refined muguet floral profile with nuances of mimosa, heliotrope, anise and powdery warmth, making it a versatile building block for muguet accords, rose fragrances and soft floral creations. The ingredient also enhances compositions with greater diffusion and lasting powdery character.

Part of dsm-firmenich's "Beyond Muguet" creative approach, Josenol reflects the company's continued exploration of transparent, modern floral notes. The molecule is also part of the company's EcoIngredient Compass program, with a readily biodegradable profile and 70–100% green score.

Named in memory of perfumer José-Louis Conesa, Josenol highlights the enduring role of innovative floral molecules in expanding the perfumer's creative palette.

Radiant Diffusion for White Florals

Patina's Cyclojasminol is a patent-pending captive molecule designed to elevate modern white floral compositions with luminous freshness and exceptional diffusion.

Featuring a refined profile of star jasmine and gardenia, Cyclojasminol delivers a clean, radiant floral character without the heaviness often associated with traditional white florals. Its signature strength is its ability to lift and extend surrounding accords, enhancing the impact and presence of floral compositions.



Josenol features a refined muguet floral profile with nuances of mimosa, heliotrope, anise and powdery warmth, making it a versatile building block for muguet accords, rose fragrances and soft floral creations. The ingredient also enhances compositions with greater diffusion and lasting powdery character.



According to Osmo, Glossine delivers greater strength and persistence than traditional Hedione-like materials, offering perfumers a powerful new tool for creating luminous floral compositions with enhanced diffusion and endurance.

Designed as a versatile floral building block, Cyclojasminol offers perfumers a tool for creating sophisticated white floral, fresh floral and contemporary feminine compositions with added brightness, volume and elegance.

Next-Level Jasmine Radiance

Osmo has unveiled Glossine, a diffusive floral molecule designed to deliver a radiant jasmine signature with exceptional longevity and performance across skin and fabric applications.

Featuring a distinctive jasmine, brightening and dewy pear olfactive profile, Glossine creates a sparkling, high-fidelity floral impression that maintains its character from top note through drydown. The material provides strong bloom, excellent base odor coverage and lasting freshness, making it well suited for fine fragrance, personal care and fabric care applications.

According to Osmo, Glossine delivers greater strength and persistence than traditional Hedione-like materials, offering perfumers a powerful new tool for creating luminous floral compositions with enhanced diffusion and endurance.

Bringing New Depth to Floral Perfumery

Patina's Caprifolia is a patent-pending captive molecule designed to expand the perfumer's palette with a sophisticated floral profile blending luminosity, spice and balsamic warmth.

Part of Patina's next generation of fragrance innovations, Caprifolia opens with a vibrant honeysuckle impression layered with lilac, hyacinth and rosy nuances, before evolving into a richer drydown featuring green carnation, heliotrope sweetness, smoky facets and balsamic depth.

With a predicted substantivity of 30 hours at 10% on blotter, Caprifolia delivers lasting impact and versatility across floral compositions, adding complexity to tuberose, dianthus, narcotic florals, chrysanthemum, leather and spice accords.

Orris Reimagined: Bringing Fresh Innovation to a Perfumery Icon

Mane's Elixiris co-extract recently earned the "Most Innovative Ingredient" award at the 2026 World Perfumery Congress, presented by the American Society of Perfumers.

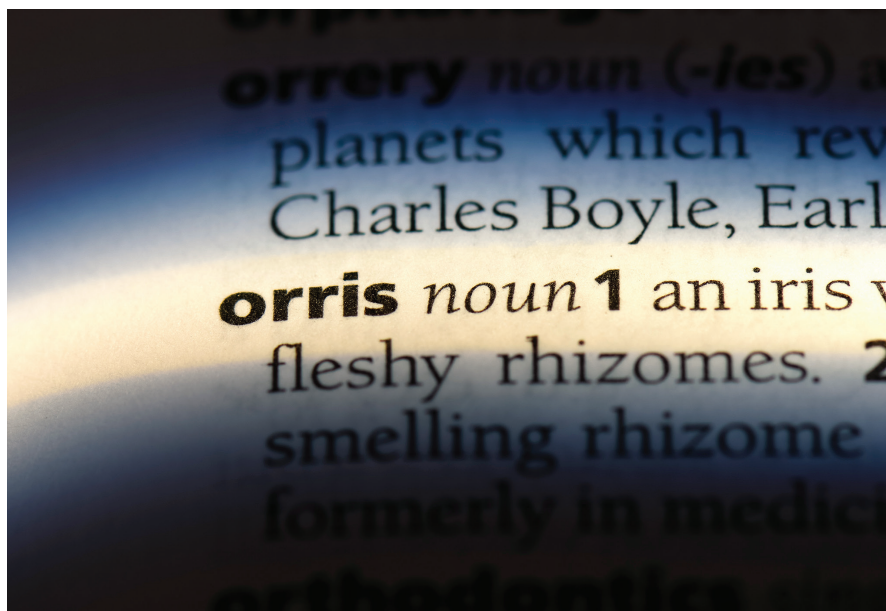
Created through the co-distillation of precious orris roots and rectified cedarwood essential oil, Elixiris goes beyond a traditional blend by using one raw material as a co-solvent to fuse the two ingredients into a unique olfactive signature.

The result is a sophisticated balance of powdery floral softness, delicate violet nuances and a dry, structured woody backbone. Designed to elevate woody compositions, Elixiris adds depth, complexity and a luxurious long-lasting character to fine fragrance creations.

Elsewhere in the company's palette, Mane's Orris Pure Jungle Essence is a premium natural extract that pairs one of perfumery's most prized botanicals with advanced supercritical fluid extraction technology.



Patina's Caprifolia opens with a vibrant honeysuckle impression layered with lilac, hyacinth and rosy nuances, before evolving into a richer drydown featuring green carnation, heliotrope sweetness, smoky facets and balsamic depth.



Mane's Orris Pure Jungle Essence is a premium natural extract that pairs one of perfumery's most prized botanicals with advanced supercritical fluid extraction technology.

Sourced from the dried rhizomes of *Iris germanica* cultivated in Morocco, the ingredient captures the full elegance of orris with a rich powdery, woody and creamy profile enhanced by subtle gourmand, cereal-like and warm chocolate nuances. The result is a refined base note that adds depth, warmth and exceptional longevity to fragrance compositions.

Developed using Mane's proprietary Jungle Essence extraction technology, the material preserves the botanical's delicate olfactive complexity while delivering a rounded, sensual character that enriches fine fragrances with timeless sophistication.

Meanwhile, Padmini Aromatics has unveiled Peaudiris (CAS# 79-69-6), a patent-pending, high-impact fragrance ingredient that combines the elegance of orris, soft leather, powdery florals and woody facets in a single, highly diffusive molecule.

Designed for fine fragrance, cosmetics, soaps, detergents and incense applications, Peaudiris delivers exceptional volume, tenacity and radiance, adding a smooth leather character wrapped in a sophisticated powdery depth.

Produced from upcycled feedstocks with more than 60% renewable carbon content (ISO 16128), the ingredient reflects the industry's growing focus on sustainable, high-performance aroma chemicals. Recommended at use levels of 0.1% to 5%, Peaudiris offers formulators a versatile tool for creating long-lasting, elegant fragrance signatures.

(Chemical name : 4-(2,5,6,6-tetramethyl-2-cyclohexen-1-yl)-3-buten-2-one.)

A Modern Powdery Floral Alternative for Heliotrope Creations

dsm-firmenich has launched Heliotropin Base, a specialty floral blend designed to deliver the signature softness of heliotrope with a modern, versatile and regulatory-conscious approach.

Centered around mimosa, powdery floral and sweet almond nuances, Heliotropin Base creates a creamy, rounded profile with a smooth vanilla and lactonic drydown. The balanced accord provides the warm, comforting character traditionally associated with heliotrope while offering a clean solution for contemporary fragrance development.

Developed as a CMR 1B-free alternative to heliotropine, Heliotropin Base combines carefully selected ingredients—including captive materials—to support floral creations, sweet accords and natural reconstitution projects.

The launch reflects dsm-firmenich's continued collaboration between perfumers and natural ingredient specialists to develop innovative building blocks that balance olfactive performance, creativity and evolving regulatory needs. 



The banner features a red background with a molecular structure pattern. On the left is the Perfumer & Flavorist+ logo with the tagline "The Resource for Sensory & Wellness Innovation". In the center, the text "Tune In!" is displayed above a large white circle containing a smartphone icon with concentric circles around it, flanked by a microphone icon on the left and a play button icon on the right. Below this, the text "Perfumer & Flavorist+ Multimedia" is shown, followed by the website URL "www.perfumerflavorist.com/multimedia".

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From Burnt Metal to Long-Lasting Tonka: **the Latest Updates to the Fragrance Ingredient Palette**

Osmo's Tornadew, a novel fragrance molecule designed to capture the electric, humid atmosphere of the air just before a storm. Discovered through Osmo's 3 billion molecule library, Tornadew delivers a distinctive watery, ozonic, green and dewy olfactive profile with nuances of violet leaf and cucumber.



Today's newest aromatic ingredients are bringing perfumers unexpected textures, sensory contrasts and richer storytelling possibilities, from the comforting warmth of toasted rice and sesame to smoky spices, metallic musks, storm-charged freshness and biotech-powered amberwoods.

This roundup explores the latest ingredient innovations from leading fragrance houses and molecular pioneers, showcasing how captive molecules, natural extracts and sustainable biotech creations are redefining gourmand, woody, musky and atmospheric accords. The result? A new era of perfumery.

NOTE: Ingredient availability and regulatory status may vary by region. Not all materials featured in this roundup are commercially available in every market. Readers should consult respective suppliers to confirm regional availability, approved uses and any applicable regulatory restrictions before formulation or commercialization.

The New Gourmand Palette: From Toasted Rice to Smoky Spice, Ingredients Get More Indulgent

Patina has unveiled Methyl Orizate, a patent-pending captive molecule designed to add a distinctive edible-inspired dimension to modern gourmand fragrances.

Featuring a warm profile of toasted rice, basmati, powdery softness and custard-like sweetness, Methyl Orizate captures the comforting aroma of freshly prepared grains while adding depth and sophistication to gourmand compositions.

The molecule blends seamlessly with musks, vanillin and related gourmand materials, offering perfumers a versatile tool for creating creamy, warm and texturally rich olfactive experiences.



Featuring a warm profile of toasted rice, basmati, powdery softness and custard-like sweetness, Methyl Orizate captures the comforting aroma of freshly prepared grains while adding depth and sophistication to gourmand compositions.

Meanwhile, Mane's Vayanol is a 100% natural molecule created through the company's biotechnology expertise, delivering a distinctive blend of spicy warmth, amber richness and smoky gourmand character.

Featuring a clove-like signature with sweet incense and subtle smoky facets, Vayanol adds depth and sensuality to fragrance compositions. Its ambery profile creates a warm, enveloping atmosphere while bringing a spicy twist to floral bouquets and complexity to gourmand accords.

Elsewhere, dsm-firmenich's sesame SFE absolute is a natural gourmand extract designed to bring rich cereal warmth and nutty sophistication to fragrance compositions.

Sourced from *Sesamum indicum* seeds from India, the ingredient delivers a distinctive toasted bread and cereal-like olfactive profile, adding depth, volume and authenticity to gourmand and warm accords.

Created through supercritical fluid extraction (SFE) followed by an absolute process, Sesame SFE Abs preserves the natural identity and complexity of the raw material while providing excellent solubility for formulation flexibility.



Ideal for gourmand, amber and comforting fragrance creations, Sesame SFE Abs expands the perfumer's palette with a savory-sweet, edible-inspired nuance that reflects the growing demand for authentic natural ingredients in modern perfumery.



Featuring a clove-like signature with sweet incense and subtle smoky facets, Vayanol adds depth and sensuality to fragrance compositions.



Patina has introduced Metalox, a patent-pending captive molecule designed to deliver a striking new textural effect: the sensation of heated metal translated into fragrance.

Ideal for gourmand, amber and comforting fragrance creations, Sesame SFE Abs expands the perfumer's palette with a savory-sweet, edible-inspired nuance that reflects the growing demand for authentic natural ingredients in modern perfumery.

Bringing a New Edge to Metallic Musk Perfumery

Patina has introduced Metalox, a patent-pending captive molecule designed to deliver a striking new textural effect: the sensation of heated metal translated into fragrance.

Part of Patina's exploration of unconventional olfactive signatures, Metalox combines metallic musk, hot

iron, starch, honeyed warmth and ambrettolide-like softness with a distinctive burnt-hair facet. Used in trace amounts, the trigeminal material adds a modern, industrial edge and a skin-close musky texture to compositions.

With a predicted substantivity of 80 hours at 10% on blotter, Metalox offers exceptional persistence while enabling perfumers to create futuristic, technical and deliberately synthetic effects.

The launch expands Patina's captive molecule portfolio with an ingredient designed for bold olfactive storytelling—where texture, sensation and unexpected contrasts redefine the boundaries of fragrance creation.

A Biotech-Derived Amberwood Molecule with Enhanced Power and Purity

dsm-firmenich has introduced Z11 HD, a high-definition version of its ambery molecule designed to deliver intensified woody sensuality, exceptional tenacity and sustainable performance.

Derived through biotechnology using renewable carbon from sugar fermentation, Z11 HD features a rich dry woody, earthy and ambery profile with a clean,



Derived through biotechnology using renewable carbon from sugar fermentation, Z11 HD features a rich dry woody, earthy and ambery profile with a clean, elegant warmth. The ingredient is designed to bring depth, sensuality and linearity to fine fragrance compositions across heart and base notes.



Inspired by the musk found in ambrette seed, Sublimolide opens with a subtle, understated softness before unfolding into a rich, enveloping musky accord accented by cozy fruity nuances and powdery floral undertones.

elegant warmth. The ingredient is designed to bring depth, sensuality and linearity to fine fragrance compositions across heart and base notes.

According to dsm-firmenich, Z11 HD contains a minimum of 95% of its most desirable isomer, delivering a cleaner and stronger olfactive impact than the original Z11 quality. The result is an intense, long-lasting amberwood signature with enhanced performance.

Part of the company's EcoIngredient Compass program, Z11 HD offers 100% renewable carbon content and an ultimately biodegradable profile, reflecting the growing demand for high-performance fragrance molecules developed through sustainable innovation.

A Vegan Macrocyclic Musk with Lasting Radiance

Mane's Sublimolide is a vegan macrocyclic musk designed to recreate the elegant character of naturally occurring ambrettolide while delivering exceptional longevity, diffusion and sensory warmth.

Inspired by the musk found in ambrette seed, Sublimolide opens with a subtle, understated softness before unfolding into a rich, enveloping musky accord accented by cozy fruity nuances and powdery floral undertones. The ingredient provides impressive volume and sillage, enhancing top notes while leaving a long-lasting, sophisticated fragrance trail.

Recommended at use levels of 0.1% to 5%, Sublimolide offers perfumers a versatile, high-performance musk for fine fragrance compositions seeking a modern balance of softness, radiance and persistence.

Bringing Tropical Depth and Floral Radiance

Patina has unveiled Nopalial, a patent-pending captive molecule designed to add naturality, complexity and vibrancy to modern fruity and floral compositions.

Featuring an exotic profile of tropical fruits, white florals and night-blooming nuances, Nopalial evokes facets of jackfruit, durian, rambutan, passion fruit, jasmine, cactus flower and champaca. Used in trace amounts, the ingredient enhances muguet and white floral accords with greater fullness and refinement while smoothing unwanted facets.

In larger applications, Nopalial delivers a richer tropical signature, adding depth to fruity compositions, brightening citrus notes, ripening orchard and stone fruits, and bringing effervescence to berry and rose accords.

With a predicted substantivity of 30 hours at 10% on blotter, Nopalial offers perfumers a versatile tool for creating more expressive, high-impact fragrance stories that bridge the worlds of nature and innovation.

A Long-Lasting Tonka Molecule Without the Supply Chain Headaches

Osmo has unveiled Tonkacloud, a new fragrance molecule that recreates the rich warmth of tonka bean while offering formulators a regulatory-compliant, reliable alternative to natural tonka.

The launch is part of a batch of materials developed through its Olfactory Intelligence platform that have been opened to a competitive bidding process.

Osmo's auction launched June 23, 2026 at the World Perfumery Congress in Monterey, California, with



Osmo has unveiled Tonkacloud, a new fragrance molecule that recreates the rich warmth of tonka bean while offering formulators a regulatory-compliant, reliable alternative to natural tonka.

participation open to fragrance houses, chemical manufacturers and consumer packaged goods companies with in-house perfumery teams.

According to Osmo, the initiative represents a departure from the industry's conventional captive development model, in which fragrance companies invest millions of dollars annually in internal molecule discovery programs and typically retain exclusive control of successful materials.

Featuring a powdery, gourmand balsamic profile, Tonkacloud combines notes of tonka, almond, mimosa, coumarin, cinnamon, hay and lactonic warmth, accented by subtle gourmand cherry facets. The molecule delivers a dense, pillowy depth even at low dosages, providing long-lasting performance across fine fragrance applications.

According to Osmo, Tonkacloud offers the signature character of tonka in full EU regulatory compliance while avoiding the supply chain constraints associated with natural tonka materials.

The launch underscores Osmo's strategy of designing next-generation aroma molecules that combine olfactive authenticity with enhanced sustainability, regulatory confidence and formulation flexibility.



Nopalial evokes facets of jackfruit, durian, rambutan, passion fruit, jasmine, cactus flower and champaca.

Reimagining Saffron-Leather Accords

Patina has introduced Safoen, a patent-pending captive molecule that delivers the rich character of saffron and leather while providing perfumers with a versatile alternative to traditional safranal.

Blending leathery saffron, balsamic styrax and cool spicy nuances, Safoen creates a tanned, subtly smoky signature designed to add depth to amber, oud, chypre and leather accords. The molecule captures saffron's distinctive warmth and sophistication while overcoming the cost and regulatory limitations often associated with safranal, according to the company.

With a predicted substantivity of 30 hours at 10% on blotter, Safoen offers long-lasting performance and creative flexibility for fine fragrance applications.

Expanding the Woody Palette with Upcycled Cedarwood and Ocean-Inspired Driftwood Base

Mane recently highlighted two woody fragrance ingredients that offer perfumers contrasting interpretations of modern wood accords—from sustainably sourced cedar to mineral-infused coastal freshness.

Cedarwood Texas (*Juniperus mexicana*) essential oil rectified is an upcycled material sourced in Texas that opens with crisp, fresh woody notes before evolving into a warm, dry cedar signature. The rectified essential oil delivers a cleaner, more refined profile while supporting Mane's commitment to circular sourcing.

Meanwhile, the company's Driftwood Base is a contemporary woody accord that blends white woods with the impression of a salty sea breeze, airy mineral facets and subtle saline nuances. Anchored by warm amber depth and a sleek woody structure, the base is designed to add sophistication and atmospheric freshness to woody and ambery fragrance compositions.

Together, the two materials reflect Mane's focus on combining sustainable ingredient development with nuanced olfactive profiles that bring greater realism, texture and versatility to modern perfumery.

Capturing the Scent Before the Storm

Osmo's Tornadew, a novel fragrance molecule designed to capture the electric, humid atmosphere of the air just before a storm.

Discovered through Osmo's 3 billion molecule library, Tornadew delivers a distinctive watery, ozonic, green and dewy olfactive profile with nuances of violet leaf and cucumber. The material creates a fresh, atmospheric impression that evokes rain-soaked landscapes and



Mane's Driftwood Base is a contemporary woody accord that blends white woods with the impression of a salty sea breeze, airy mineral facets and subtle saline nuances.

charged air, bringing a new dimension of realism to aquatic and green fragrance compositions.

With strong longevity and performance, Tornadew is particularly suited for laundry and fabric care applications, where long-lasting freshness and sensory impact are critical.

The launch highlights Osmo's approach to molecular discovery—using advanced technology to uncover unique scent materials that expand the perfumer's palette and create more vivid connections between fragrance and memory.

Silicon-Containing Molecule for Naturalistic Freshness

Patina has introduced Silterra, a patent-pending captive molecule that brings a new dimension to fresh, earthy perfumery as the first fragrance design featuring a silicon atom.

Silterra opens with a vibrant camphoraceous, green and botanical freshness before evolving into a smooth muguet floral heart and a dry, earthy base reminiscent of patchouli. Subtle facets of melon rind, tuberose and amber add a quiet sensuality, creating a complex balance between cleanliness, nature and warmth.

According to Patina, the silicon-based molecule influences the character of surrounding compounds, shifting compositions toward a more earthy and naturalistic expression. With a predicted substantivity of 40 hours at 10% on blotter, Silterra offers perfumers a long-lasting tool for building sophisticated fresh, green and botanical accords.

Reimagining Vetiver with Vetiveryl Acetate's Silky Woody Signature

Mane's Vetiveryl Acetate, a refined vetiver ingredient, brings a softer, more sophisticated interpretation of the classic woody note.

Characterized by woody, earthy and nutty facets accented by subtle grapefruit nuances, Vetiveryl Acetate smooths the harsher, rooty aspects often associated with traditional vetiver while preserving its depth and elegance. The result is a polished woody profile that



Vetiveryl Acetate smooths the harsher, rooty aspects often associated with traditional vetiver while preserving its depth and elegance.

adds softness, roundness and a delicate silky touch to fragrance compositions.

The ingredient performs particularly well in woody, ambery, citrus, gourmand and contemporary orris accords, enhancing blends with greater harmony and refinement. It also serves as an effective fine fragrance fixative, contributing strong tenacity and long-lasting performance. 



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SCENT GOES TO SLEEP: HOW FUNCTIONAL FRAGRANCE IS TRANSFORMING THE HOME INTO A WELLNESS SPACE

The new creative brief:
design not just a scent,
but a state of mind.

Instead of simply creating a "sleep smell," brands are creating olfactive environments that help consumers associate specific scents with desired emotional states.

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From lavender rituals to neuroscience-backed scent systems, ambient fragrance brands are moving beyond “making a room smell good” to creating immersive environments designed to support relaxation, stress relief and better sleep. For perfumers and product developers, the next frontier of home fragrance is emotional performance.

The opportunity is significant. According to the American Academy of Sleep Medicine, nearly three-fourths of Americans^a (74%) report that stress sometimes, often or always disrupts their sleep, while 68% say anxiety impacts their ability to rest. As consumers search for solutions that fit seamlessly into their lifestyles, fragrance is increasingly being explored as a sensory pathway to relaxation.

For fragrance creators, this represents a new creative brief: design not just a scent, but a state of mind.

From Fragrance to Functional Experience

The evolution of wellness fragrance reflects a broader consumer expectation that products should deliver measurable benefits—not just pleasant experiences.

The new Pura x Calm Collection illustrates this shift by combining scent with sound to create a multi-sensory wellness ritual. Developed through the collaboration between smart home fragrance company Pura and mental health platform Calm, the collection translates Calm’s sleep, mindfulness and relaxation content into fragrance experiences.

Rather than simply offering three calming scents, the collection links fragrance with specific emotional moments. Sleep Story pairs lavender, chamomile and soft woods with bedtime rituals. Breathe Bubble uses eucalyptus, mint and fresh air accords to complement breathing exercises. Soundscape combines bergamot, marine notes and eucalyptus to evoke clarity and emotional reset.

The collection also integrates with the Pura app, allowing fragrance intensity and duration to align with Calm audio experiences.



Rather than simply offering three calming scents, the Calm x Pura collection links fragrance with specific emotional moments.

For ambient scent developers, the takeaway is clear: the future of home fragrance may be less about stand-alone products and more about sensory ecosystems.

The Rise of Neuroscience-Driven Perfumery

Brands entering this space are increasingly borrowing from neuroscience, behavioral science and consumer testing to support claims around emotional impact.

Blueme, founded by Chesapeake Bay Candle founder Mei Xu, has built its positioning around neuroscience-informed fragrance development. Its Sleep collection uses lavender, cypress, Siberian pine, geranium and patchouli notes to create what the brand describes as a scent experience designed to support relaxation.

Meanwhile, Drift's Rest & Relax Home Scent Diffuser incorporates Dreamwood, a biotech-derived ingredient designed to provide a sandalwood-like sensory profile without relying on traditional harvesting. The fragrance

^a<https://aasm.org/stress-anxiety-and-depression-survey-shows-mental-health-conditions-disrupt-a-majority-of-americans-sleep/>

combines lavender, chamomile and vanilla with the woody material to create a calming evening atmosphere.

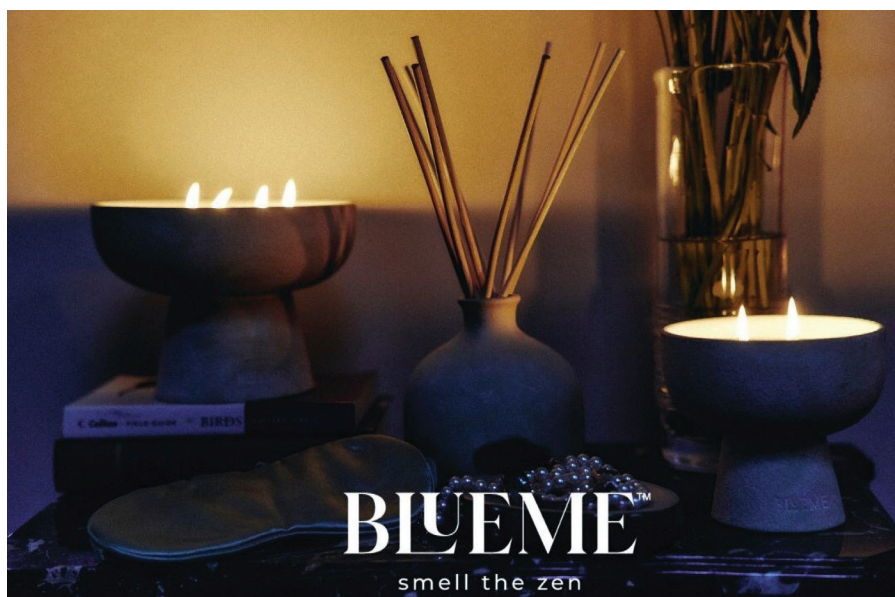
Drift reports that 97% of consumers in a three-week study agreed the fragrance made them feel more relaxed in the evening, highlighting how brands are increasingly using consumer research to validate emotional positioning.

For perfumers, this creates both opportunity and complexity. Traditional fragrance evaluation has focused heavily on liking, intensity, longevity and technical performance. Functional fragrance introduces new dimensions:

- Does the fragrance help signal a transition into relaxation?
- Does it create a recognizable emotional association over repeated use?
- Does the olfactive profile support a specific ritual or behavior?
- Can the emotional benefit be measured and communicated credibly?



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Blueme, founded by Chesapeake Bay Candle founder Mei Xu, has built its positioning around neuroscience-informed fragrance development.

The New Olfactive Language of Sleep

The fragrance palette for sleep and relaxation is expanding beyond predictable lavender profiles.

While lavender remains a cornerstone ingredient due to its longstanding association with calm, developers are building more sophisticated emotional landscapes through combinations of:

- Soft botanicals: lavender, chamomile, geranium and neroli for soothing familiarity.
- Clean freshness: eucalyptus, mint and airy accords to suggest breathing, clarity and mental reset.
- Comforting woods: sandalwood, cedar, cypress and biotech wood alternatives to create grounding warmth.
- Gourmand softness: vanilla, milky notes and subtle sweetness to evoke comfort and security.
- Nature-inspired atmospheres: marine, rain, forest and fresh-air accords that transport consumers outside the home.

Instead of simply creating a “sleep smell,” brands are creating olfactive environments that help consumers associate specific scents with desired emotional states.

Key Considerations for Perfumers and Product Developers

1. Beyond Preference: Design for Ritual

The strongest wellness fragrances may be those tied to repeatable behaviors: turning on a diffuser before bed,

starting meditation, preparing for work or creating a relaxation moment.

2. Think Beyond the Fragrance Bottle

Ambient fragrance is increasingly merging with technology, sound, lighting and smart-home platforms. Developers should consider how scent interacts with other sensory inputs to create immersive experiences.

3. Build Credibility Around Claims

As functional fragrance grows, consumers and regulators will demand greater transparency around claims. Robust testing methodologies, consumer studies and neuroscience research will become important tools for differentiation.

4. Create Emotional Complexity

Relaxation does not always mean soft and floral. Some consumers may seek grounding woods, fresh air, mineral notes or even nostalgic gourmand profiles. The next generation of sleep fragrances will likely be highly personalized.

5. Explore Delivery Innovation

Long-lasting, controllable and customizable scent delivery will become increasingly important as consumers integrate fragrance into daily wellness routines. Smart diffusers and new formats offer opportunities to tailor experiences based on time of day and consumer needs.

The Future: The Home as a Sensory Wellness Platform

The rise of sleep and stress-focused fragrance signals that consumers are increasingly viewing their homes as extensions of their mental and emotional health routines.



The strongest wellness fragrances may be those tied to repeatable behaviors: turning on a diffuser before bed, starting meditation, preparing for work or creating a relaxation moment.

For the fragrance industry, this creates a new category opportunity at the intersection of perfumery, wellness and technology.

The winning brands will answer an ambitious question: “How should this space help people feel?” 

Lift the Sweet. Block the Bitter.

Avant Organics launches **Stevi Lift**. It enhances mouthfeel in stevia-sweetened formulas and blocks stevia bitterness while delivering a clean, balanced sweetness.

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MAPPING THE GLOBAL SENSES

(Part 2 of 3): Novelty & Familiarity



The Scandinavian concept of lagom—the idea that there is a “just right” amount of everything—is quietly influencing how product developers think about sensory design.

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Read Part 1 of this series, “Mapping the Global Senses: Ancient Rituals and Lab Innovations Shaping the Future of Flavor.” Part 3 of this series will appear in the October edition of *Perfumer & Flavorist*+

There is a contradiction at the heart of what we eat now. We have never had more access to the world’s flavors—every spice, every technique, every fermentation protocol available on a shelf or a screen—and yet most of us, if we’re being honest, still reach for the same things we reached for 10 years ago. The future of flavor is being built in kitchens and labs and cooperatives scattered across six continents, and most of it will reach you disguised as something familiar.

What follows is a road map of places where something is genuinely shifting, where the chemistry and the culture and the money are all moving in the same direction at once. Some of it is ancient. Some of it is happening this year. All of it matters if you work in flavor, fragrance, or the increasingly blurred space between them.

Vienna: the Pleasure of Bitter Things

There is a reason Austrians have been drinking bitter things after lunch for generations, and it has nothing to do with masochism. Gentian root, wormwood, angelica—these are the notes in Alpine digestive culture. Balanced, calibrated over centuries of practice, and austere in the way that good architecture is austere: almost sugar-free.



Skyr went from nonexistent in the United States to a growing category in roughly a decade. Siggi's, the brand that led the charge, posted 120% growth in 2015 and built its entire identity on a single, counterintuitive proposition: not sweet.



Underberg has been selling tiny bottles of concentrated bitters since 1846. The format is spreading.

Underberg has been selling tiny bottles of concentrated bitters since 1846. The format is spreading. American producers like St. Agrestis and Apologue are making low-ABV and non-alcoholic aperitifs that lean entirely into bitterness, not as a challenge to be endured but as an experience to be savored. They are not trying to mimic alcohol. They are selling a sophisticated bitter experience on its own terms.

The science supports them. The same research on bitter taste receptors and GLP-1 secretion that's reshaping how we think about yerba mate applies here. Bitter compounds do something measurable in the gut. They affect how full you feel, how your body manages glucose, per emerging research^a. This gives bitters a functional credibility in a wellness-obsessed market.

What's most interesting from a technical standpoint is that flavor houses are no longer focused solely on masking bitterness. They're developing enhancement systems—ways to make bitterness more present, more refined, to strip out the harsh metallic notes while preserving the clean, almost medicinal finish that consumers are increasingly reading as premium.

Reykjavik: Learning to Taste Mineral

Skyr went from nonexistent in the United States to a growing category in roughly a decade. Siggi's, the brand

^a“Effects of Bitter Substances on GI Function, Energy Intake and Glycaemia-Do Preclinical Findings Translate to Outcomes in Humans?” <https://pmc.ncbi.nlm.nih.gov/articles/PMC8072924/>; “Bitter taste receptors: Key target to understand the effects of polyphenols on glucose and body weight homeostasis. Pathophysiological and pharmacological implications,” <https://www.sciencedirect.com/science/article/pii/S0006295224001758>

that led the charge, posted 120% growth in 2015 and built its entire identity on a single, counterintuitive proposition: not sweet. They use four times the milk of regular yogurt, carry significantly less sugar than Greek yogurt, and marketed both of those things as features rather than compromises. It worked, which told the industry something important about where at least a segment of the market was heading.

But the broader shift out of the Nordic countries has to do with a flavor note that is genuinely difficult to describe but increasingly easy to recognize once you know what you're tasting: minerality. It's in Icelandic spring water—a clean, almost metallic finish that has nothing to do with impurities and everything to do with the volcanic geology the water passes through. It's in sea salt from Saltverk, harvested from geothermal seawater, tasting sharper and more complex than anything from the Mediterranean. It's in seaweed—Akua makes kelp jerky and kelp pasta that manage to taste oceanic without being fishy, which is harder than it sounds.

Chef Magnus Nilsson's work at Fäviken, before it closed, documented traditional Nordic preservation techniques with an almost obsessive attention to detail: salt-curing, drying, smoking over juniper. Juniper smoke has a piney, resinous quality that is showing up now in



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craft spirits and some meat alternatives, and the technique is being studied not as nostalgia but as a serious flavor development tool.

The Scandinavian concept of lagom—the idea that there is a “just right” amount of everything—is quietly influencing how product developers think about sensory design. Less aroma. Cleaner finish. Flavors that don't announce themselves but stay with you after you've swallowed.

Bangalore: Flavor as Mood or Medicine

India's functional beverage market is growing fast, and the innovation happening there is less about new ingredients than about a fundamentally different way of thinking about what a flavor is supposed to do. In the West, we've historically separated taste from function—food tastes good, supplements work. In India, that distinction barely exists. Ayurvedic formulations have always been about flavor and effect simultaneously, and modern brands are translating that logic into formats that Western consumers can actually integrate into their daily lives.

Turmeric, ashwagandha, brahmi, tulsi—none of these are new. What's new is the precision with which they're being positioned: This drink is for



Turmeric, ashwagandha, brahmi, tulsi—none of these are new. What's new is the precision with which they're being positioned. Indian brands are making adaptogenic coffee alternatives that taste nothing like coffee but deliver a similar ritual satisfaction.

calm. This one is for focus. This one is for energy at 2:00 p.m. when the afternoon collapse starts. Indian brands like Kapiva and Organic India are making adaptogenic coffee alternatives that taste nothing like coffee but deliver a similar ritual satisfaction, and they're doing it without the jitteriness that sends half the Western coffee-drinking population to their therapist.

From Pandan to Buldak: the Gateway Effect

Southeast Asia is contributing its own thread to this story. Pandan—a tropical leaf that tastes somewhere between vanilla, coconut and fresh-cut grass—crossed over from Thai and Vietnamese bakeries into mainstream Western markets quietly and suddenly. Trader Joe's carried a pandan waffle cookie that sold out before most people knew what pandan was. Thai tea, which used to be a restaurant-only beverage, is now a flavor that shows up in ice cream, cakes and cookies. Its profile—creamy, spiced, intensely black-tea forward—translates across formats in ways that surprised even the manufacturers.



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In the U.S. market, Sriracha started as a condiment on tables at Vietnamese pho shops, invisible to most of the mainstream food industry. Then it wasn't.

And then there's heat, which is undergoing its own evolution. Samyang's buldak ramen went viral not because it was simply hot but because the heat had structure: sweet first, then savory, then a burn that built over time instead of arriving all at once. The North American hot sauce market^b was valued at approximately \$1,171.04 million in 2025 and expected to grow to \$1,953.54 million by 2032. The companies pushing it forward are studying how to build heat that moves rather than just sits on your tongue.

The gateway effect is worth understanding here, because it explains how flavors that once lived entirely within immigrant communities end up on supermarket shelves. Sriracha is the textbook case. It started as a condiment on tables at Vietnamese pho shops in the United States, invisible to most of the mainstream food industry. Then it wasn't. Huy Fong made over \$85 million in revenue by 2013 without spending a single dollar on advertising. Datassential documented a 37% increase in sriracha menu mentions nationwide. Matcha followed a similar path—a 57% jump in menu mentions over a single year, driven by its translation from Japanese tea ceremony into lattes and desserts. Kimchi is moving now: U.S. imports surged 37.4% in 2023, and Cleveland Kitchen launched a kimchi pickle chip in July 2024 that sold through 1,050 stores including Walmart locations.

^b<https://www.fortunebusinessinsights.com/u-s-hot-sauce-market-107592>

Each of these ingredients made the same journey. Niche to familiar. Immigrant kitchen to grocery aisle. And each of them got there the same way: by arriving inside a format people already trusted. A sauce on a familiar noodle. A flavor in a drink you already knew how to order. The unfamiliar became legible because it was wrapped in something emotionally safe.

The Comfort Layer: Why Familiar Still Wins

For all the innovation happening at the edges—the fermented cacao pulp, the fonio, the AI-generated cocktails—the center of mass in the food market barely moves. Most people eat on autopilot, between meetings and errands and exhaustion, and they reach for what they already know. This is not a failure of imagination. It is, as industry analysts have started calling it, defensive consumption: buying familiar foods as a form of emotional risk management. A disappointing meal wastes money. It wastes dinner. It wastes the mood you walked into the kitchen with.

NIQ's 2024 Consumer Outlook^c found that manufacturers who innovate are 1.8 times more likely to grow overall sales. But the same data makes clear that purchase behavior stays anchored in familiarity. Shoppers will try something new when it comes wrapped in something they already trust—a known brand, a familiar format, a recognizable base flavor. NIQ's beverage research documented this explicitly: traditional flavors like cola and lemon-lime are making room for dragon fruit, yuzu, and hibiscus, but only when those novel flavors arrive inside established product structures.

The psychology behind this is well-documented and worth taking seriously. Research published in *Cognition and Emotion* by Reid, Green and colleagues demonstrated that food is among the most powerful elicitors of nostalgia^d, and that nostalgic food experiences elevated comfort by strengthening social connectedness.

Separate research published in *Social Cognitive and Affective Neuroscience* found that nostalgia activates brain structures involved in self-reflection, autobiographical memory, emotion regulation and reward processing^e—specifically the medial prefrontal cortex, hippocampus, and ventral striatum. In practical terms: familiar flavors reduce cognitive load. They require less mental energy to process. They activate memory and



Traditional flavors like cola and lemon-lime are making room for dragon fruit, yuzu and hibiscus, but only when those novel flavors arrive inside established product structures.

emotion simultaneously. In an economy designed to exhaust your attention, that matters enormously.

This is why throwback products keep outperforming expectations. Why limited-edition revivals sell out. Why childhood flavors resurface every few years under new packaging. Research on the “Proust effect”—the phenomenon where memories triggered by taste and smell are among the most potent and emotionally charged—has shown that nostalgic food labels actually increase both purchase intention and consumption. The flavors themselves haven't changed. What's changed is how seriously the industry is studying why they work.

The market has effectively split into two parallel tracks, and both are growing. On one side: experimental, narrative-driven, globally influenced products aimed at consumers who actively seek out new experiences. On the other: reformulated classics designed for people who do not want to think about food at all. For them, innovation is invisible. A recipe shifts slightly. Sugar drops by three grams. Fiber goes up. The flavor stays the same. The moment it doesn't, they notice. 

^c<https://nielseniq.com/global/en/insights/report/2024/consumer-outlook-2024-6-consumer-sentiment-driven-strategies-to-drive-growth-and-capture-spending/>

^d<https://www.scribd.com/document/1060663703/Reid-et-al-2023-Cognition-and-Emotion>

^e<https://academic.oup.com/scan/article/17/12/1131/6585517>



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The Flavor Equation: Engineering Craveable Snack Bars in the Age of Protein and Sugar Reduction

The primary hurdle is executing what consumers call “mindful indulgence.”

Snack bars have always made big functional promises—protein, fiber and energy on the go—but in today’s \$20 billion global market, nutrition labels alone are no longer enough to win repeat purchases. Taste is no longer treated as a secondary reward for good behavior; it is the baseline expectation, with 74% of consumers explicitly choosing flavor first^a. However, delivering on this expectation has become a complex balancing act for product developers and flavor chemists. As the category charges toward an anticipated 17% growth by 2030, per Euromonitor^b, formulators are facing intense technical challenges at the bench.

The primary hurdle is executing what consumers call “mindful indulgence.” With 60% of shoppers actively reducing sugar and a surging demographic of GLP-1 weight-management users demanding high-protein options, developers are forced to cram bars with functional proteins and fibers that introduce severe bitterness, off-notes, and a chalky, unappealing texture.

To build a successful product, innovators must successfully mask these harsh protein notes, replace the missing mouthfeel of sugar, and engineer the perfect balance of chew and crunch—all while delivering unique, regionally resonant flavor profiles like strawberry mojito or mango and passion fruit.

By treating flavor as the hero, nutrition as the enabler and texture as the core experience, brands can move past functional compromise to build the next generation of truly craveable snack bars.



^a<https://www.healthfocus.com/wp-content/uploads/2021/10/2024-Global-Snacking-Report-Brochure.pdf>

^bEuromonitor Passport, Feb 2026



By treating flavor as the hero, nutrition as the enabler and texture as the core experience, brands can move past functional compromise to build the next generation of truly craveable snack bars.

In this Q&A with Rogerio De Almeida Prado Guimaraes, vice president, global dairy and BBC, Taste, IFF, we explore the dynamics of this high-growth market, as well as the technical sensory finesse required to drive success at the formulation and product development level.

How can formulators use top-note design to bridge familiar flavors with more novel, premium sensory experiences?

Guimaraes: When balancing innovation with familiarity, IFF's proprietary segmentation model helps formulators and brands identify drivers of choice across consumer groups to create bars with multi-regional appeal. We fine-tune the level of innovation in a formulation to match what each consumer segment is ready to embrace, ensuring the bar's perceived benefit outweighs any resistance to taste novelty.

Our decades-long research into the concept of familiarity has enabled us to develop a "newness" model that evaluates how consumers perceive novelty and sensory complexity. Differentiation can be achieved by anchoring a flavor in a recognizable profile, then adding a distinctive twist—such as Choco-Orange or Choco Cherry Coconut flavors. This approach delivers a premium flavor profile that blends novelty, comfort, and trust.

How can taste modulation technologies enhance flavor while masking protein off-notes?

Guimaraes: As demand for protein grows, driven in part by the increasing adoption of GLP-1 medications—manufacturers face greater pressure to deliver nutritional benefits without compromising taste.

High-protein formulations often introduce bitterness, astringency, and beany off-notes that can compromise consumer acceptance. Addressing these sensory challenges requires more than traditional masking approaches as it requires targeted taste modulation that improves the overall flavor experience.

Advanced taste modulation technologies, such as FlavorFit, take a holistic approach to flavor optimization. Rather than simply masking a single off-note, flavorists balance multiple sensory dimensions simultaneously, as focusing on one sensory challenge alone can create imbalances elsewhere in the product experience.

By reducing undesirable protein notes while enhancing sweetness perception, improving mouthfeel and supporting the intended flavor profile, modulation technologies help create a more rounded and indulgent sensory experience.

This enables formulators to not only neutralize protein off-notes, but also amplify the richness,



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authenticity and overall impact of core flavors such as chocolate, vanilla, resulting in protein bars that deliver both nutritional benefits and exceptional taste.

How can brands recreate the indulgent taste and texture of full-sugar bars in reduced-sugar formulations?

Guimaraes: Reducing sugar successfully requires a holistic approach that addresses the full sensory experience, not just sweetness intensity.

Our FlavorFit taste modulators restore the full sensory experience lost during sugar reduction, masking off-notes from sweeteners like stevia and maintaining the indulgent mouthfeel and sensorial profile of full-sugar bars. They help recreate sugar's natural sweetness profile by delivering an immediate sweetness impact while reducing lingering bitterness and astringency.

Taura's clean label fruit inclusions can be used alongside FlavorFit taste modulators. They create an additional burst of flavor, texture, and visual appeal in bars with fruit layers, fillings and inclusions.

How can brands create clean-label indulgent bars that deliver emotional comfort and nostalgia?

Guimaraes: Comfort and nostalgia are powerful purchase drivers, with consumers seeking familiar flavors that feel both elevated and contemporary. Nostalgic flavors can be refreshed with more sophisticated flavor execution, allowing brands to feel modern and relevant while tapping into emotional resonance.

At the same time, the demand for clean labels continues to grow, with over a third of global consumers citing natural ingredients as key product characteristics they seek in order to “feel well.” Yet it can be challenging for manufacturers to maintain great taste, texture, and shelf-life stability when cleaning up labels by removing artificial ingredients and preservatives.

IFF’s Product Design solutions include flavors, modulators, texturizing ingredients and system blends to help manufacturers create delicious, healthy, compliant, and sustainable clean-label bars that deliver emotional resonance without compromising product performance.

How can brands create a scalable global bar platform that can be customized with locally relevant flavors?

Guimaraes: The challenge is not choosing between globalization and localization—it’s designing for both from the start.

At IFF, we advocate a globally scalable base with locally relevant flavor experiences. Brands can build a

modular bar platform around a consistent nutritional and texture foundation, then localize through targeted flavor systems and regional inclusions rather than reformulating entire products.

Flavor is the most efficient lever for customization, enabling brands to deliver regional relevance while minimizing manufacturing complexity. Through insight-driven innovation, FlavorFit taste modulation solutions, sensory science and IFF Product Design, we help customers create scalable bar platforms that balance nutrition, affordability and great taste.

Looking ahead, the biggest opportunity is designing around universal consumption needs—energy, satiety, recovery and permissible indulgence—while using locally inspired flavors to connect with consumers. The winning model is not “one flavor fits all,” but one scalable platform with localized flavor expression.

Select insights derived from IFF’s “Bar Code” report;
<https://www.iff.com/food-beverage/taste/bar-flavor-solutions/> 



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THE NEXT GENERATION OF FRAGRANCE DELIVERY TAKES SHAPE

Fragrance is getting a high-tech makeover with microencapsulation and light-activated scent that lasts weeks.



Unlike conventional encapsulation methods, Microcaps' patented microfluidic manufacturing platform uses a step-emulsification process to produce highly uniform fragrance droplets at industrial scale, offering precision, reproducibility and formulation control.

Courtesy of Microcaps

From precision microencapsulation and light-activated scent release to high-performance water-based platforms, suppliers are reengineering how fragrance is delivered, experienced and sustained. These next-generation technologies promise longer-lasting performance, alcohol-free alternatives, enhanced sensory experiences and stronger sustainability credentials—signaling a shift in how perfumers and brands think about fragrance creation and consumer engagement.

Inside Givaudan and Microcaps' Vision for the Future of Fragrance Delivery

As fragrance houses race to improve performance without sacrificing aesthetics or sustainability, Givaudan is making a strategic bet on one of the industry's most promising delivery technologies. The company has announced an equity investment and strategic collaboration with Swiss startup Microcaps AG, giving the fragrance leader access to precision microencapsulation technology that could reshape everything from alcohol-free fine fragrance to advanced beauty applications.

At the center of the collaboration is Microcaps' patented microfluidic manufacturing platform, originally developed at ETH Zurich's Complex Materials Group. Unlike conventional encapsulation methods, the technology uses a step-emulsification process to produce highly uniform fragrance droplets at industrial scale, offering precision, reproducibility and formulation control. The company has secured 11 patents around the platform and recently commercialized Perfume Pearls, an alcohol-free fragrance delivery system designed specifically for fine fragrance.

Rather than dissolving perfume oil in ethanol, Perfume Pearls encapsulate pure fragrance oil inside translucent alginate shells derived from algae. The suspended microcapsules remain stable in a structured water-based formula until sprayed, when the capsules burst within the nozzle to release fragrance alongside water.

The result is an alcohol-free fragrance that avoids the drying feel of ethanol while maintaining sprayability, fragrance intensity and a premium sensory experience without emulsifiers or traditional solubilizers.

At this early stage, the encapsulation technology is generally being applied to fragrances designed according to principles learned for alcohol-based perfumery, says Microcaps co-founder Michael Hagander.

In conventional perfumery, fragrances are balanced across top, middle and base notes according to the release profile of ethanol. This includes critical top notes



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that dominate upon the first spray and which shape initial consumer impressions.

Microcaps' technology offers a less intense impression upon the initial spray, though the difference in odor intensity evens out to the equivalency of an alcohol-based scent after 30 seconds, Hagander notes.

He adds that scent compositions are generally more stable in Microcaps' chassis compared to ethanol, resulting in top notes that remain for a longer period of time.

The technology is quite young compared to the long legacy of alcohol-based perfumery, Hagander acknowledges, meaning it will take time for perfumers to adjust creative strategies around the release profile of the new encapsulation technology.

This will likely include scents with more intense head notes to match the initial sensory spike seen upon the first spray of an alcohol-based scent.

For Givaudan, the investment expands its toolbox at a time when consumer demand is pushing fragrance development beyond conventional alcoholic sprays. Water-based formats, skin-friendly formulations, natural positioning and improved sustainability credentials have become strategic priorities across prestige fragrance and beauty, but achieving comparable performance has remained a technical challenge.

Hagander points out that Microcaps' system is intended specifically to the skin, offering a much gentler alternative to alcohol. Furthermore, he says, skin care ingredients can be added to the system to evolve from simply "doing no harm" to actively moisturizing the skin.

On skin, Hagander says the format can leave the skin feeling "silky," transforming fragrance from a smell into a multidimensional experience.

Acknowledging that he's "obviously biased," Hagander believes that non-alcohol fragrances will be a significant category, but will not be replacing the ethanol-based category any time soon.

He also sees the sector first gaining traction with perfume's newest buyers—Gen Alpha and Gen Z—who tend to be health-conscious and perhaps don't have as deeply ingrained expectations of what a fragrance should be compared to older generations.

It's also a natural fit for markets where alcohol-based scents are not preferred. It makes sense, then, that Microcaps will be attending this year's BeautyWorld Middle East in October 2026.

An early adopter was Guerlain, whose Aqua Allegoria Perle (formulated by Guerlain perfumer Delphine Jelk)

offered a reimagining of a trio of the brand's signature scents using the water-gel format.

While Hagander sees brands primarily applying the technology to flankers and niche launches for now, he expects brands to launch entire large-scale lines using Microcaps' system.

Beyond to the performance and experiential elements of Microcaps' technology, Hagander points out that, in the era of an ecommerce fragrance sales boom, water-based platforms are far less hazardous (and thus less expensive, generally) to ship compared to flammable alcohol-based products.

And, just as importantly, because the capsules break upon spraying and are entirely biodegradable and microplastic-free, they do not persist in any negative way in the environment.

(Hagander says the company is exploring certifications around the technology's sustainability.)

"Encapsulation is one of the most transformative technologies in our field," said Jeremy Compton, global head of science and technology, fragrances, at Givaudan. He noted that combining Givaudan's fragrance expertise with Microcaps' platform creates new opportunities to improve both performance and sustainability across fragrance and skin care applications.

The collaboration will initially focus on strengthening Givaudan's encapsulation capabilities for its Fragrance & Beauty business, particularly in non-alcoholic fine fragrance performance, while opening opportunities across broader beauty and personal care categories.

Maurizio Volpi, president of Givaudan Fragrance & Beauty, called the partnership "a strategic step" that strengthens the company's innovation capabilities and ability to deliver differentiated fragrance experiences.

For Microcaps, the deal represents a significant commercialization milestone. Founded as an ETH Zurich spinout, the company has spent the past seven years developing industrial-scale microfluidic encapsulation technology serving cosmetics, nutraceuticals and life sciences. Its production platform operates from Switzerland using purpose-built manufacturing lines compliant with Cosmetic GMP 22716, with founders Alessandro Ofner, Ph.D., and Hagander positioning the technology as a new benchmark for high-precision encapsulation.

Beyond the immediate investment, the partnership highlights a broader competitive trend emerging among major fragrance suppliers. As fragrance performance becomes as important as fragrance composition itself, companies are increasingly investing in enabling technologies—including encapsulation, controlled-release systems and novel delivery platforms—to create differentiated consumer experiences rather than relying solely on new aroma ingredients.



For Givaudan, the Microcaps investment expands its toolbox at a time when consumer demand is pushing fragrance development beyond conventional alcoholic sprays. Water-based formats, skin-friendly formulations, natural positioning and improved sustainability credentials have become strategic priorities across prestige fragrance and beauty, but achieving comparable performance has remained a technical challenge.

IFF's Light-Activated Sensora Signals Next Frontier in Long-Lasting Fragrance Performance

IFF has unveiled Sensora, a patent-pending, light-activated pro-fragrance platform that gradually releases new scent facets over time, opening the door to more dynamic fragrance experiences across home, fabric and personal care products.

Unlike traditional fragrance delivery technologies, Sensora uses a controlled-release pro-fragrance mechanism that is activated by both indoor and outdoor light. The technology allows perfumers to design fragrances that unfold in phases, revealing new olfactive dimensions after use while extending scent perception for up to 20 days, per the company. The result is a fragrance experience that continues well beyond the initial application, washing cycle or first impression.

"With Sensora, we are advancing fragrance performance into a new territory—one where scent continues to reveal itself in real life, long after the first moment of use," said Ana Paula Mendonça, president of IFF Scent. "By combining pro-fragrance science with our deep expertise in fragrance design, we are creating more enduring, more meaningful experiences that bring consumers joy."

The launch reflects a broader shift in fragrance innovation, where ingredient suppliers are increasingly focused on delivery systems that enhance consumer experience as much as the fragrance formula itself. Rather than simply extending longevity, Sensora gives perfumers precise control over how a scent develops over time, creating opportunities for more sophisticated olfactive storytelling and premium product differentiation.

IFF is debuting the technology in fabric care with Floral Fusion, the first Sensora fragrance designed specifically for liquid laundry detergents. Part of the company's fragrance experience enhancer portfolio, Floral Fusion releases refined floral notes on dry fabrics after washing, enriching the fragrance beyond its original scent signature.

According to IFF, the launch responds to changing consumer expectations. A 2026 global usage and attitudes survey spanning 17 countries found that more than one-third of consumers expect laundry fragrances to last longer, while nearly one in four want scent to remain noticeable for at least four days.

Jan Bechtel, senior vice president of consumer fragrance for IFF Scent, said the technology offers brands a new way to stand out in laundry care by delivering both lasting fragrance and a more elevated sensory experience.

Developed under IFF's Scent+ innovation platform and built on the company's Science of Performance approach, Sensora is designed to integrate seamlessly



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into fragrance compositions and serve as a scalable technology platform for future applications across multiple product categories.

"Sensora represents a step-change in how we design fragrance performance," said Mohammed Ashour, vice president of innovation for IFF Scent. "Its light-activated pro-fragrance mechanism gives perfumers a new level of control to orchestrate how scent evolves, revealing new olfactive facets over time while providing a scalable platform for innovation across applications and categories."

Rewriting the Rules of Water-Based Fragrance

During the 2026 World Perfumery Congress, Cosmo International Fragrances is spotlighting AquaElixir, its patent-pending, alcohol-free fragrance platform. The 100% natural-origin, water-based technology is designed to deliver the performance of traditional fine fragrance while addressing growing demand for sustainable, skin-friendly alternatives.

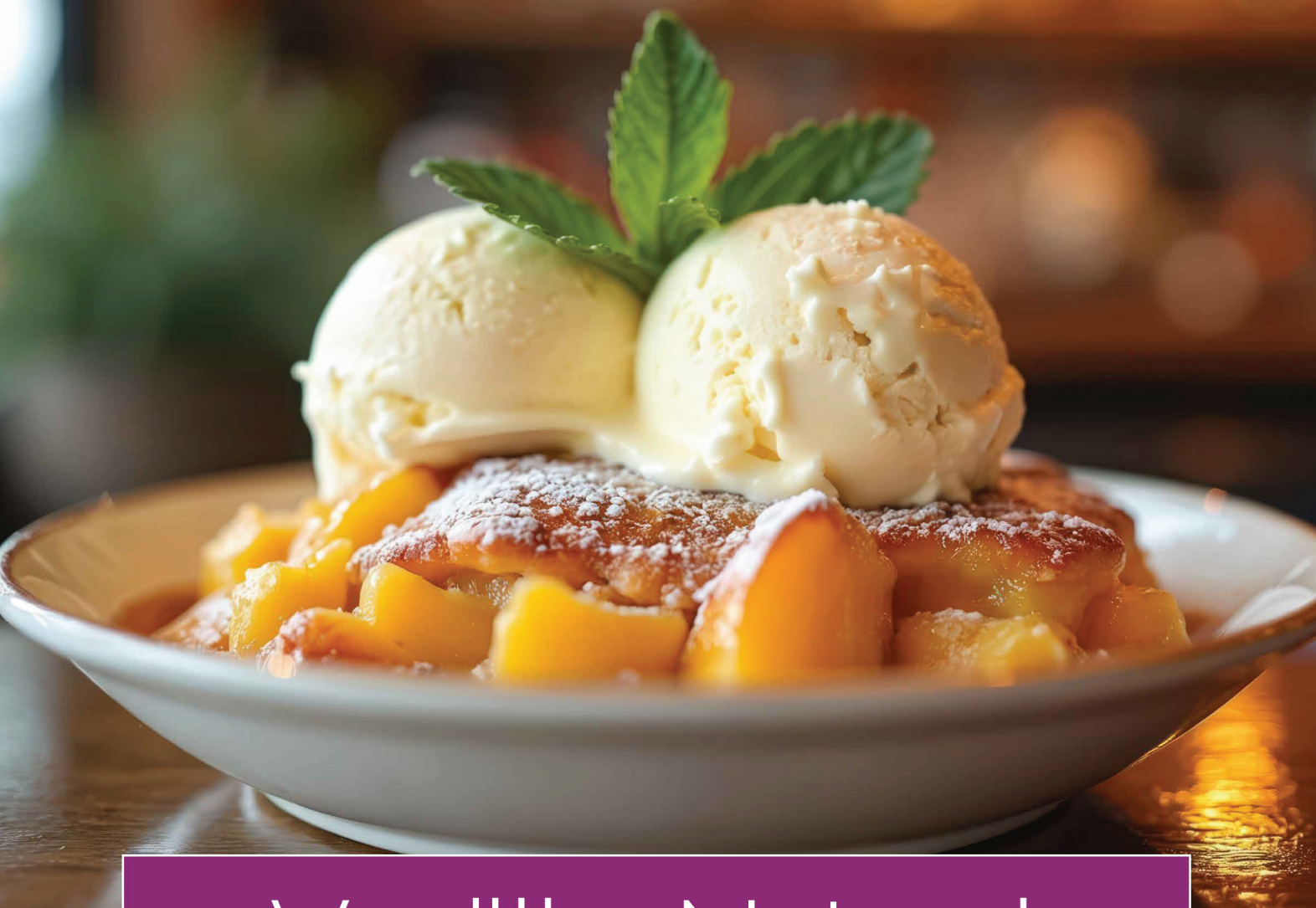
Derived entirely from plant-based materials, AquaElixir is biodegradable and manufactured without ethanol, offering a transparent, moisturizing and non-sticky fragrance base suitable for all skin types. The technology is engineered to support high fragrance loading while maintaining strong diffusion, intensity and long-lasting wear—key technical hurdles that have limited the adoption of water-based fine fragrances.

With brands increasingly exploring alcohol-free formats to meet consumer demand for gentler formulations and improved sustainability, AquaElixir positions Cosmo among a growing group of fragrance suppliers developing next-generation delivery systems that extend beyond conventional ethanol-based perfumes. 

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The advertisement features a vibrant red and orange background with a molecular structure pattern. In the top left corner is the logo for "perfumer & flavorist+" with the tagline "The Resource for Sensory & Wellness Innovation". The central text reads "Tune In!" in a large, white, sans-serif font. Below this text are three white circular icons: a microphone on the left, a smartphone in the center with concentric circles around it, and a play button on the right. At the bottom, the text "Perfumer & Flavorist+ Multimedia" is displayed in a white, serif font, followed by the URL "www.perfumerflavorist.com/multimedia" in a smaller, white, sans-serif font.



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